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Learning from Lancashire: Exploring the contours of the shale gas conflict in England

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ABSTRACT

This paper explores the conflict over shale gas exploration in Lancashire where the company Cuadrilla is preparing to horizontally drill and hydraulically fracture the first shale gas wells in England. At present, this is the only location in Europe where new commercial exploration for shale gas is underway, thus the outcome has wider significance. The initial planning applications were refused by Lancashire County Council in June 2015. The decisions were then appealed by Cuadrilla and there was a public enquiry in February and March of 2016. On 6 October 2016, the central Government over-turned the initial decisions at one site and gave Cuadrilla more time to address traffic concerns at the other. The paper uses the public enquiry to map the contours of the shale gas conflict. It is divided into three sections. The first explores public attitudes towards shale gas development in the UK and reveals growing public awareness and increasing opposition. The second presents the conceptual frame for the analysis, which includes both a critical assessment of the social licence to operate (SLO) and an introduction to a social, actuarial, and political risk and licensing model (SAP Model). The third deploys the SAP model to analyse the public enquiry. The model explains how Cuadrilla is able drill despite the absence of both a local political and social licence to operate. It is concluded that unless the industry and the government can address growing public concerns about shale gas development, continuing conflict could constrain commercial development.

1. Introduction

Horizontal drilling and high volume hydraulic fracturing have revolutionised the oil and gas industry in the United States. Having expected to be a significant importer of natural gas, in 2016 the US became a net exporter, natural gas is replacing coal in power generation—bringing carbon emissions—and industry now has access to an inexpensive feedstock. However, the 'fracking' of hundreds of thousands of wells is not without controversy and there is growing public concern about the environmental and social impacts, with development banned in several US states and localities (Thomas et al., 2017a, 2017b; Partridge et al., 2017; Whitton et al., 2017; Gamper-Rabindran, 2017). Given the positive macro-economic impact in the US, it is no surprise that the UK government seeks to replicate the experience. By contrast, the European Commission, and many member states and sub-national governments, have been more circumspect with bans or moratoria in place (Van de Graaf et al., 2017). In Poland, where support has been strongest (Goldthau and Sovacool, 2016; Lis and Stasik, 2017), the industry is no longer a commercial prospect (LaBelle, 2017). On reflection, it is fair to say that the 'shale gas revolution' is struggling to move beyond North America and in Europe the UK is a litmus test for the future of shale gas.

In January 2017, a site off the Preston New Road in Lancashire in the northwest became 'ground zero' for the shale gas conflict in England. A company called Cuadrilla Resources is engaged in site preparation and, daily, shale gas activists stage demonstrations to slow the pace of progress and to protest the UK Government's decision to allow drilling to proceed. There have been numerous arrests and the cost of policing is running into the hundreds of thousands of pounds; yet both sides seem determined to carry on regardless. A statement by the European Academies' Science Advisory Council (2014, 11) aptly summarises the current situation. They maintain that: '…even if fully compliant with laws and regulations, activities that are particularly intrusive or perceived to carry significant risks can be vetoed by a hostile public through campaigns, legal actions, demonstrations or other democratic pressures. Such industries must negotiate a "social licence" with their community to conduct their business.'

This paper deploys a critical engagement with the social licence to

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operate (SLO) and the social, actuarial, and political risk and licensing model (SAP Model) to explore the national context and local specifics of the shale gas conflict in Lancashire. It is organised into three sections: the first reviews public attitudes toward and understandings of shale gas development in the UK; the second presents a critical assessment of the SLO and introduces the SAP model. The third section uses the SAP model as a framework to analyse evidence from the Cuadrilla Resources planning appeal in Lancashire to map the contours of the shale gas conflict. This enables an assessment of the status of the various licences and their interaction. In the conclusion, discussion returns to the SLO and the SAP model and considers their efficacy in framing an analysis of the shale gas conflict in England. The wider implications of the conflict are also considered.

2. Context and review

This section provides the context for the conceptual and empirical components that follow. The first part uses UK government opinion surveys to chart changing public attitudes towards shale gas development in the UK. The second part presents a brief review of published academic research by UK social scientists on public perceptions of shale gas.

2.1. Public perceptions and understanding

Since 2012, the Department of Energy and Climate Change (now the Department of Business, Energy and Industrial Strategy or BEIS) has conducted a quarterly survey (known as the Wave Survey) that captures changing public attitude towards key energy and climate change issues at the national scale. The most recent data (Wave 21) was collected from a representative sample of 2180 UK households between 29 March and 2 April 2017 (BEIS, 2017). Questions about shale gas have been included in the survey since June 2012.

What do the Wave Surveys say about public attitudes to shale gas? First, there has been an increase in awareness over the period 2012, with 76% of respondents in Wave 21 indicating that they are aware of hydraulic fracturing for shale gas, up from approximately 40% in June 2012. However, this growth in awareness was not steady over this period, rather there was a steep increase in awareness in the period coinciding with the protests at Balcombe in West Sussex in the summer of 2013—with levels relatively stable thereafter. Second, there has been a gradual decline in support and an increase in the level of opposition. In Wave 21, only 19% of respondents supported shale gas development; while 30% opposed it, slightly down from the highest level of opposition (33%) in Wave 19 in autumn 2016. The share responding that they 'neither support nor oppose' has remained relatively stable at 49%, with only 2% now replying that they 'did not know'. In Wave 21, of the 49% that 'neither support nor oppose' hydraulic fracturing for shale gas, 74% put this down to 'not knowing enough about it'. Third, the survey provides insight into the primary reasons for support or opposition. The most frequent reasons for support were: need to use all available energy sources; reduces dependence on fossils fuels (coal, oil); reduces dependence from other countries, may result in cheaper energy bills, and good for local jobs and investment. Conversely, the most frequent reasons for opposition were: loss/destruction of natural environment; risk of contamination to water supply; too much risk/uncertainty to support at present; risk of earthquakes and not a safe process. How do these trends compare with the rest of the EU? With the notable exception of Poland, significant and rising levels of opposition to shale gas is common across the EU, as are the concerns identified above (Bradshaw, 2016).

Parallel surveys by the University of Nottingham (Andersson-Hudson et al., 2016) show similar public attitudes in the UK. Their latest survey (O'Hara et al., 2016), conducted by YouGov from 29 September to 3 October 2016, showed 37.3% of respondents in favour and 41% against shale gas development. This was the first time that the share opposing was greater than those who supported development. The two surveys are not directly comparable, and neither is longitudinal, nonetheless, they both suggest an increasing and now high level of awareness with growing and now significant opposition to shale gas at the national level. The Nottingham survey explored the relationship between knowledge and support and suggested there is a positive relationship between the two, those who knew what shale was were twice as likely to support its development (Stedman et al., 2016, 146). However, as the 'knowledge gap thesis' suggests (Rayner, 2004; Sturgis and Allum, 2004), it would be misguided for industry and government to assume that providing more 'positive' information to the majority who are undecided due to a lack of knowledge would necessarily result in higher levels of support. Interestingly, the Nottingham researchers suggested using the Social Licence to Operate framework to test approval at the local level (Andersson-Hudson et al., 2016, 588).

2.2. Social science research on the perception of shale gas in the UK

Williams et al. (2015) explored public perceptions of hydraulic fracturing in the UK and reported a feeling that the debate is too focused on economic issues at the expense of other areas of importance. This results in a short-term outlook within the shale gas industry that is likely to have negative impacts on environment and society. They identified four key areas where public perceptions and institutional framings of hydraulic fracturing for shale gas are not aligned. These are: trustworthiness, inclusivity, somnambulism and epistemological pessimism. Participants raised concerns about trustworthiness in relation to institutional and governmental actors involved in the industry. Likewise, in relation to inclusivity, participants felt that greater consideration should be given to democratic decision-making and the two-way nature of public engagement, so that the public feels included in the decision-making process. This is significant for the later discussion of the social licence and procedural justice. The issue of somnambulism suggests that the approach to safety and regulation is tantamount to sleepwalking into approving a potentially damaging activity. This contrasts with a more precautionary approach that would presume against development while high levels of uncertainty remain. Lastly, the expression of epistemological pessimism highlights the tendency to focus on the worst-case scenario and on areas of greatest uncertainty.

Many of the concerns recognised by Williams et al. (2015) are also evident in the Whitmarsh et al. (2015) study; however, they emphasised several additional issues to be considered by the Government and industry if they are to gain greater public support for shale gas. They show that while there are high levels of ambivalence amongst the public, attitudes are most strongly predicted by political affiliation and attitudes towards climate change. In terms of opposition, the most commonly raised concerns relate to the seismic risk associated with fracking and the potential for the contamination of water sources. Finally, they considered public views in relation to the role that Government plays and noted that there are doubts associated with its ability to effectively regulate the industry and, in common with Williams et al. (2015), there are concerns over the trustworthiness of the government. Issues of trustworthiness, transparency and conflicting discourses have also been explored by Bomberg (2017), Cotton et al. (2014) and Cotton (2015, 2017). Beebeejaun's (2017, 9) comparative study of regulation in Texas and Lancashire concludes that: "The lack of perceived transparency set a context within which activism started to emerge, not least as an attempt to check the perceived pro-industry approach of the UK government." The lack of trust is also a widespread concern in the US, as is the sense that government regulators are too closely aligned with industry interests (Thomas et al., 2017a, 2017b).

A more recent US-UK comparative study explores how people shape their attitudes towards shale gas (Partridge et al., 2017; Thomas et al., 2017a, 2017b). In addition to the common issues identified above, that tend to focus on short-term and site-specific concerns, the study