

COMMUNIQUE DE PRESSE

Combating Climate Change: The French Environment and Energy Management Agency (ADEME) selects the France Nord Project

Paris, 25 May, 2010 - Championed by a consortium of French and European manufacturers and research organizations, the France Nord project, to transport and store carbon dioxide, has been selected by the French Environment and Energy Management Agency (ADEME) to help mitigate greenhouse gas emissions.

The project will examine the feasibility of installing, in a sedimentary basin in the north central part of France, a carbon dioxide transportation and storage demonstration infrastructure to be potentially used by several CO₂-emitting industries.

CO₂ capture and geological storage is one response to the challenge of climate change. The availability of a storage site near CO₂-emitting industries in France would make it easier to assess the cost and feasibility of this solution on an industrial scale.

Detailed technical studies will be conducted in order to select a suitable geological site for storing CO₂ in deep saline aquifers*. The studies will also identify appropriate infrastructure to transport the carbon dioxide from the industrial facilities to the storage facility.

After two years of study, the partners, in cooperation with public authorities and local residents, expect to be able to recommend a site for the demonstration facility.

The €54-million France Nord project will be 40%-financed by ADEME from the research demonstrator fund set up as part of France's Grenelle environmental process and 60% by the other consortium partners.

The consortium comprises six of France's biggest manufacturers (Air Liquide, EDF, GDF SUEZ, Lafarge, Total and Vallourec), three French research organizations (BRGM, IFP and INERIS), and two German research organizations (EIFER in Karlsruhe and GeoForschungsZentrum in Potsdam).

* *Sedimentary rock containing non-potable water, located at least 1,000 meters underground, overlaid by impermeable sedimentary cap rock.*

Carbon capture and storage (CCS) is a suite of technologies designed to capture CO₂ (contained in flue gases produced by manufacturing facilities and concentrated in process gas), transport it and inject it into a suitable storage facility.

CCS technology is recognized as one of the solutions that will help mitigate greenhouse gas emissions and climate change, both internationally by the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA), by the European Union's Strategic Energy Technology Plan (SET Plan) and in France by the Grenelle environmental process.



Air Liquide

Air Liquide is the world leader in gases for industry, health and the environment, with 42,300 employees in more than 75 countries. Since its creation in 1902, its core business has been oxygen, nitrogen, hydrogen and noble gases. Air Liquide offers innovative technologies to mitigate emissions, reduce energy consumption in industry, develop natural resources and spearhead the energies of the future, such as hydrogen, biofuels and photovoltaic solar energy. Air Liquide explores the best that air can offer to protect life, staying true to its commitment to sustainable development. www.airliquide.com

EDF

The EDF Group, one of the leaders in the energy market in Europe, is an integrated energy company active in all businesses: generation, transmission, distribution, energy supply and trading. The Group is the leading electricity producer in Europe. In France, it has mainly nuclear and hydraulic production facilities where 95% of the electricity output involves no CO₂ emissions. EDF's transport and distribution subsidiaries in France operate 1,285,000 km of low and medium voltage overhead and underground electricity lines and around 100,000 km of high and very high voltage networks. The Group is involved in supplying energy and services to around 38 million customers around the world, including close to 28 million in France. The Group generated consolidated sales of €66.3 billion in 2009, of which 49% in Europe excluding France. EDF is listed on the Paris Stock Exchange and is a member of the CAC 40 index. www.edf.com

GDF SUEZ

Thanks to its activities in power generation and natural gas transmission, exploration and storage, GDF SUEZ holds the key-skills needed for each step in carbon capture, transport and storage. The Group participates in several CO₂ capture and injection pilot projects in Europe: mobile pilot skid to test post-combustion capture in cooperation with Hitachi, and E.ON; injection on the K12B gas field located on the Dutch continental shelf; CO₂ injection into an aquifer located in the South of the Netherlands. GDF SUEZ also submitted with E.ON an application for the European Economic Plan for Recovery (EEPR) funding for a demonstration plant on capture, transmission and storage of CO₂ in Rotterdam. One of the leading energy providers in the world, GDF SUEZ is active across the entire energy value chain, in electricity and natural gas, from upstream to downstream. It develops its businesses (energy, energy services and environment) around a responsible-growth model to take up great challenges: responding to energy needs, ensuring the security of supply, combating climate change and optimizing the use of resources. GDF SUEZ relies on diversified supply sources as well as flexible and high-performance power generation in order to provide innovative energy solutions to individuals, municipalities and businesses. The Group employs 200,644 persons worldwide and achieved revenues of €79.9 billion in 2009. www.gdfsuez.com

Lafarge

Lafarge is the world leader in building materials, with top-ranking positions in all of its businesses: Cement, Aggregates & Concrete and Gypsum. With 78,000 employees in 78 countries, Lafarge posted sales of Euros 15.9 billion in 2009. In 2010 and for the sixth year in a row, Lafarge was listed in the 'Global 100 Most Sustainable Corporations in the World'. With the world's leading building materials research facility, Lafarge places innovation at the heart of its priorities, working for sustainable construction and architectural creativity. Additional information is available on the web site at www.lafarge.com

Total

Total is one of the world's leading oil and gas companies, with operations in more than 130 countries. To help meet global energy demand today and tomorrow, Total's 97,000 employees deploy their skills across the entire oil and gas chain, from exploration and production to refining and marketing, trading, and gas and power. It is also a world-class chemical producer. Through real-world initiatives and ongoing innovation, Total intends to play a key part in addressing the core social and environmental issues of the future by pursuing a threefold objective: managing and reducing its footprint, creating value for all stakeholders, and securing the future. www.total.com

Vallourec

Vallourec is a global leader in premium tubular solutions primarily serving the energy markets and other industrial applications. With 18,000 employees, integrated production facilities, advanced R&D and presence in more than 20 countries, Vallourec offers its customers innovative global solutions to meet the growing energy challenges of the twenty-first century. www.vallourec.com

BRGM (Bureau de Recherches Géologiques et Minières – Office of Geological and Mining Research)

Supervised by the French Ministry of Higher Education and Research and the Ministry of Ecology, Energy, Sustainable Development and the Sea, BRGM is a public Earth sciences institution that manages surface and subsurface resources and risks. Its four missions are to conduct scientific research, support policy-makers, engage in international cooperation and development assistance, and ensure the safety and monitoring of mines. Its research activities and expertise span ten fields: geological mapping, mineral resources, geothermal energy, water, post-mining, natural risks, contaminated soil and waste, metrology, information systems, and geological storage of carbon. In the latter area, it focuses primarily on specifying storage capacity in deep aquifers and advancing knowledge of storage behavior in order to set appropriate safety criteria and provide expertise and scientific support to the French government, the European Commission and businesses. www.brgm.fr

IFP

IFP is a world-class public sector research and training center that develops the technologies and materials of the future in the areas of energy, transportation and the environment. It provides policy-makers and industry with innovative solutions for a smooth transition to the more efficient, less expensive, cleaner and sustainable energies and materials of tomorrow. A prominent player in carbon capture and storage R&D, IFP is engaged in developing new technologies across the chain, with the ultimate aim of delivering commercial solutions. IFP is participating in a number of French and European projects, alongside manufacturers and other research organizations. www.ifp.fr

INERIS (Institut National de l'Environnement Industriel et des Risques – French National Institute for the Industrial Environment and Risks)

Overseen by the Ministry of Ecology, Energy, Sustainable Development and the Sea, INERIS works to prevent health, safety, and environmental risks caused by economic activity. It shares its scientific and technical expertise with policy-makers, businesses and municipalities to help them make the most appropriate decisions to improve environmental safety. The Institute is notably focusing on risks related to carbon capture, transportation and storage, where it leverages accident risk expertise acquired studying hazardous phenomena. As part of the France Nord project, the Institute will assess the risks related to surface facilities for carbon capture and transportation. www.ineris.fr

EIFER

EIFER is a European Economic Interest Grouping (EEIG) created in 2001 by EDF and the University of Karlsruhe (now Karlsruhe Institute of Technology, KIT), located in Karlsruhe (Germany). The projects undertaken by this research institute, devoted to energy and the environment, are commissioned by Public Authorities (European, German, and French), by the companies of the EDF Group, and by KIT. The scopes of the different research groups focus on renewable energies (geothermal and bioenergy), geological sequestration of CO₂, distributed generation (fuel cells & hydrogen), energy in cities and territories, geosimulation for energy, as well as economics of energy and the environment. <http://www.eifer.uni-karlsruhe.de/>

Helmholtz-Centre Potsdam-GFZ German Research Center for Geosciences

The object of research of the GFZ is the Earth System - our planet, on and from which we live. We study the history of the earth and its characteristics, as well as the processes which occur on its surface and within its interior. We also investigate the many interactions which exist between the various parts of the system, the geosphere, the hydrosphere, the atmosphere and finally the biosphere. The research within the Centre of CO₂ Storage at the GFZ focuses on the possibilities and conditions of long term and safe storage of carbon dioxide in the underground. CO₂ is an increasingly considered option to avoid CO₂ emissions to the atmosphere. Therefore new technologies to monitor CO₂ in deep porous rocks are developed and tested, and fluid rock interactions are thoroughly investigated. Close to the small town Ketzin in Brandenburg a test site for CO₂ storage which is unique in the European continent is operated in international cooperation.

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