

# UK SHALE GAS THE ENGINEERS' SUMMIT 2015

Institution of  
**MECHANICAL  
ENGINEERS**

Process Division  
**Seminar**

24 February 2015  
etc venues, St Paul's, London  
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**THE ONLY SHALE GAS EVENT THAT EMPOWERS ENGINEERS TO UPDATE AND EDUCATE THE UK COMMUNITY ON THE REALITIES OF SHALE GAS PRODUCTION.**

# UK SHALE GAS THE ENGINEERS' SUMMIT

24 February 2015, etc venues, St Paul's, London



## THE ONLY SHALE GAS EVENT THAT EMPOWERS ENGINEERS TO UPDATE AND EDUCATE THE UK COMMUNITY ON THE REALITIES OF SHALE GAS PRODUCTION.

With the North Sea expected to support the UK's energy policy for a maximum of 20 years, the pressure to explore alternative energy sources is greater than ever. Shale gas, although not a new energy source, is a potentially successful and valuable resource for the UK.

This seminar will explore the methods and processes that are implemented to extract shale gas as well as the information that needs to be shared to change the UK's public perception of shale gas.

Discover how the Government is taking note from lessons learned in the USA and putting stricter measures in place to ensure that operational activity (drilling/hydraulic fracturing) is monitored efficiently.

### NEW FOR 2015:

- **HSE and Environment Agency** discuss shale gas regulations
- **UKOOG** explain how they will support the development of the UK supply chain
- **National Grid** discuss their expected role in future supply chain scenarios
- **Cuadrilla Resources, Centrica and IGas Energy** present practical operational case-studies

### PARTNERING ORGANISATION:



### MEDIA PARTNER:



### WHAT 2014 ATTENDEES HAD TO SAY:

"An excellent insight into the status of shale gas development in the UK"

"Great learning experience... with real industry experts delivering in-depth presentations"

"Good value for such an effective networking event"

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# PROGRAMME

**TUESDAY 24 FEBRUARY 2015**

**08:30 REGISTRATION AND REFRESHMENTS**

**09:00 CHAIR'S OPENING REMARKS**  
Tim Fox, Head of Energy and Environment, Institution of Mechanical Engineers

## **MAPPING THE UK SHALE GAS INDUSTRY: WHO DOES WHAT?**

**09:10 KEYNOTE: THE ROLE OF UKOOG IN THE UK SHALE GAS MARKET**  
**Ken Cronin, Chief Executive Officer, UKOOG**

- Representing the UK oil and gas onshore industry and supporting the exploration and production of shale gas and developing the UK supply chain
- Working with the industry to ensure guidelines are established and implemented effectively
- UKOOG's main areas of priorities to boost shale gas development between 2015 and 2020

**09:40 HEALTH AND SAFETY REGULATIONS FOR ONSHORE OIL AND GAS PRODUCTION**  
**Tony Almond, Offshore and Pipelines Policy Team, HSE**

- Providing a safe operating environment throughout the lifecycle of shale gas wells
- Ensuring well operators are maintaining the highest level of safety particularly in well integrity
- Working with the Environment Agency to minimise the risk of leaks and water contamination

**10:10 ENVIRONMENTAL RISKS AND REGULATION IN ENGLAND**  
**Tony Grayling, Director Sustainable Business and Development, Environment Agency**

- The role and approach of the Environment Agency in regulating onshore oil and gas
- Working with HSE to ensure that environmental standards are met
- Engaging with local communities on environmental permitting decisions

**10:40 NETWORKING REFRESHMENT BREAK**

## **UK SHALE GAS SUPPLY CHAIN**

**11:10 SHALE GAS SUPPLY SCENARIOS**  
**Simon Durk, Gas Supply Manager, Energy Strategy and Policy, National Grid**

- Projecting shale scenarios from no progression to successful development
- Accumulating sufficient production data
- Working with industry to support a future supply chain

## **SUSTAINING A HIGH LEVEL OF WELL INTEGRITY**

**11:40 EFFECTIVE MONITORING OF OPERATIONAL DRILLING AND ACTIVE WELLS**  
**Eric Vaughan, Well Services Director, Cuadrilla Resources**

- Preparation prior to drilling; identifying the location and setting up the drilling rig
- Materials used to support the drilling process
- Highlighting the potential engineering challenges associated with drilling shale gas wells in the UK

**12:10 LOCATION, PLANNING AND PREPARATION: A CASE STUDY**  
**John Blaymires, Chief Operating Officer, IGas Energy**

- The engineering challenges associated with unconventional gas
- Technology and equipment to enhance the success of drilling
- A step-by-step insight into the production cycle of shale gas

**12:30 NETWORKING LUNCH**

## INTEGRATED WATER MANAGEMENT: THE WHOLE LIFECYCLE

13:30

### FROM START TO FINISH: USING AND DISPOSING OF WATER IN THE HYDRAULIC FRACTURING PROCESS

Steve Thompsett, Executive Director, UKOOG

- An insight into the whole lifecycle process of integrated water management from baseline monitoring to shale gas extraction
- Safely storing water and understanding the potential risks of underground storage
- Raising awareness and safety standards when operating in a densely populated area

14:00

### ADHERING TO STANDARDS TO MINIMISE CONTAMINATION

Ian Davey, Senior Advisor, Environment Agency

- Upholding the Environment Agency's high standards of ensuring a minimum impact operating environment for shale gas operators
- Measures to reduce water contamination, including the monitoring of storage reservoirs
- Ways to minimise the risks associated with hazardous water storage

14:30

### NETWORKING REFRESHMENT BREAK

## COMMUNICATING WITH THE PUBLIC: AN ENGINEER'S PERSPECTIVE

15:00

### SUPPORTING THE SCIENCE TO EDUCATE THE PUBLIC

Mathew Humphrey and Sarah O'Hara, School of Politics and International Relations, University of Nottingham

- An overview of UoN Public Perceptions of Shale Gas Report
- Defining shale gas as an acceptable energy source in public discourse
- Understanding public perceptions and how facts can alter such perceptions

15:30

### THE TECHNICAL REALITIES OF SHALE GAS EXTRACTION AND PRODUCTION

Confirmed Representative, Centrica

- Understanding an engineer's role in shale gas development
- The practicalities of engineering shale gas production
- Trying to educate and reassure the public through facts as opposed to myths – how should engineers communicate on shale gas?

16:00

### PANEL SESSION: HOW WILL THE UK RETAIN AND SUPPORT THE TRANSFERENCE OF ENGINEERING SKILL SETS REQUIRED TO SUPPORT SHALE GAS DEVELOPMENT?

Tim Fox, Head of Energy and Environment, Institution of Mechanical Engineers  
Gordon Ballard, Chairman, OPITO

Ken Cronin, Chief Executive Officer, UKOOG

- Can current training and education for engineers be applied to the shale gas industry?
- How do industry and operators plan to attract young engineers?
- Will the role of engineers increase should momentum build in 2015?

16:20

### CHAIR'S CLOSING REMARKS

16:30

### CLOSE OF SEMINAR

Find out more about our speakers at [www.imeche.org/events/S1825](http://www.imeche.org/events/S1825)

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

### Organising committee:

Process Division

## **SPEAKERS AND CONTRIBUTORS**



**AN EXCELLENT  
EVENT WHICH BRINGS  
TOGETHER EXPERTS  
FROM ACROSS THE  
INDUSTRY TO SHARE  
THEIR EXPERIENCE.**

**- University of Southampton**

### **KEN CRONIN KEYNOTE SPEAKER CHIEF EXECUTIVE OFFICER, UKOOG**

Ken Cronin is the Chief Executive of the newly re-launched trade body UKOOG (UK Onshore Oil and Gas). UKOOG is the representative body for the UK onshore oil and gas industry including exploration, production and storage across both conventional and unconventional sources. Ken has more than 20 years' global experience in media, investor and government relations and has worked in and with many companies across the nuclear, renewables, oil and gas and power sectors. Prior to his role at UKOOG, Ken spent 10 years at worldwide communication agency Kream Gavin Anderson as Head of Global Energy.

### **TIM FOX CHAIR HEAD OF ENERGY AND ENVIRONMENT, INSTITUTION OF MECHANICAL ENGINEERS**

Tim Fox has worked in commercial enterprises, government agencies and educational institutions in the UK, Australia, Canada and The Netherlands. Tim is currently Head of Energy and Environment at the Institution of Mechanical Engineers.

### **TONY ALMOND OFFSHORE AND PIPELINES POLICY TEAM, HSE**

Tony Almond joined HSE in April 2005 working as Communications Manager on the Work at Height Regulations. Tony also led on the UK response to a European Commission proposal to reduce ergonomic risk factors and musculoskeletal disorders. He then worked as part of a team leading on workplace safety policy, including work at height, slips and trips, confined spaces and other cross-cutting workplace hazards. Tony later moved to his current role on shale gas and oil policy in 2013. Before HSE he worked for Department of Work and Pensions (DWP) for 18 years where he held a number of health and safety related posts.

### **TONY GRAYLING DIRECTOR SUSTAINABLE BUSINESS AND DEVELOPMENT, ENVIRONMENT AGENCY**

Tony Grayling has worked with the Environment Agency since 2008 where he joined as Head Environmental Policy. Since then Tony has progressed and is now responsible for the agency's work on technical and cross-cutting issues. Tony has a wealth of experience having held positions within the Labour Party, Institute of Public Policy Research and Department of the Environment, Transport and the Regions. Tony studied at the University of Cambridge between 1982 and 1990, where he received a BA in Natural Sciences and a PhD in Plant Sciences.

### **SIMON DURK GAS SUPPLY MANAGER, ENERGY STRATEGY AND POLICY, NATIONAL GRID**

Simon Durk joined National Grid in 2001 as an operational research specialist. In 2013 Simon was appointed to Gas Supply Manager within National Grid's Energy Strategy and Policy department. Prior to joining National Grid Simon worked for Cap Gemini as an operational research analyst for eight years and holds a BSc in Chemistry from UCL and a MSc in Operational Research from LSE.

### **STEVE THOMPSETT EXECUTIVE DIRECTOR, UKOOG**

Steve Thompsett is Executive Director at UK Onshore Oil and Gas (UKOOG). He has an extensive background in environmental risk management, developed in both the public and private sector over the last 20 years. For DECC he co-ordinated much of the early policy work on shale gas, including the establishment of the Office of Unconventional Gas and Oil. He has previously worked for the Environment Agency and Defra, having led policy work on flood and coastal risk management and marine issues. As a consultant he was Head of Climate Resilience and Adaptation at Jacobs and more recently Director of Water and Energy Environment at CAPITA. Steve drives UKOOG's work on regulation, European interests and disclosure amongst other issues.

## **SPEAKERS AND CONTRIBUTORS**



**VERY GOOD  
INSIGHT INTO  
THE DEVELOPING  
INDUSTRY OF SHALE  
GAS RECOVERY.**

**- Centrica**

### **IAN DAVEY**

#### **GROUNDWATER TEAM, ENVIRONMENT AGENCY**

Ian Davey began his career in oil exploration, working in Europe and the Middle East, before turning to the water industry. He has more than 30 years' experience in managing water resources and quality, much of this in dealing with land and groundwater contamination. He has provided support to prospective EU member states in implementing water directives and spent a number of years working with government departments in Poland and Bulgaria. In the last few years Ian has worked mostly on integrated river basin management in the UK and other parts of Europe. More recently he has taken a leading role for the Environment Agency on unconventional gas exploration and groundwater protection. Ian is currently Chair of JAGDAG (Joint Agencies Groundwater Directive Advisory Group), which considers whether substances are hazardous under the Groundwater Daughter Directive. He represents the UK on the EU's Water Framework Directive working group on groundwater.

### **MATHEW HUMPHREY**

#### **HEAD OF SCHOOL OF POLITICS & INTERNATIONAL RELATIONS, UNIVERSITY OF NOTTINGHAM**

Mathew Humphrey is a Reader in Political Philosophy and Director of External Relations. Some of his recent work has centred upon the relationship between environmental policy outcomes and democratic processes. Mathew teaches across three different areas of political theory. Firstly with regard to the theory of environmental politics, secondly on analytical political philosophy and theories of justice, and finally on theories of ideology. Mathew's main area of research is in political theory and the environment, with a subsidiary interest in theories of ideology.

### **SARAH O'HARA**

#### **FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF NOTTINGHAM**

Sarah O'Hara is currently Pro-Vice-Chancellor of Academic Planning within the Faculty of Social Sciences at the University of Nottingham. Sarah's main areas of research include: water management strategies in the former Soviet Republics of Central Asia, dust and health in the Aral Sea Basin, Late Holocene Environmental Change in Southern Alberta, the Ancient Raqqa (Syria) Industrial project as well as recent and long-term environmental change in Mexico. More recently Sarah has been engaging in an ongoing study, Public Perceptions of Shale Gas in the UK, with Professor Mathew Humphrey.

### **JOHN BLAYMIRE**

#### **CHIEF OPERATING OFFICER, IGAS ENERGY**

John Blaymires has 29 years of international experience in the oil and gas industry gained at Hess Corporation and Shell International. Before joining IGas, he was Director of Technology Development for Hess based in Houston.

### **ERIC VAUGHAN**

#### **WELL SERVICES DIRECTOR, CUADRILLA RESOURCES**

Eric Vaughan has over 30 years of experience in the drilling and well service industry. He is a former US and European regional manager for NOWSCO Well Service, where he managed significant onshore oilfield service operations.

# BOOKING FORM

EVENT CODE: S1825AB

**EARLY BIRD ENDS 19 DECEMBER**

**UK SHALE GAS  
THE ENGINEERS' SUMMIT 2015**  
24 February 2015  
etc venues, St Paul's, London  
EC1A 4HD

**REGISTRATION** Please complete in capitals.

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| Do you have any special requirements? |                       |

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 News and updates from the Institution  
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**FEES AND CHARGES** Please complete the appropriate box.

Registration fees include entry to the sessions, refreshments, lunch and a copy of the event proceedings.

|   | <b>EARLY BIRD RATE</b><br>Before 19 December 2014 | <b>STANDARD RATE</b> | <b>TOTAL</b> |
|---|---|----------------------|--------------|
| Member, Institution of Mechanical Engineers | £260.00+VAT                                       | £310.00+VAT          | £            |
| Member, supporting organisation             | £260.00+VAT                                       | £310.00+VAT          | £            |
| Non-member                                  | £355.00+VAT                                       | £420.00+VAT          | £            |
| Student/retired                             | £70.00+VAT  | £85.00+VAT           | £            |

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**Payment must accompany this registration form. Registration will be confirmed only on receipt of full payment.**

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London

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[www.imeche.org/events/S1826](http://www.imeche.org/events/S1826)



9 December 2014  
Aberdeen

### PIPING AND PIPELINE RISK-BASED INSPECTION

The UK oil and gas industry is facing its greatest challenge yet as the demand for energy across the UK continues to grow. A consequence of this is the pressing need for operators to ensure greater asset integrity both on and offshore.

[www.imeche.org/events/C1420](http://www.imeche.org/events/C1420)



15 April 2015  
Coventry

### ESSENTIAL MANAGEMENT SKILLS FOR ENGINEERS 2015

This event promotes the development and improvement of the next generation of engineers. Recent economic problems mean that this conference is more important than ever. Companies need to invest in their most vital assets, their employees, to ensure that their business can succeed.

[www.imeche.org/events/C1421](http://www.imeche.org/events/C1421)

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