Securing the UK's Energy Future

Proposed Underground Gas Storage Facility

Preesall, Lancashire

halite energy group

Project Overview

Halite Energy Group (Halite) is proposing to build an underground gas storage facility in newly-created salt caverns on the Wyre Peninsula at Preesall, Lancashire in one of the last remaining UK onshore sites suitable for gas storage. If approved, it would become the UK's largest onshore gas storage site.

Halite's project team is led by highly experienced and respected figures from the UK energy and utilities sectors. Chairman, Dr John Roberts CBE, spent seven years as Chief Executive of United Utilities and before that 30 years at Manweb plc. He is joined on Halite's board by non-executive director, David Gray, who was formerly Managing Director, Networks, at energy regulator Ofgem and a member of its governing board, the Gas and Electricity Markets Authority. Chief Executive, Keith Budinger spent 18 years working at British Gas prior to joining United Utilities as Director of Asset Management.

The application, which was accepted for examination by the Planning Inspectorate (formerly the Infrastructure Planning Commission) in December 2011, is for the creation of up to 19 purpose-built caverns which will store 900 million cubic metres of natural gas. The vast majority of the development would be 1,000 feet underground, with a small number of above ground buildings to operate the facility.

The £660 million project would create more than 3,000 direct and indirect jobs at its peak, with an average of 1,200 jobs generated during the eight-year construction phase.

Storing gas in salt caverns underground is a proven industry which is well established across the world. There are more than 70 underground gas storage facilities globally, with four operational projects in the UK. There has never been a major incident recorded at an underground gas storage facility in the UK since the first underground field was brought online in 1959 at Hornsea, Yorkshire.

The Planning Process

The application is being scrutinised by the Planning Inspectorate throughout 2012, after which they will make a recommendation to the Secretary of State for Energy and Climate Change on whether the project should gain a Development Consent Order. The final decision will be made by 25 April 2013.

Halite has worked hard to address concerns raised by residents and the relevant local authorities by reviewing previous unsuccessful proposals for a gas storage facility at Preesall by predecessor, Canatxx. These concerns have centred around geology, risk, safety and impact on the environment.

As part of the application, Halite conducted a wide-ranging consultation exercise with the local community and a number of statutory and non-statutory consultees. Feedback from this process has helped shape the application.

Following the consultation, Halite has successfully come to agreement with a wide range of local and national bodies. 44 Statements of Common Ground have been reached with organisations such as Lancashire County Council, Wyre Council, the Health & Safety Executive, the RSPB, the Environment Agency and Natural England who have stated that they have no concerns about important elements of our proposals including geology and safety.

Map indicating the location of the proposed facility at Preesall, Lancashire

Why Gas Storage?

The UK economy faces a major challenge as indigenous gas supplies from the UK Continental Shelf (UKCS) decline and there is increasing dependence on imported gas. The country moved from being a net exporter to importer of gas in 2004, and by 2025 we will be reliant on imports for around 75% of our gas.

The need for gas is made all the more pressing as a quarter of the UK generating capacity (coal and nuclear) is being taken off-line in the next ten years. This will mean the UK is simultaneously more dependent on gas for generating our electricity and more dependent on imports for delivering gas to our power stations.

Whilst the Government remains committed to the decarbonisation of power generation in the long-term coupled with an increase in renewables, there will continue to be a strong demand for gas. The inevitable supply troughs in offshore wind, combined with the inflexibility of nuclear supply will mean an ongoing need for natural gas to provide essential capacity for electricity generation.

Gas storage is vital as it secures the UK's energy supplies during demand peaks and helps to insulate consumers from price volatility in international markets.

The UK has historically relied on the inherent flexibility of gas supplies from the UKCS and has required relatively low levels of gas storage. As domestic production declines this flexibility is disappearing and the need for storage is increasing. This has been highlighted in recent winter cold snaps when gas reserves can run dangerously low. We currently have only 14 days gas capacity compared to France with 87 days, Germany with 69 days and Italy with 59 days. Halite's project would represent a significant boost to current capacity adding three days, or 20 per cent.

The need for more gas storage was recognised by the Energy and Climate Change (EEC) Select Committee in their report on the UK's Energy Supply published on 25 October 2011. The Committee said that: ''[DECC] should aim to double the UK's current gas storage from current levels by 2020… to ensure a resilient gas supply.'' It also recognised that the Government should develop a strategy for increasing gas storage, warning that: ''doing nothing could result in no storage being built, which would diminish energy security.''

Why Preesall?

The UK has two main types of underground gas storage:

- Depleted oil/gas field storage, pore storage – this is where gas is stored in natural gas/oil fields which have produced all their economically recoverable oil or gas
- Salt cavity storage and man-made void storage – this is where naturally occurring salt deposits, such as those at Preesall, are used to store gas

Depleted field storage requires considerable pressure, and therefore energy, to fill. As a result, these types of facility tend to be used for what is referred to as 'seasonal storage', where gas is injected over a long period of time, typically the summer, and is then supplied to the market in the winter when demand, and therefore prices, are higher.

Due to geology, there are only a small number of depleted onshore gas/oil fields and they tend to be relatively small in size. Offshore, the UK has far more opportunities, however costs of construction, as with anything built offshore, rise considerably.

The opportunity to build salt cavity storage is limited both on and offshore by geology as the UK has only limited salt deposits. Of these the shallower ones, those in Cheshire and Lancashire, benefit over the deeper deposits in that the pressure of the gas they are capable of holding tends to mirror the main UK gas transmission system, the NTS. This, combined with the fact that salt caverns are capable of moving large quantities of gas either in or out very quickly, means that they lend themselves to providing the day to day flexibility required for security of supply as well as longer term seasonal cover.

Preesall also benefits from its location at the heart of the NTS, where access to fast cycle gas storage is particularly helpful for the operation and stability of the system. Gas from the Preesall facility would enter the NTS at Nateby, which is on the main western leg of the NTS in an area that currently has considerable spare capacity, thus reducing the need for significant investment by National Grid in the NTS to accommodate Preesall's gas flows.

Getting The Facility Built

The Halite project is financially viable and able to attract significant backing to contribute to the extra storage capacity that is needed in the UK. If consent is granted, construction of the project could commence almost immediately, unlike many gas storage projects which have been approved but lack the economic and financial viability to get them off the drawing board. However, the project will need to attract large scale investment and, for this to be successful, a clear policy framework will be required.

The UK has made significant progress in recognising the need for increased gas storage in recent years. We believe that a number of further measures would help to bring forward the investment required to meet that need:

Clear targets for gas storage: clear targets for the amount, and crucially the type, of gas storage the UK requires under different scenarios would bring clarity to the need case and improve investor confidence.

Continued clarity in the planning process: the UK has suffered in the past from high levels of consent risk and costs for major infrastructure. The new process for major infrastructure has done much to restore confidence among project developers and investors and it will be important to maintain this.

A clear framework to ensure gas is actually stored: as well as developing storage capacity, the UK also needs clear signals to ensure that gas is actually stored, possibly through an obligation. Putting this in place now would provide clarity on the future market for gas storage and bring forward investment in storage capacity.

Halite believes that the Preesall project presents an ideal opportunity to develop a facility that could be used for decades to come, thereby helping to secure the UK's future energy security. Crucially it also represents a much needed, significant investment into the UK economy at a vital time.

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