Department of Energy & Climate Change

Shale gas development in the UK

Edinburgh 12 November 2014

Department of Energy & Climate Change

Agenda

Gas in the UK energy mix

Benefits, how development might proceed

Is it safe and how is it regulated?

How does it fit with our climate goals?

HMG efforts to encourage development

Public engagement

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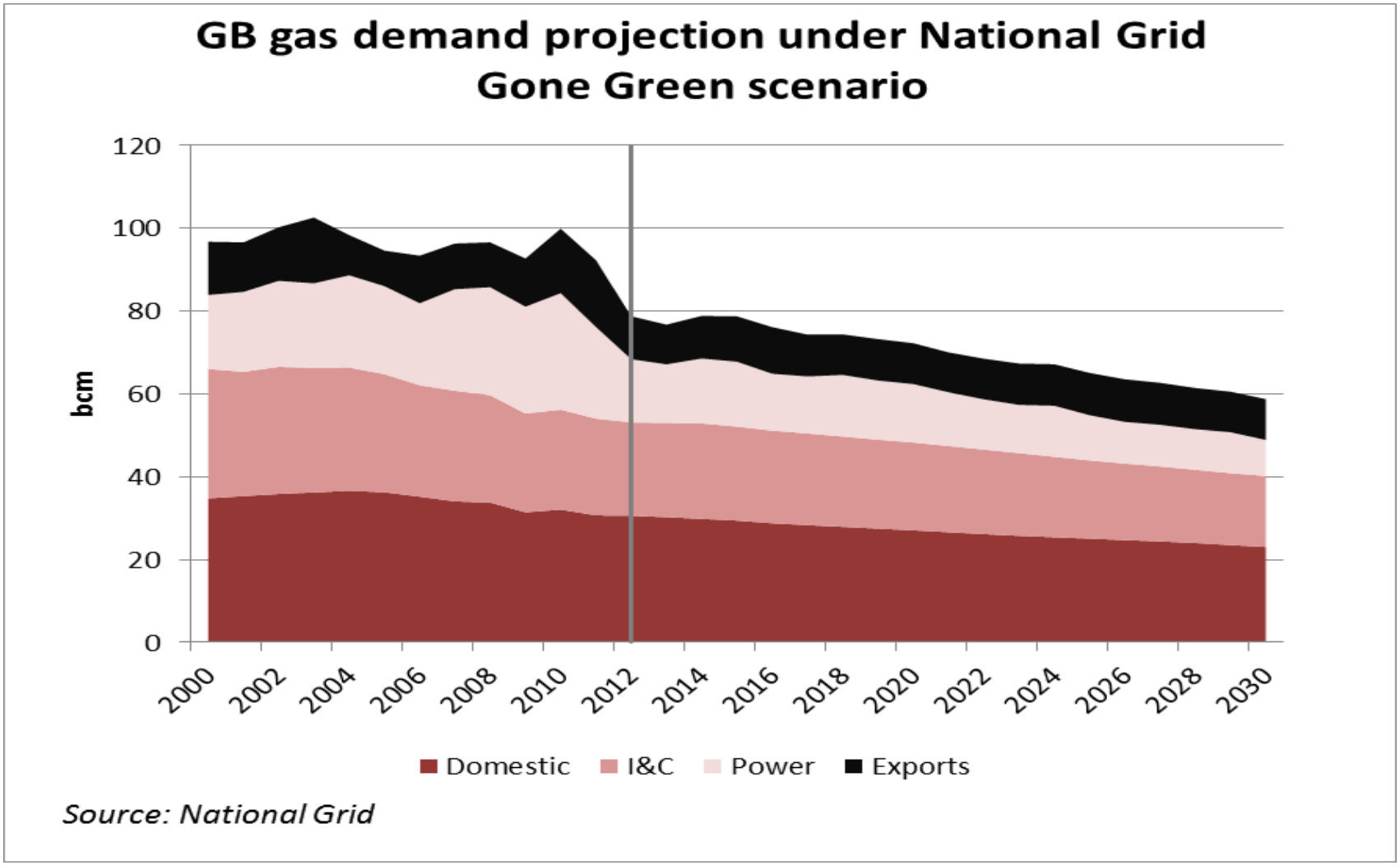
How much gas do we use?



Source: National Grid

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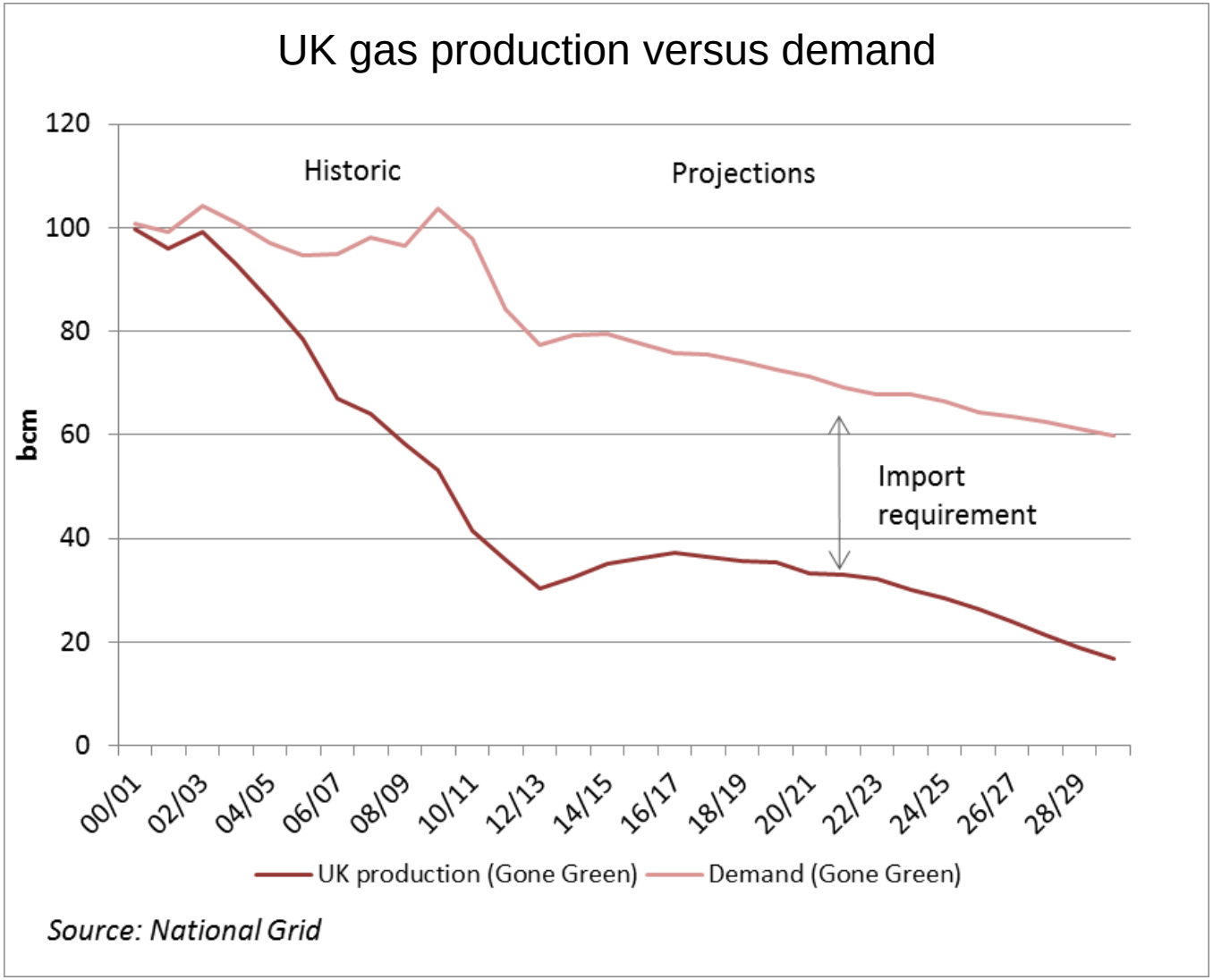
Where do we get gas from?



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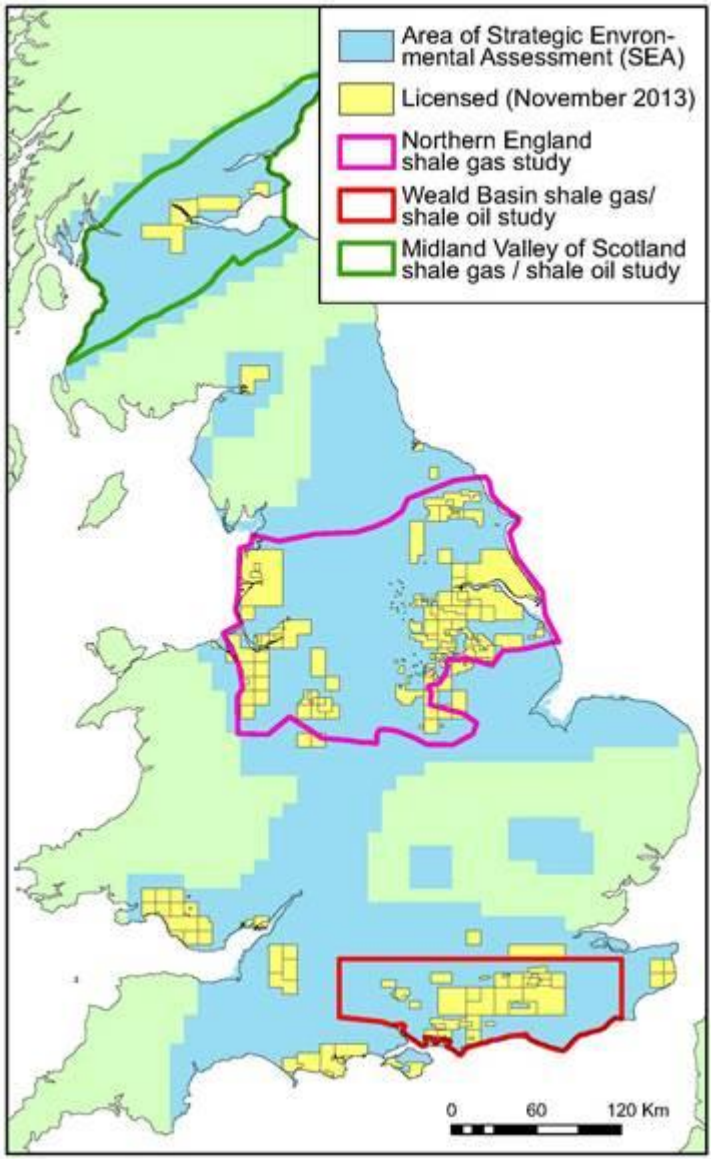
Potential economic contribution

One scenario: UK Institute of Directors report on UK Shale Gas Potential (2013):

- Production could peak at ~32bcm per year
- Likely decrease use of imported gas
- Could support around 70,000 jobs
- Net benefit to the Treasury in tax revenues



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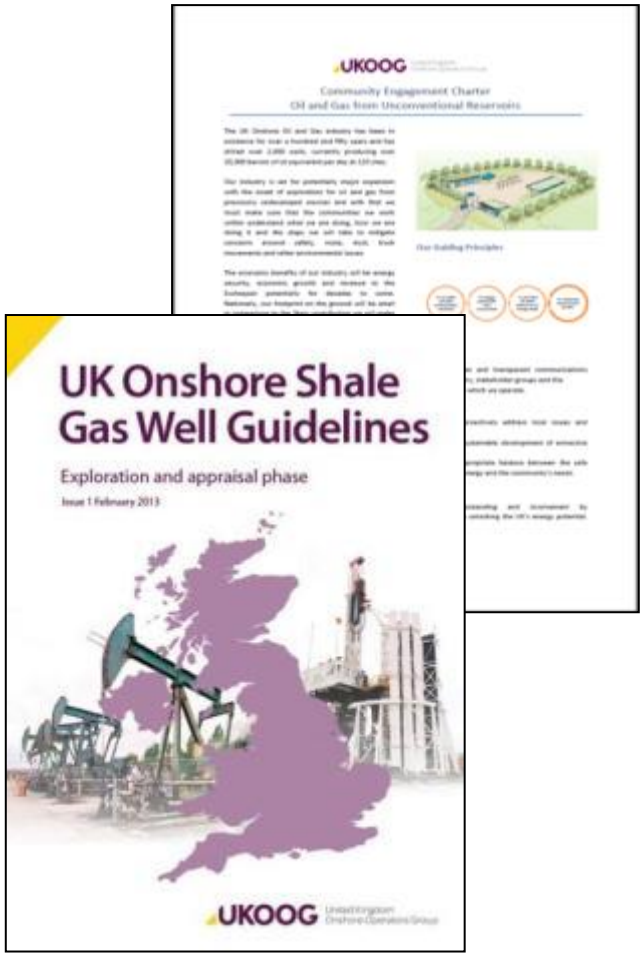
Communities would also benefit

Industry-led Community Engagement Charter

- Engage early: before any planning application
- Exploration stage: £100,000 in community benefits per hydraulically fractured well-site
- Production stage: 1% of *revenues* to local community
- Annual report: evidence of how Charter has been met
- Regular review: Operators to consult further as industry develops



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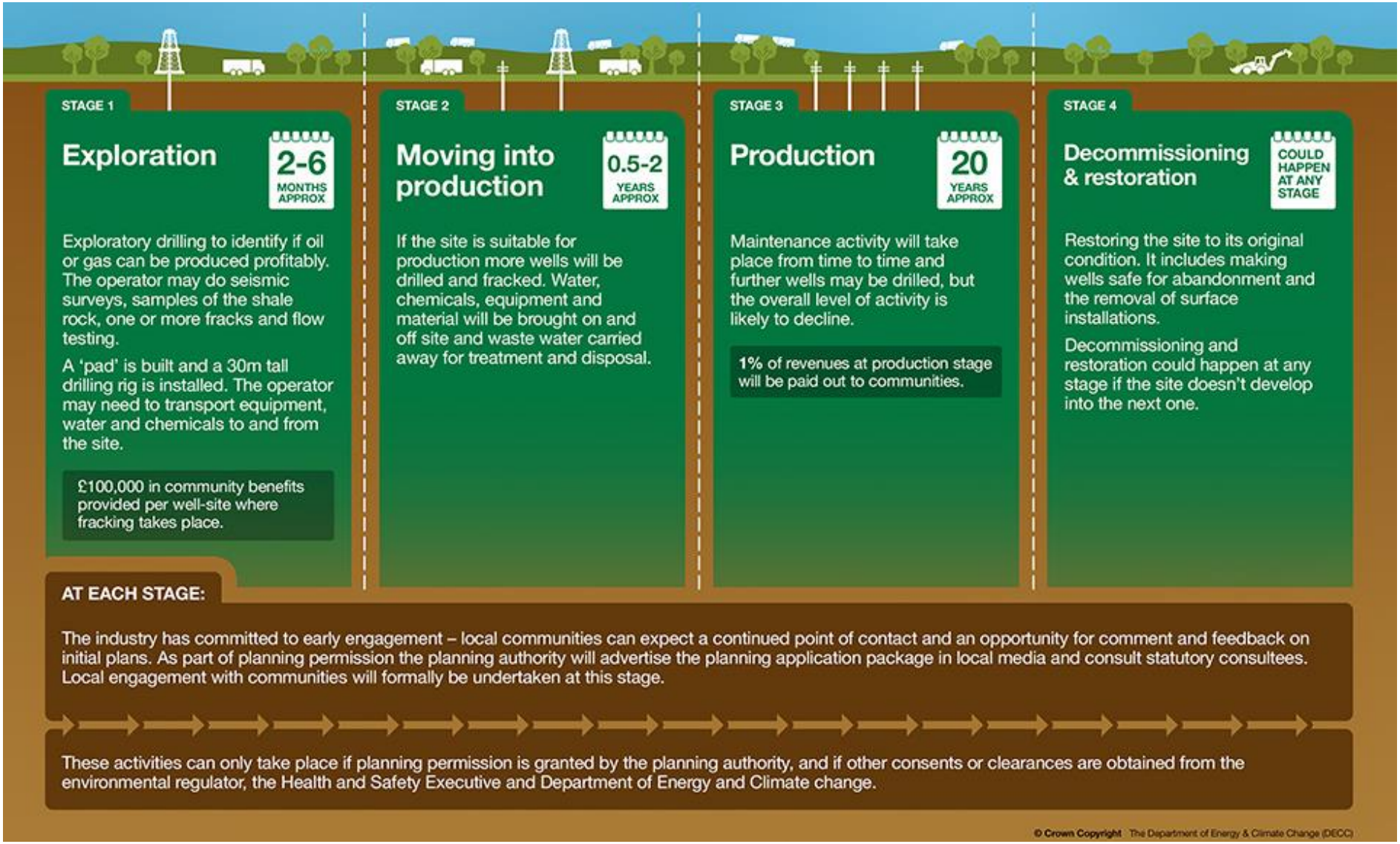
How might development run?



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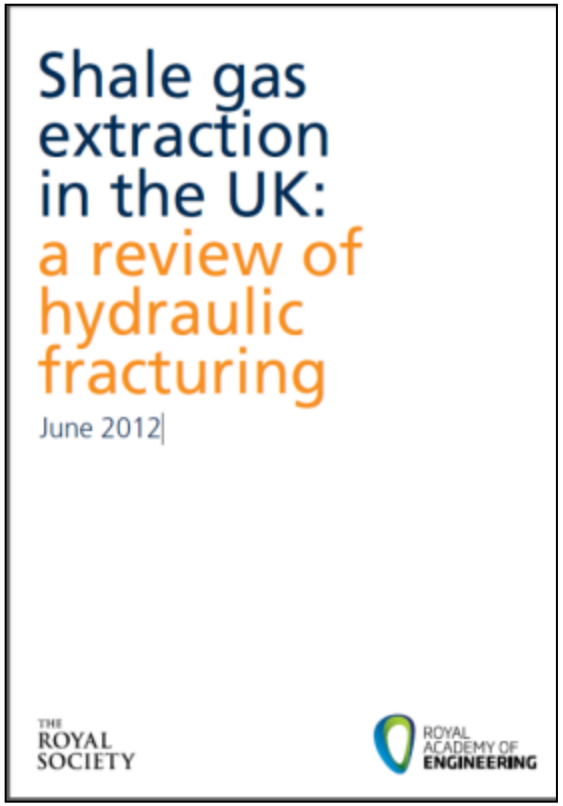
Is it safe?

June 2012 Royal Academy of Engineering/ Royal Society independent review of the scientific and engineering evidence on risks associated UK shale gas development:

"…risks can be managed effectively in the UK, if operational best practices are implemented and enforced through regulation."

HMG accepts and is implementing recommendations.



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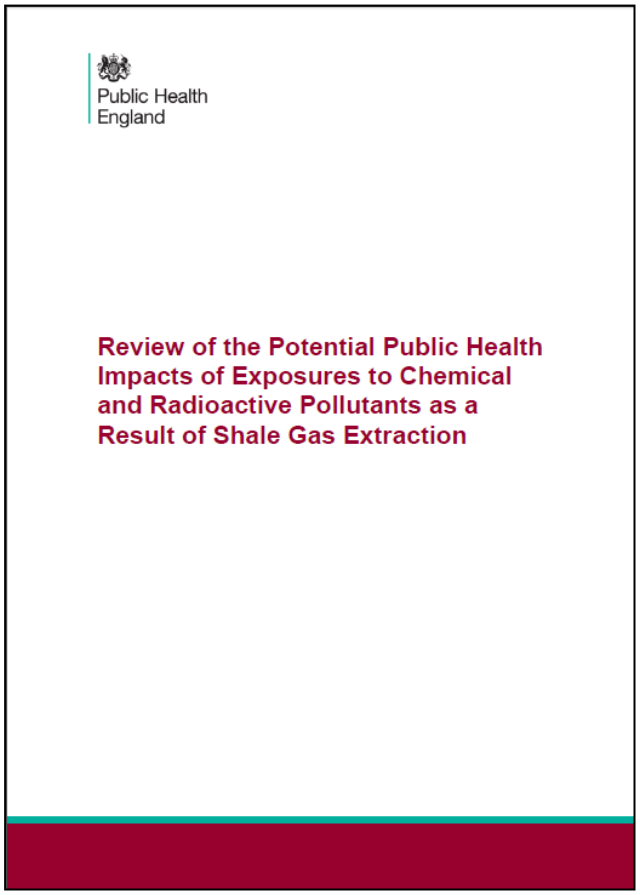
Does it harm public health?

June 2014 report concluded:

- "…potential risks to public health from exposure to emissions associated with shale gas extraction process will be low if the operations are properly run and regulated.
- "Where potential risks have been identified in other countries, the reported problems are typically a result of operational failure and a poor regulatory environment."



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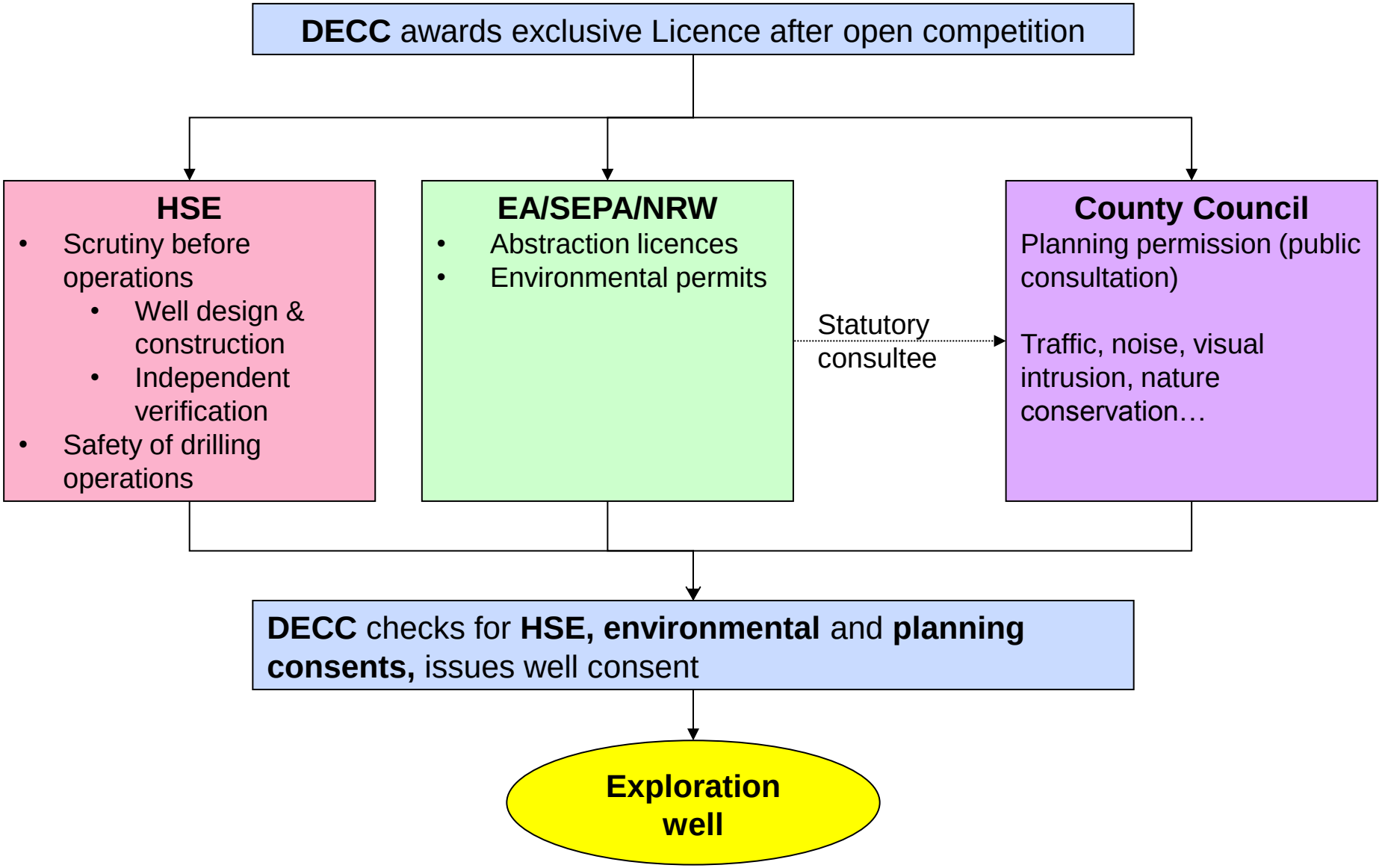
Regulatory process - exploration



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Regulatory Roadmap shows detail

- www.gov.uk/government/publications/regulatory-roadmap-onshore-oil-and-gas-exploration-in-the-uk-regulation-and-best-practice

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Onshore oil and gas exploration in the UK: regulation and best practice

Please select the country where the proposed drilling operation is to be located.

England | Wales | Scotland | Northern Ireland

Introduction

How to use this roadmap

Frequently asked questions

Pre-drilling approvals checklist

Bibliography

Glossary

Version 1.0
URN 13D/330

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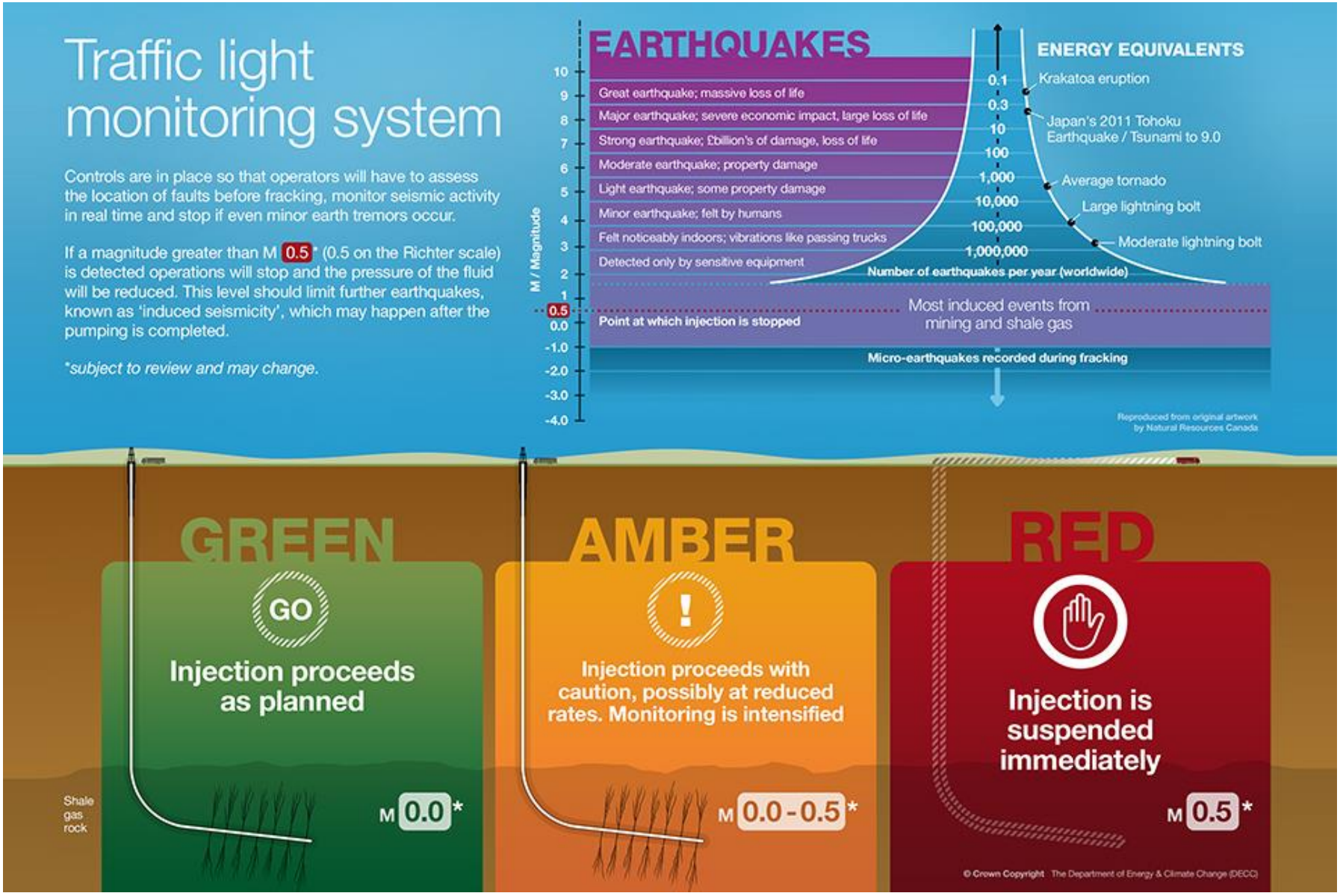
DECC covers seismic regulation



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Mackay-Stone on climate impact

Conclusions

- Shale CO_2 footprint < LNG, comparable to conventional gas sources
- Gas based electricity generation CO_2 footprint significantly lower than coal
- Local GHG emissions from operations a small proportion of the carbon footprint

Selected Recommendations

- ‘Reduced emissions completions’ should be adopted at all stages following exploration
- Monitoring and inspection of GHG emissions throughout process until production techniques fully understood and documented in UK
- Research to develop ever cleaner extraction techniques
- Research to monitor methane emissions

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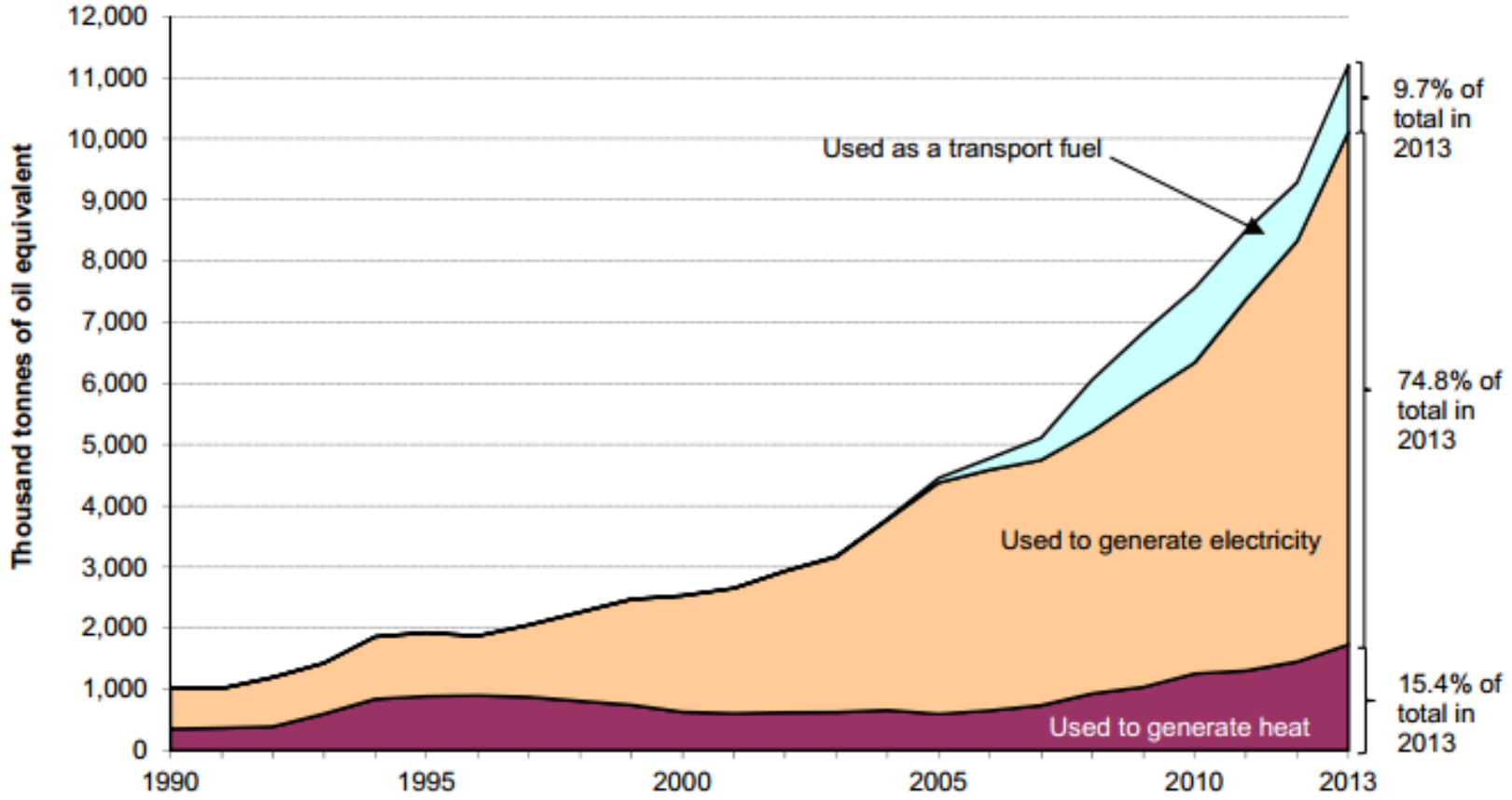
And HMG remains committed to renewables and improved efficiency

Chart 6.1.1: Renewable sources used to generate electricity, heat and for transport, 1990 to 2013



DECC, DUKES 2014

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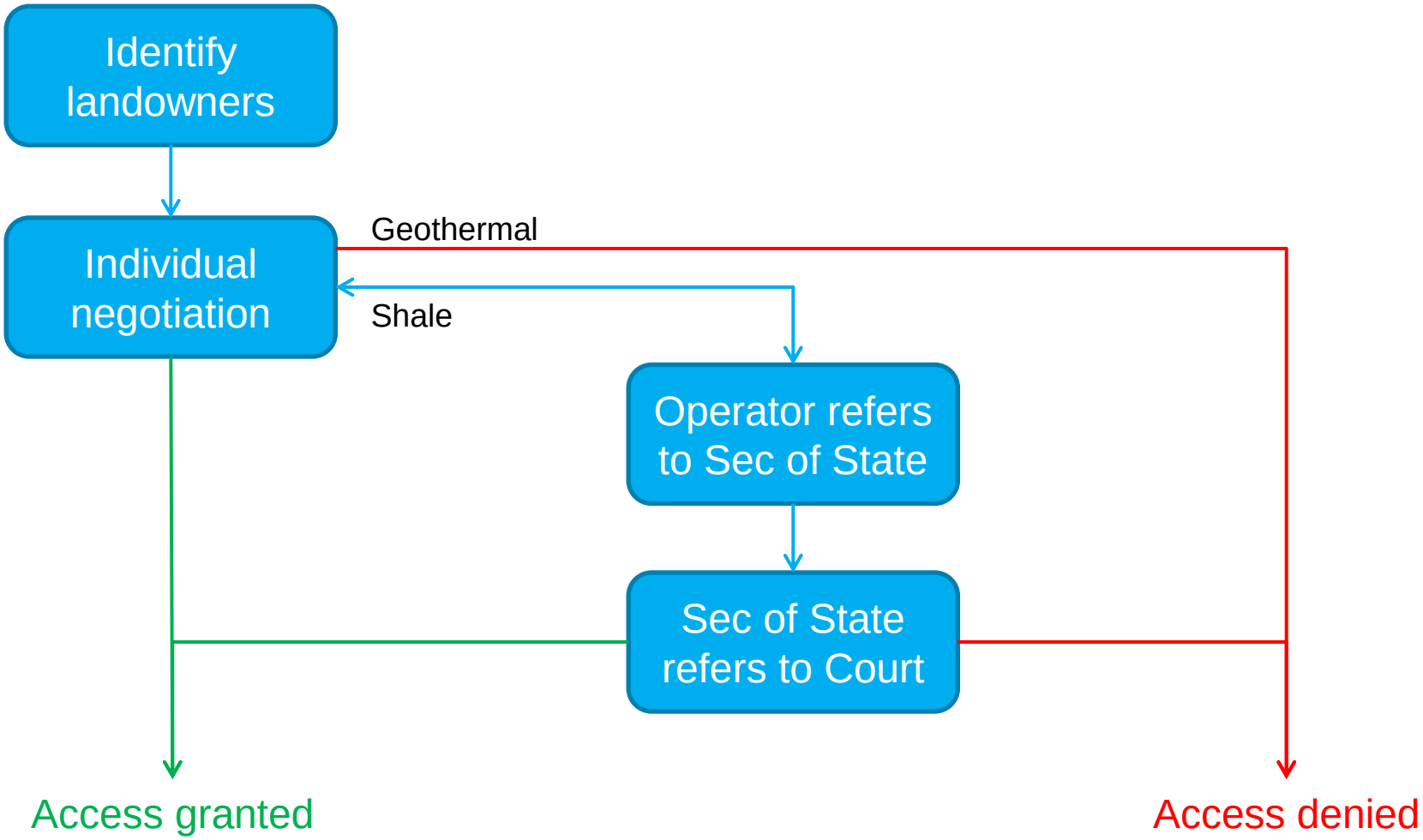
Current access powers



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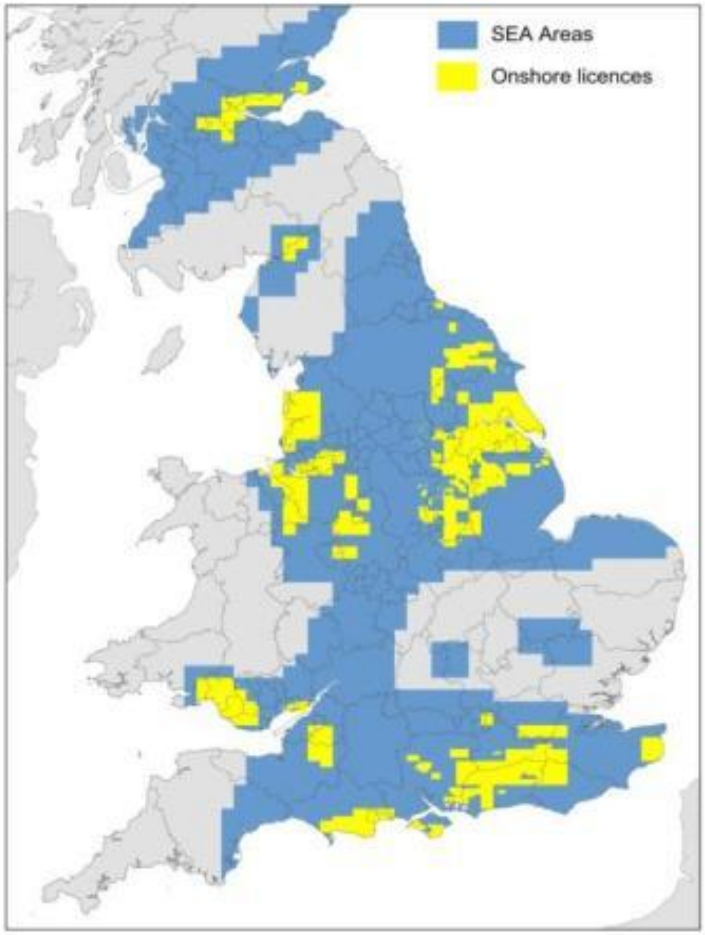
HMG promotes development

- **Licensing** - DECC conducting a Strategic Environmental Assessment (SEA) and launched 14th licence round. This has now closed and DECC hopes to be able to announce licence offers in the early part of 2015.
- **Tax** – A new planned pad allowance will reduce the tax paid on a portion of a company's income from 62% to 30%.
- **Rates** – Extend 100% business rates retention to shale production sites (in England)
- **Access rights…**



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Underground Access proposal

Our proposal currently going through Parliament would ***significantly simplify the existing procedure***, whilst ensuring that key features (such as payment) are retained.

1. Right of underground access

Granting ***underground access to land below 300 metres (nearly 1000 feet) from the surface*** to companies exploring and/or extracting oil, gas or geothermal energy.

2. Payment in return for Access

People living above underground drilling receive a payment from the company in return for the right of access. Industry has put forward a voluntary offer for a payment system, made at ***community level***. This will be a ***£20,000 one-off payment*** for each unique lateral (horizontal) well that extends by more than 200 metres. [subject to a reserve power]

3. Notification system for the community

The community informed via a ***voluntary public notification***, under which the company outlines matters such as the ***relevant area of underground land, coupled with details of the payment*** made in return for access. [subject to reserve power]

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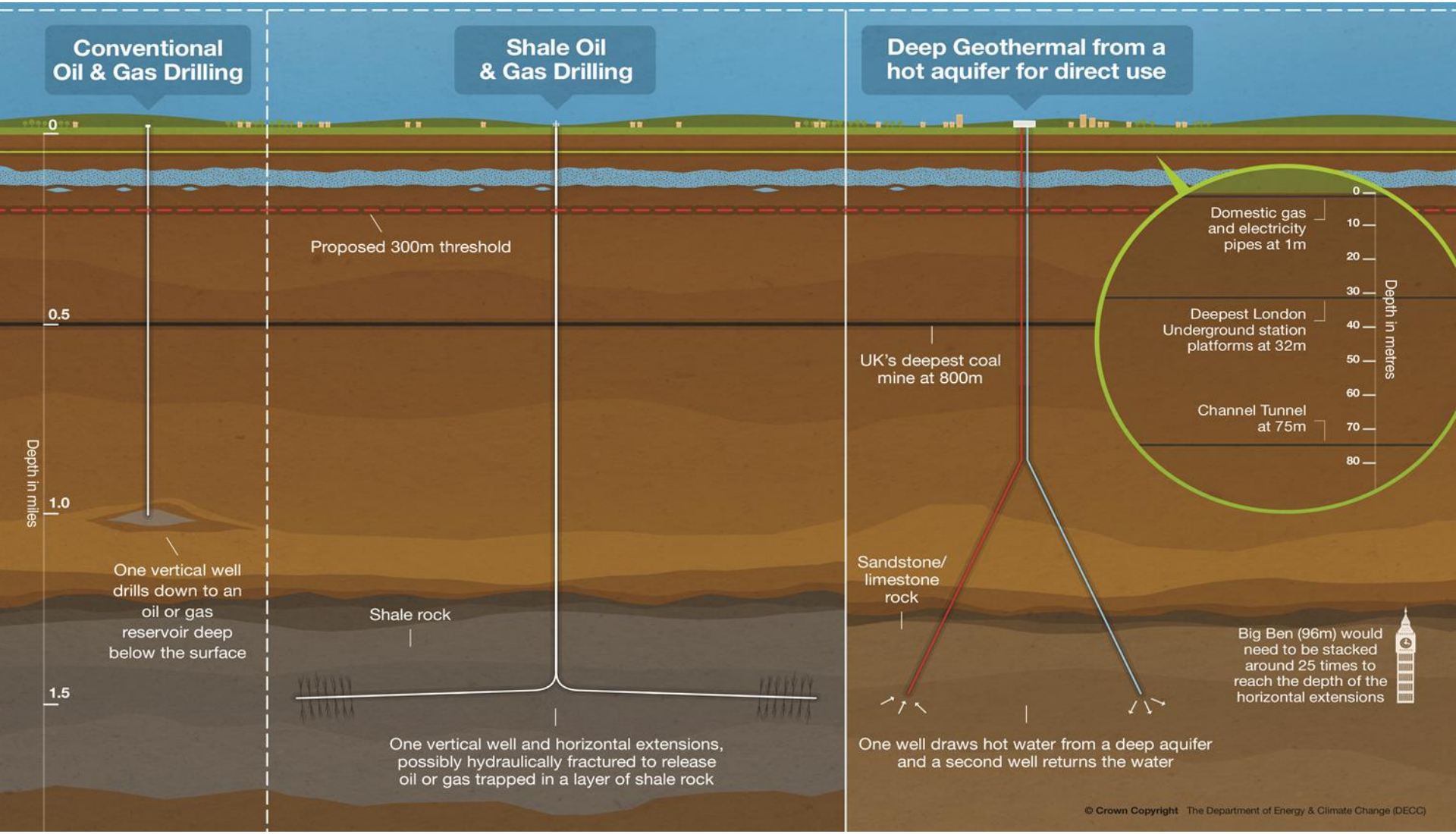
Access rights & depth in context



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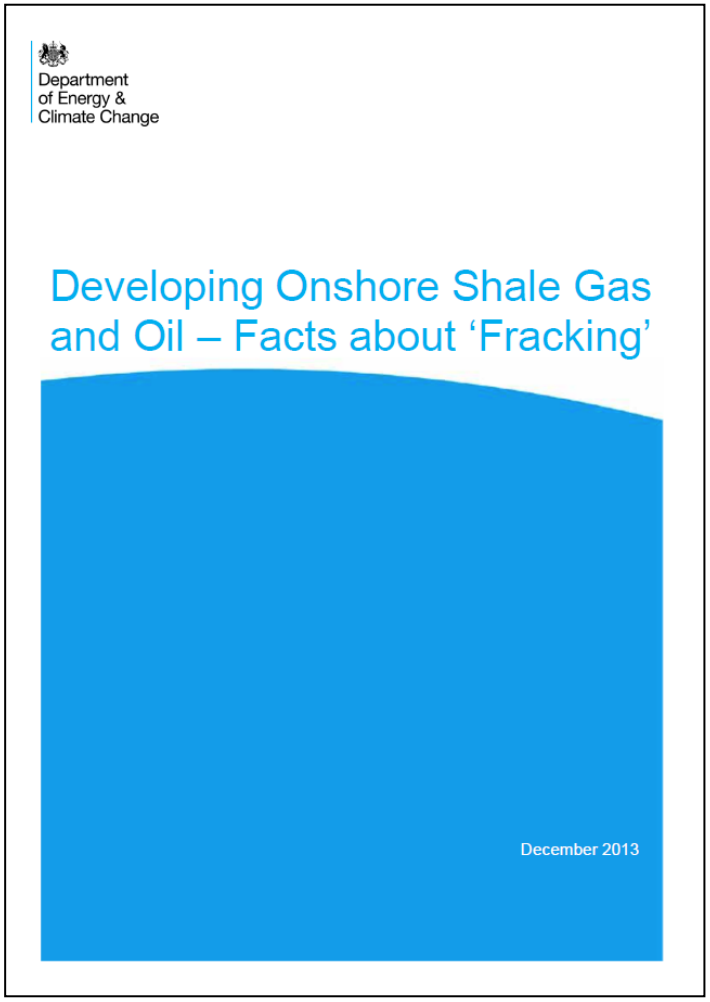
Informing the public

www.gov.uk/government/news/next-steps-for-shale-gas-production



Plus detail leaflets on:

- Regulation and monitoring
- Planning permission and communities
- Water
- Local air quality
- Understanding earthquake risk
- Safety from design to decommissioning
- Climate change

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Conclusions

- **We need gas** - bridge to a low-carbon future, with role to 2050 and beyond
- **UK shale gas** provides potential for energy security, economic growth, job creation and tax revenues
- Industry is subject to **robust regulation**
- Greenhouse gas **emissions** lower than imported LNG
- HMG fostering development
- Industry committed to **early community engagement**
- HMG providing information for constructive debate

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Thank you for listening

www.gov.uk/government/policy-teams/office-of-unconventional-gas-and-oil-ougo
www.gov.uk/oil-and-gas-onshore-exploration-and-production