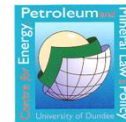


What lessons can be learned from onshore wind technology deployment for a developing UK shale gas sector

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- 1 The current UK shale gas situation**
- 2 Similarities and differences of onshore wind and shale gas**
- 3 Planning**
- 4 Public participation and engagement**
- 5 Community Benefits Approach**
- 6 Conclusion**

UK Shale Gas Situation

Relatively recent history in the UK

- Compared to the US
- No current extraction (early exploration)

No specific mention in UK legislation regarding shale gas

Anticipation of significant unconventional hydrocarbon (particularly shale gas) infrastructure deployment

- US-style?

STANDING ITEMS

12. Question(s) from Members of the Public

13. Notices of Motion (County Council Minute 169/26 July 2012)

The following Notices of Motion submitted to the County Council, by the Councillors shown below, have been referred to the Cabinet for consideration and report back:

(a) Gas Extraction (submitted by Councillor Hook):

that this Council will oppose any application seeking to extract shale gas by means of the process known as fracking

Recommendation: that the County Council be advised to take no further action on the Notice of Motion on the grounds that:

(i) it would be unlawful for the County Council to pursue a blanket resolution to oppose planning applications for shale gas exploration or extraction as this would effectively prevent it from considering any application in the required manner in accordance with the development plan and other material considerations;

(ii) no part of Devon is currently licensed for any form of oil or gas exploration, and the current round of licensing is still at an early stage;

(ii) geological formations with potential for shale gas are limited to the Lias group in the eastern corner of Devon, which are on the fringe of the extensive Lias outcrop that covers much of eastern and southern England;

(iv) while the environmental impacts of hydraulic fracturing (fracking), particularly in terms of water resources and land stability, can be significant, the Cabinet believes the likelihood of proposals being put forward in Devon is overstated.

STANDING ITEMS

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(a) Gas Extraction (submitted by Councillor Hook):

that this Council will oppose any application seeking

Recommendation: that the County Council

(i) it would be unlawful for the County Council to grant a licence for shale gas extraction as this would effect and other material considerations

(ii) no part of Devon

(iii) geological formations extend to the western and southern England;

(iv) while the likelihood of proposals being put forward in Devon is overstated.

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...stern and southern England;

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...e likelihood of proposals being put forward in Devon is overstated.

Growing opposition to shale gas deployment...

Lessons to be Learned?

Lessons to be learned from other recent technology deployment?

Onshore wind

- Deployment from the 1990s onwards
- Significant growth – over 3,000 turbines operational, 700 under construction, 1,800 approved and 3,000 planning applications approved
- Anticipated to drive overall renewable deployment
- Growing opposition to onshore wind infrastructure deployment

Significant barriers to deployment with negative implications...

Onshore wind and shale gas?

Requirement of a high number of installations characterised by

- Generating (turbines) or extraction (wells) structures
- Associated infrastructure
 - distribution/transmission cables; sub-stations (wind)
 - pipelines; storage and other infrastructures (shale)
 - roads (both)
- Need to navigate planning and public engagement and participation (opposition) hurdles in order to deliver the necessary infrastructure

Important Differences?

Onshore wind a renewable technology

- Environmentally (climate) friendly?

Targets/Obligations

Unconventional hydrocarbons are still hydrocarbons

Debate increasingly polarised and evidence-based discourse lacking...?

Examples of shale gas and onshore wind infrastructure



Shale Gas Infrastructure

Infrastructure

- Exploration/ Appraisal/ Extraction ('christmas tree')
 - how many? Number of platforms? Re-drilling? Spacing?
- Associated Infrastructure
 - pipelines (underground?)
 - storage (gas, waste water) onsite/offsite?
 - generating station (electricity) onsite/offsite?
 - roads (transport infrastructure)
- Small scale landscape impact?
 - scale of find; installation (well platform and associated infrastructure)

UK-Specific Characteristics

Population density

- US (30/km²), EU (100-200/km²), UK (290/km²)

Resource

- Site availability/ Geology of sites/ Water utilisation/scarcity/
Environmental restrictions (see below)/ Land use conflict/
Access to market/ Local opposition (see below)

Compensation to land owners

- Difficulties increase as level of drilling increases/ pollution event(s)?

Planning and Shale Gas

Exploratory investigations, testing and extraction require application for planning permission at the Local Planning Level

Development applications are assessed on their merits against the policies of the Development Plan and in light of advice from statutory consultees and representations received

Under current planning arrangements, LPA decides who to consult

The county council must determine applications in accordance with planning law

England

National Planning Policy Framework (2012)

- Ensure there are no unacceptable adverse impacts on the natural and historic environment, human health and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality
- Control, mitigate or remove at source any unavoidable noise, dust, particle emissions and blasting vibrations; establish appropriate noise limits for extraction in proximity to noise sensitive properties
- Clearly distinguish between the 3 phases of development (exploration, appraisal and production) and address constraints on production and processing within such areas

England

- Planning system requires separate permission for exploration, appraisal and production activities
- Each well pad requires separate planning permission
- Pre-application and front loading
- Planning conditions and obligations
 - noise, decommissioning and restoration, transport
- Sufficient resources available to necessary institutions (planning bodies, etc)

Scotland

Scottish Planning Policy (Consolidated SPP) (2010)

- No real difference with the NPPF

However, planning in general under more centralised (government) control in Scotland than in England

- Localism Act (2011); but
- Growth and Infrastructure Bill (2012)
- Possible shale gas assessed as a major infrastructure scale development in England... Implications?
- “Ensure an effective planning system”, produce technical planning guidance and “Properly align” planning system with licensing and regulatory regimes by end 2013... One-stop shop/ Centralisation?
- Scottish Government has more power over call-in decisions and can direct particular local development to be dealt as if major developments

Public Participation and Engagement

Public participation and engagement

- Need to build and maintain public support

How does planning legislation and policy encourage public participation and engagement in the

- Decision making process?
- Supporting shale gas infrastructure deployment?

Benefits of local participation and engagement

- 'Local' experts, conflict mitigation and issues of local democracy, improved support levels

Local Communities and Shale Gas

This has been a particularly detrimental issue for onshore wind and the problem is increasing

Shale gas has few of the benefits (perceived or otherwise) of renewable energy technologies

- Renewable, sustainable, (more) environmentally friendly, climate change mitigation
- Local people/ communities/ Local authorities could not undertake their own shale gas developments (expertise, time, awareness of the process, access to information, transparency and costs)
- Does have employment/economic benefits

Community Benefits

Onshore wind

- Typically in the form of a community payment (based on installed capacity)
- Other 'benefits' via planning conditions and obligations

However,

- Problems with NIMBYism concept
- Better information and access to decision making
- It is community ownership that alleviates planning and public participation and engagement as barriers to deployment

What is on offer for shale gas?

- Tax incentives...

“The concerns expressed by environmental groups and local organisations are both real and legitimate” (Tom Greatrex, Shadow Energy Minister)

- A good starting point

Such barriers to onshore wind deployment were greatly underestimated and two decades on are increasingly aggravating and constraining deployment... and increasing costs

Unconventional hydrocarbons and shale gas in particular are currently at the stage where they can be addressed appropriately

thank you
and questions

