

April 14, 2017

# OVERVIEWS PROJECTS NEWS & POLICY RESEARCH EVENTS SURVEY ABOUT US FORUM

## **News & Views**

The International CCS Knowledge Centre in Regina, and the Global Carbon Capture and Storage Institute announced the signing of a Memorandum of Understanding, the agreement intends to promote greater collaboration between the two organizations to support the global deployment of CCS technology. In Europe, the UK CCS Research Centre received £7.6m in funding to extend its CCS efforts for a further five years. Multinational oil and gas company Total signed the MoU with Norway's Petroleum and Energy Minister to join the Technology Centre Mongstad for testing CCS. In North America, Archer Daniels Midland Company (ADM) announced that the start-up of the Illinois Industrial Carbon Capture and Storage project, a partnership to safely and permanently store more than 1 million tons of carbon dioxide a year. What's more, Veolia signed a partnership agreement with Carbon Clean Solutions Limited (CCSL) for the large-scale rollout of CCSL's patented carbon dioxide separation technology.

## Europe

UK Carbon Capture and Storage Research Receives a £7.6m Nudge

# 2017/04/11

The UK CCS Research Centre (UKCCSRC) has received £7.6m (\$9.4m) in funding to extend its carbon capture and storage (CCS) efforts for a further five years. The UKCCSRC project, which will be led by Professor Jon Gibbins at the University of Sheffield, has been awarded £6.1m funding through the Research Councils UK Energy Programme, with an additional £1.5m coming from partner institutions.

# Oil Giant Inks Carbon Capture Deal With Norwegian Government

# 2017/04/07

Multinational oil and gas company Total has today (7 April) signed a Memorandum of Understanding (MoU) with Norway's Energy Minister to join one of the world's largest facilities for testing carbon capture and storage (CCS).

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# **North America**

ADM Begins Operations for Second Carbon Capture and Storage Project

# 2017/04/10

Archer Daniels Midland Company (ADM) announced today that the Illinois Industrial Carbon Capture and Storage (ICCS) project, a partnership to safely and permanently store more than 1 million tons of carbon dioxide a year, has begun operations.

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# Senators Push Bill to Fund Carbon Capture Projects

# 2017/04/05

Two senators introduced a bill Wednesday to boost carbon capture projects for power plants. The bill, from Sens. Michael Bennet (D-Colo.) and Rob Portman (R-Ohio) would open up new financing opportunities for carbon capture energy projects by letting companies use tax-exempt bonds issued by state and local governments to fund for them.

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### Asia

## Carbon Clean Solutions Joins Veolia for Large Scale CO2 Re-use

# 2017/04/02

Veolia has signed a partnership agreement with Carbon Clean Solutions Limited (CCSL), a global leader in low-cost carbon capture technology, for the large-scale rollout of CCSL's patented carbon dioxide (CO2) separation technology. The agreement provides the two partners with an opportunity to reduce the impact of the greenhouse effect of industrial activities.

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# Global

# International CCS Knowledge Centre, Global CCS Institute Forge partnership

# 2017/04/05

The International CCS Knowledge Centre in Regina, and the Global Carbon Capture and Storage Institute announced the signing of a Memorandum of Understanding (MOU) on March 30 at the centre's office, which is located in the Innovation Place technology hub on the University of Regina campus. The agreement intends to promote greater collaboration between the two organizations to support the global deployment of carbon capture and storage (CCS) technology.

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# **Reviews of Research Papers and Reports**

### Actions Required to Develop a Roadmap Towards a Carbon Dioxide Utilisation Strategy for Scotland

## University of Sheffield 2017/4/13

Scottish Enterprise (SE) commissioned this report to better understand the required actions in developing a roadmap towards a carbon dioxide (CO2) utilisation strategy for Scotland. The report provides an overview of CO2 utilisation with respect to opportunities in Scotland and provides recommendations for further steps for Scotland to explore and develop its potential in this area. The study found that Scotland is uniquely advantaged for the development of a world leading CO2 utilisation sector as it has: a significant source of high quality biogenic CO2 from the food and drink sector; vibrant CO2 utilisation, hydrogen and Carbon Capture and Storage (CCS) academic communities; and a significant renewable energy resource.

### Global Carbon Capture and Storage Market 2017-2021 - Research and Markets

#### Technavio 2017/3/30

The report covers the present scenario and the growth prospects of the global carbon capture and storage market for 2017-2021. To calculate the market size, the report analyzes business dimensions with an eye on individual growth trends and contribution of upcoming market segments. The report also includes a discussion of the key vendors operating in this market. The use of CCS technology is one of the novel ideas that help reduce the amount of CO<sub>2</sub> released into the atmosphere by fossil fuel-dependent industries such as power generation and oil and gas processing. The basic functioning of the CCS technology includes capturing the CO<sub>2</sub> before its release into the atmosphere and then transporting and storing it in an environmentally safe location.

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### Study on CO<sub>2</sub> Adsorption with Activated Carbon Alkaline Cleaned and Modified under Ultrasonic Condition

Fubao Zheng, Rongying Lin, Pan Yang 2016/12

In this experiment, coconut shell activated carbon particles were used as the carriers, the activated carbon particles alkaline cleaned and modified under ultrasonic condition were used for the adsorption of CO<sub>2</sub> gas. This paper focuses on the influences of alkaline agent concentration and ultra- sonic time in the process of alkaline cleaning of activated carbon, and the influences of the stirring time, ultrasonic time and modifying agents in the process of modification of activated carbon. The alkaline cleaned and modified activated carbon particles were characterized by TGA and ASAP2020. The results show that the adsorption capacity of CO<sub>2</sub> gas of the modified activated carbon particles was 1.5 mmol·g-1 when the alkaline cleaning conditions were KOH solution of 5 mol·L-1 and ultrasonic time of 120 min, and the modified conditions were stirring time of 30 min, ultrasonic time of 100 min, and 10% (mass fraction) potassium carbonate as modifier. Research shows that ultrasound could promote the dispersion effect of alkaline agent on activated carbon pore, so that the pore cleaning effect on activated carbon would be enhanced. Besides, modifiers were distributed in pores very well by ultrasonic time was too long in the process of modified activated carbon particles for CO<sub>2</sub> gas could be improved. However, when ultrasonic time was too long in the process of modification, the pore would be collapsed and broken into small particles, and then the adsorption property declined.

# **CCS Images Gallery - New!**



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# **Upcoming Events**

All Energy 2017

Time: 2017/5/10 to 2017/5/11

Location: Glasgow, UK

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