

Home / Media centre / News announcements / 2017 news announcements / North Cheshire energy research site plans

New North Cheshire energy research site to be UK's 'eyes and ears of the underground'

26 September 2017

The British Geological Survey (BGS) has announced the location for a new 'observatory for the underground' that will provide important research evidence on natural resources for heat and energy. The BGS has confirmed the Ince Marshes area in North Cheshire as its preferred location for the Cheshire Energy Research Field Site, part of a £31 million science investment.



Ince Marshes, Cheshire, where the BGS has announced its intention for a UK Geoenergy Observatory site to help us better understand the subsurface

The UK Geoenergy Observatory will gather new information from the two research sites, the Cheshire Energy Research Field Site and the Glasgow Energy Research Field Site. Together they will underpin the development of energy technologies and advance our understanding of the underground environment - one that modern society uses extensively for water, pipelines, tunnels, building materials, landfill, drainage and more.

The Cheshire Energy Research Field Site will attract world-leading geologists, engineers and other scientists to undertake energy-related research. This research will advance our understanding of the technologies and science needed for carbon storage, energy storage, underground storage of waste material and shale gas.

The observatory will strengthen the research capability of the North West's energy sector. It will add to the region's national science infrastructure, which includes the nearby Jodrell Bank and SciTech Daresbury.

The investment has been commissioned by NERC, the UK's main agency for funding environmental sciences, and is being delivered by the BGS, the UK's leading research centre in geoscience.

The BGS has been modelling the geology of the Ince Marshes area since 2016 to determine its suitability for geological and energy technology research. Following an extensive study of the local geology, and consultation with landowners and local residents, the BGS can confirm Ince Marshes as its preferred location.

Professor John Ludden, Executive Director of the BGS, said:

"Ince Marshes provides researchers with a complex geological environment that enables them to examine the way that different rock types behave at a range of different depths. Ince Marshes also has the combination of natural environmental change from the estuary and impact from major infrastructure, industry and population centres. It is also located at the very heart of Cheshire's Energy Hub - with the wind farm, refinery, energy research centre, mixed-use energy development and the hydrogen cluster as neighbours.

North Cheshire is also under an onshore oil and gas licence, with operators actively exploring the area. The UK Geoenergy Observatories will build on Cheshire's standing as an energy hub and strengthen this corridor of scientific activity, which stretches from the Jodrell Bank Observatory in the east, through the Daresbury Laboratory, to our research site, which would draw in some of the best scientists and engineers in the world.

We need the subsurface environment to develop a mix of low-carbon energy technologies at the required scale - whether that's for carbon storage, energy storage, geothermal energy, hydrogen production or lower-carbon energy sources. It is vital that we build the best-possible geological evidence base to be able to optimise the process without an adverse impact on the environment.

This investment will provide industry, academia, regulators, government and the public with the tools to break new boundaries in energy science, develop better low-carbon solutions and take care of the environment. Providing the very best evidence base on the UK's geology has been the British Geological Survey's role for the last 180 years. It continues to be our primary objective."

Creating the Cheshire Energy Research Field Site will involve the BGS drilling some 80 observation boreholes of various depths across a 28km² area around Ince Marshes. The network of boreholes has been designed to enable UK geoscientists and geoengineers to study geology in unprecedented detail, to observe how fluids and gas flow within underground systems and to understand the relationship between the rock layers: from the surface to the deep underground environment.

Measurements will be taken from boreholes, such as seismic activity, water movement and chemistry. These will be observed and analysed providing the most comprehensive geological dataset in the country. The data collected from the research will be made be accessible to all, giving local communities, academics, government, regulators and industry an unrivalled environmental evidence base. The UK Geoenergy Observatories will be open to the entire science, research and development community.

Some research conducted at the Cheshire site will look at how shale gas behaves in the ground. NERC will not be commissioning any extraction ('shale gas fracking'), but if licenses are granted for others to extract gas in the area, the BGS will be monitoring the effects of this and our data will be available to all. The observatory will enable valuable science whether fracking is happening or not.

The BGS will be holding community meetings in North Cheshire in October, November and December for local residents to find out more. British Geological Survey scientists will be available to speak about the project, answer questions, discuss the science objectives and what the investment could mean for the community.

Join the BGS on Wednesday 11 October 2017 at:

- Elton Village Hall, 10am to 12pm
- Thornton Church Hall, 6pm to 8pm

The BGS will also be available in community locations in Chester, Dunham, Frodsham, Hapsford, Helsby and Ince throughout the autumn, for local residents and businesses to find out more. Dates and times will be confirmed and advertised locally. Full details will also be on the events diary on the BGS website.

Further information

Cristina Chapman

UK Geoenergy Observatories Project Communications Manager

British Geological Survey

0115 9363066

07970 229792

crisc@bgs.ac.uk

Mary Goodchild

News & Media Officer

NERC media office

01793 411939

marodc@nerc.ac.uk
