

Conference announcement

Matt Stalker*

Sustainable Oil and Gas 2013 (Edinburgh, Scotland, November 25–26, 2013)

*Corresponding author: **Matt Stalker**, IChemE, 165-189 Railway Terrace, Rugby CV21 3HQ, UK, e-mail: mstalker@icheme.org

Synopsis

Society needs fuel for heating, cooking and transportation. The global chemical industry still depends heavily on hydrocarbon feedstocks. Demand is increasing rapidly as a direct result of population growth, industrialisation and increasing affluence in developing economies. In the face of resource depletion and climate change, IChemE has acknowledged the need for decarbonisation of the energy economy, and yet, as the recent Energy Technology Perspectives report published by the International Energy Agency makes clear, oil and natural gas will remain important to the global energy system for decades.

Post 2030 as CO₂ reductions deepen, gas fired generation will increasingly take the role of providing the flexibility to complement variable renewable energies and serve as peak load power. Gas will remain an important fuel in all sectors and global demand is predicted to be 10% higher in absolute terms in 2050 compared to 2009.

Oil extraction has not witnessed the same technological revolution as natural gas. However, the automotive industry is delivering more efficient vehicles, and biofuels are displacing oil products as liquid fuels to some extent. These developments are being driven by the increase in oil prices since 2005, and by government policies limiting carbon emissions. As a consequence, global use may fall by more than 50% by 2050. Nonetheless, hydrocarbon products derived from crude oil will retain their positions as important energy carriers and as feedstocks for the chemical industry.

New perceptions about the potential supply of conventional and ‘unconventional’ gas (such as shale gas) at relatively low cost are creating the possibility of unexpected expansion of gas markets in many parts of the

world. This development also has implications for the downstream chemical industry, particularly in the USA where energy self sufficiency is likely and a renaissance in commodity petrochemical production is widely anticipated. It is too early to tell whether Europe’s shale beds will prove as bountiful as America’s.

Platform for oil and gas industry

IChemE is heavily influenced by activity in the oil and gas sector. IChemE members can be found at work in upstream exploration and production as well as in downstream refining and processing and petrochemicals. This new conference, taking place in Edinburgh, UK in November 2013 will assess the impact of these trends with a specific focus on chemical engineering solutions for more sustainable hydrocarbon production and use in Europe in the first half of the 21st Century.

Covering every major aspect of the oil and gas industry with a particular focus on the challenges faced in Europe, the event will feature a mix of invited speakers, oral and poster presentations and a trade exhibition of related products and services.

Chairs

Upstream challenges & solutions

Geoff Maitland, IChemE deputy president and Professor of Energy Engineering, Imperial College London

Shale gas and other new opportunities

Brian Songhurst, Director LNG, Thyssenkrupp Uhde Energy & Power

The future of refining and petrochemicals in Europe

Paul Booth, President, SABIC UK Petrochemicals

The carbon management challenge

Malcolm Wilkinson, Director, Sustinium

Confirmed invited speakers

- Professor Jim Skea, chair in sustainable energy at Imperial College London and Research Councils UK Energy Strategy Fellow;
- Professor Paul Ekins, former UK Green Party member and director of the Institute for Sustainable Resources at University College London;
- Professor Richard Darton, former head of engineering science at Oxford University and past IChemE president, Professor Richard Darton.
- David White, President Water & Carbon Services, Schlumberger
- Professor Eric Mackay, Chair in Reactive Flow Simulation, Heriot-Watt University

For the latest information visit www.icheme.org/sog2013

Location

The conference will take place at the John McIntyre Conference Centre in Edinburgh.

Further information

The conference will cover the following topics:

- Upstream challenges and solutions: advanced drilling technologies; hydrocarbon production in extreme environments; improved reservoir management and recovery optimization; and recovery of non-conventional hydrocarbons – oil shales, tar sands, heavy oil.
- Shale gas and other new opportunities: unconventional gas – shale gas and coal bed methane; shale gas – geology and reservoir development, environmental impact and opportunities; coal bed methane – geology and reservoir development, gas gathering; environmental impact and opportunities; processes for monetisation; and gas market impact.

- The future of refining and petrochemicals in Europe: process engineering solutions to the low margin challenge in older refineries; strategies for refinery reconfiguration in the face of changing transport fuel demand; new approaches to improved cracker flexibility optimisation and maintenance strategies for ageing petrochemical plant; product and process engineering pathways to lighter stronger polymers; and keeping oil in the European energy mix to 2050.
- The carbon management challenge: alternative energy scenarios; solving the CO₂ disconnect; the economics of climate resilience; and negative emissions technologies.

Sustainable Oil and Gas 2013 is an international symposium and whilst the conference is primarily focused on the European chemical and process industries, contributions are welcomed from all regions where the energy challenge is being addressed.

For the latest information visit www.icheme.org/sog2013

