

PUBLIC PERCEPTION OF SHALE GAS EXTRACTION IN THE UK: THE IMPACT OF THE BALCOMBE PROTESTS IN JULY- AUGUST 2013

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Introduction

Since March 2012 we have conducted seven UK-wide surveys via YouGov which have focused on public perceptions of shale gas extraction in the UK. We have published three short reports outlining the main highlights from the surveys (O'Hara et al, 2012; 2013a and 2013b) the most recent of which was in July 2013 providing an update on our findings following the sixth survey conducted between June 30th and July 2nd 2013. Here we report the headline findings of the seventh survey, conducted between the 20th and 24th September 2103.

Since the July survey the UK has witnessed the first significant protest against the use of hydraulic fracturing or 'fracking' in the UK, with the Sussex village of Balcombe (which is located approximately 16 miles north of Brighton) becoming the centre of media interest as anti-fracking protesters congregated on the area to stop the drilling activities being undertaken by Cuadrilla Resources. Although Cuadrilla Resources planned to drill 'a conventional oil well',¹ not 'frack' for shale gas, future fracking for oil had not been ruled out and it is clear from the media reporting of events that the protests were very much linked with the ongoing debates about shale gas extraction.² The protests were widely covered in the UK and beyond with extensive coverage on the television, radio, and the media, with a total of 124 people, including the Green MP Caroline Lucas, arrested for public order offences.³ Given the events at Balcombe we thought it timely to run our shale gas survey for a seventh time to see whether the protests at Balcombe have had any impact on public perceptions of shale gas in the UK.

The Surveys

The University of Nottingham shale gas survey was first run in March 2012 with the most recent survey taking place over a four-day window between 20th and 24th September 2013. The surveys which are conducted via YouGov are nationally representative and are weighted. The total number of people that have responded to the survey has ranged from between 2126 and 3697 (Table 1) with the total number of people surveyed over the duration of the study being more than 21,300.

Date of survey	# of respondents
18th-20th March 2012	2784
26th-30th April 2012	2791
17th-19th June 2012	2687
13th-14th December 2012	3530
14th-18th March 2013	3697
30th June-2nd July 2013	2126
20th-24th September 2013	3688

Table 1. The dates and number of respondents to the seven YouGov surveys

¹ <http://www.cuadrillaresources.com/news/cuadrilla-news/article/cuadrilla-takes-action-to-minimise-impact-of-balcombe-protest-camp-and-calls-on-protestors-to-remain-peaceful/>

² See for example <http://www.bbc.co.uk/news/uk-england-sussex-23944344>

³ See http://www.dailymail.co.uk/news/article-2433858/Hundreds-police-activists-Balcombe-fracking-site.html?ITO=1490&ns_mchannel=rss&ns_campaign=1490

The survey has been designed to get nationwide view of how the UK public public perceive shale gas extraction. We start of by asking respondents the following:

This is a fossil fuel, found in sedimentary rock normally more than 1000 metres below ground. It is extracted using a technique known as hydraulic fracturing, or 'fracking'. Is this fossil fuel:

- a) Boromic gas
- b) Coal
- c) Xenon gas
- d) Shale gas
- e) Tar-sand oil
- f) Don't know.

The important word association in this question is the term 'fracking' which is almost always referred to in reports and media articles about shale gas. In our March 2012 survey a mere 37.6 % of respondents correctly identified shale gas from the list of real and imaginary fossil fuels. Over the last 16 months the percentage of people able to identify shale gas has risen to over 60% and in the September 2013 survey had risen to just under 65%. In all of our surveys men are much more likely to identify shale gas than women with the level of recognition in our March 2012 survey being 50.3% for men and 26.4% for women. In September 2013 the figures were 74.2% and 55.7% respectively.

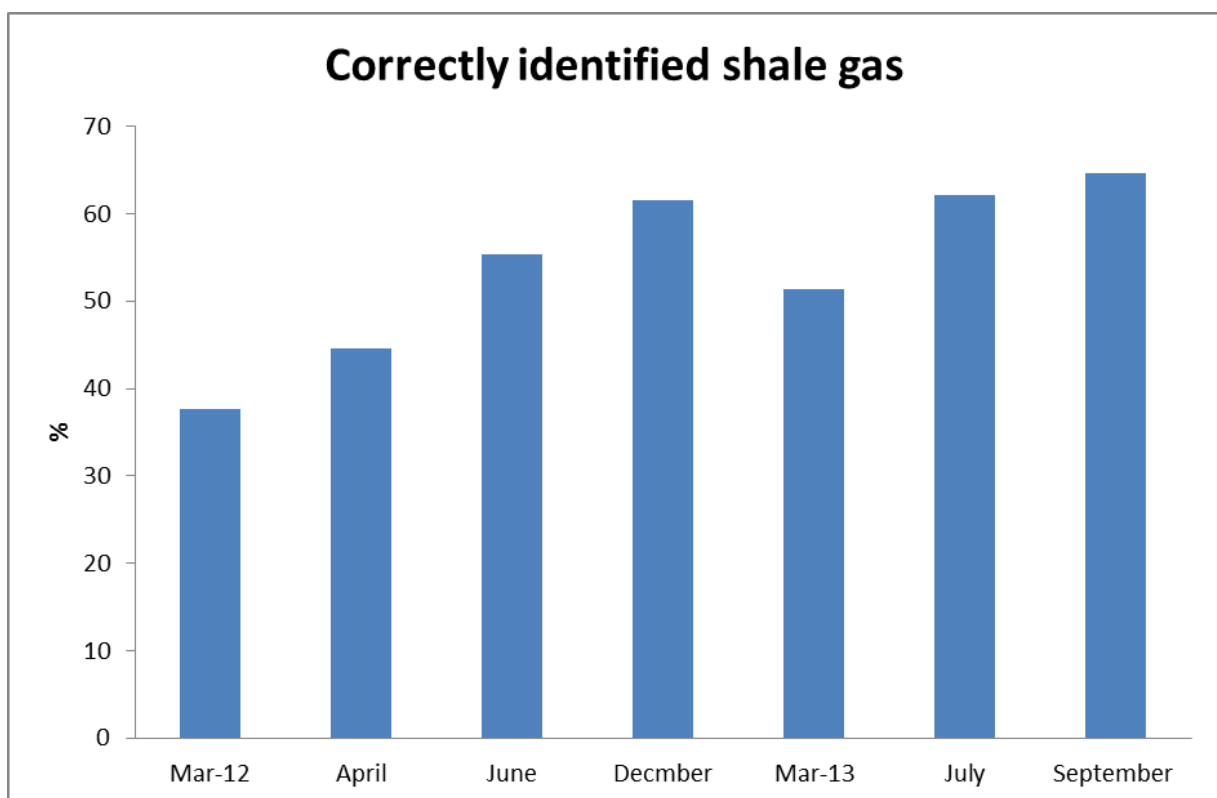


Figure 1. Shale gas recognition in the UK: March 2012 – September 2013.

Respondents who did not identify shale gas exited the survey while those who did were asked a series of questions about whether they associated shale gas with earthquakes, water contamination, being a clean fuel and being a cheap fuel. We also asked whether they associated shale gas with lower or higher greenhouse gas emissions. In the Septmenber 2013 survey an additional question

about UK energy security was also added. This two-stage process means that questions about how people perceive shale gas are only answered by those people who have heard of, and may have developed a view about, this energy source.

Figures 2 to 6 show the UK level results for these questions for each of the seven surveys.

Shale gas and earthquakes

The possible link between fracking for shale gas and earth tremors has triggered considerable concern and is viewed by some as a potentially dangerous and damaging impact of shale gas exploration. Two small earthquakes in April and May 2011 in the Blackpool area (2.3 and 1.5 respectively on the Richter Scale) close to where Cuadrilla Resources were fracking for shale gas were widely reported in the media and led to the suspension of fracking at the site pending further investigation. The release of the Preese Hall report in April 2012 and an acknowledgement by Cuadrilla Resources that their activities were the likely trigger for the earth tremors was also widely reported. It is thus not surprising that the majority of people who correctly identified shale gas also considered it to be associated with earthquakes with the number of people making this association being high throughout. However, in recent months this association does appear to be declining and there has been a notable decrease in the differential between those that associated shale gas extraction with earthquakes and those who do not. This differential has narrowed markedly in September 2013 from a peak of nearly +58% in April 2012 to +25% now.

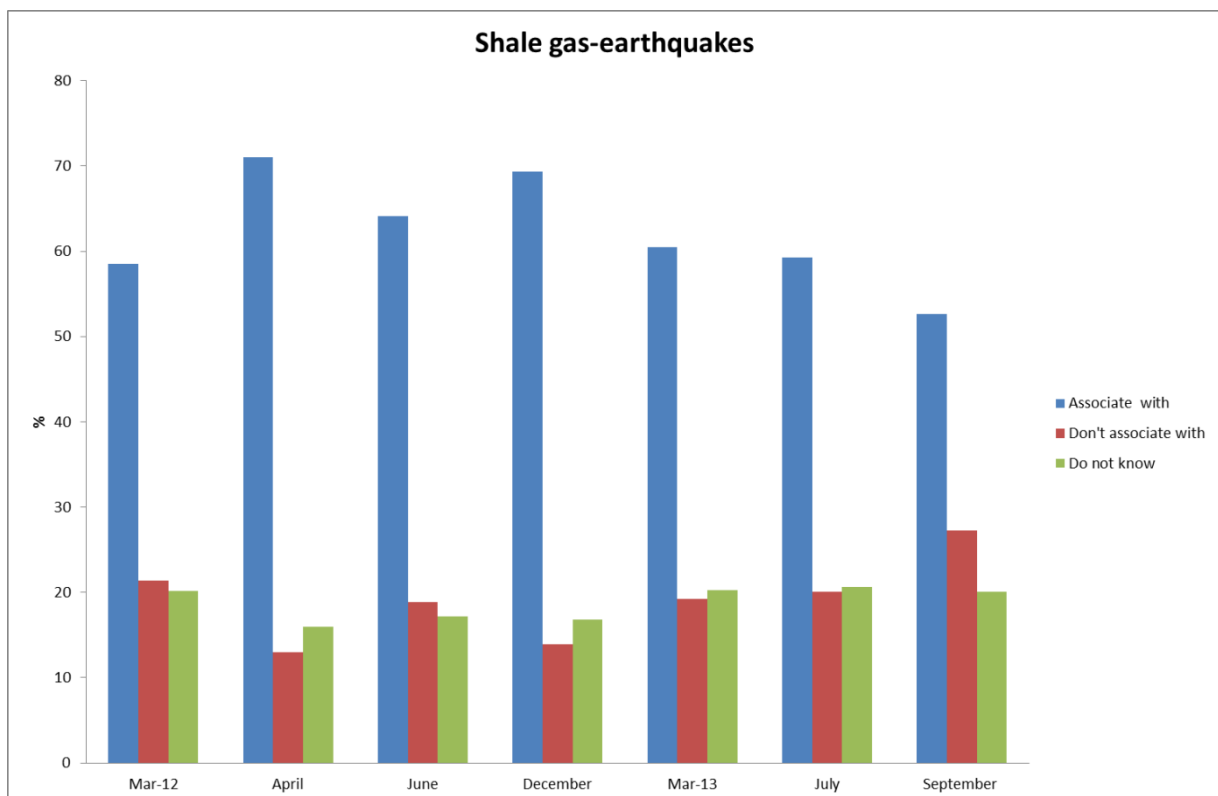


Figure 2. The association between shale gas and earthquakes in the UK: March 2012-September 2013

Contamination of drinking water

There are considerable concerns that the extraction of shale gas could result in the contamination of drinking water sources either by chemicals used in fracking fluids and/or by methane escape as a result of the fracking process itself. Again, the issues and debates around drinking water contamination have been widely reported in the media (often with reference to the controversial film *Gasland*)⁴ and a large number of respondents to our surveys associate the two together. This said we are seeing significant changes in the public's opinion on this. In March 2012 44.5% of respondents associate shale with water contamination, and only 23.9% did not. In July 2013 the respective figures were 35.2% and 29.8%. This gives a move in ratings (if we take water contamination to represent disapproval) from -20.6% to -5.4% over this period (Fig. 3). Post-Balcombe the negative differential has risen and currently stands at -10.5%. Although higher than in the March 2013 and July 2013 surveys it is lower than the four surveys conducted in 2012.

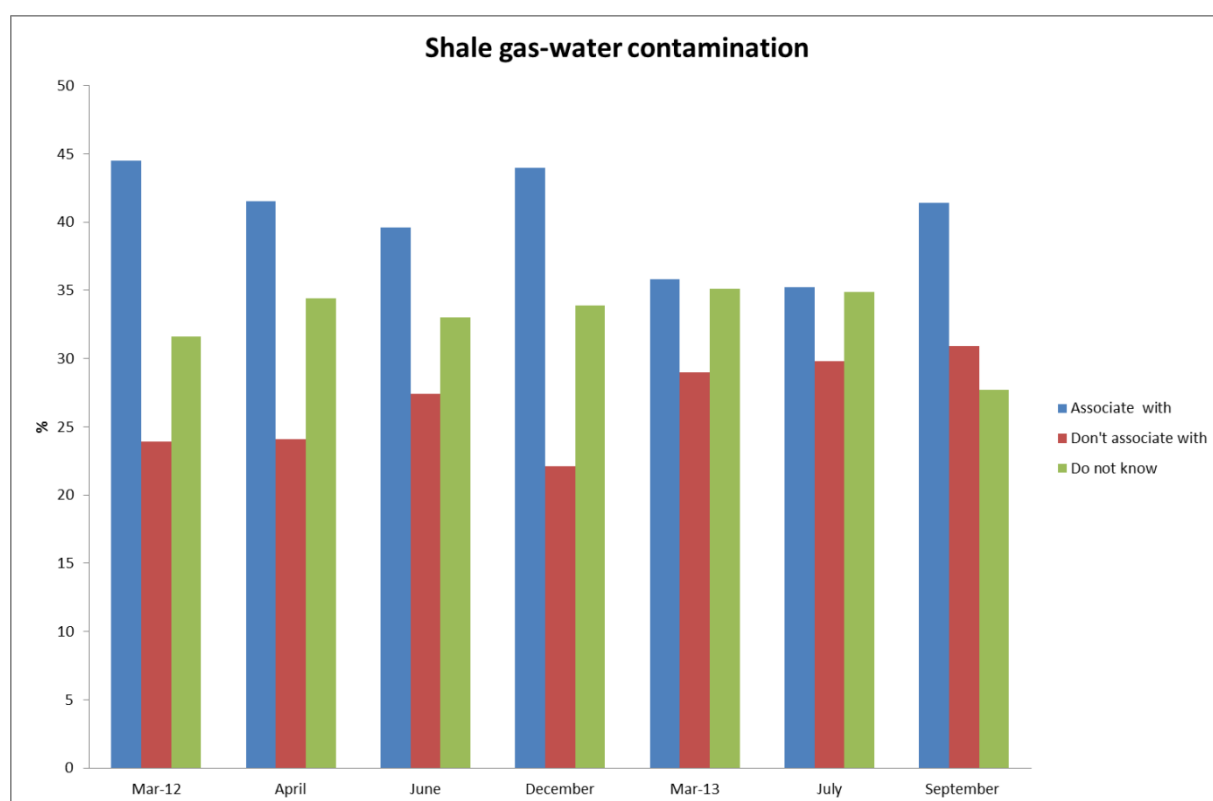


Figure 3. The association between shale gas and water contamination in the UK: March 2012-September 2013

Is shale gas a clean energy?

Despite industry claims that shale gas is a clean energy resource especially compared to other fossil fuels such as oil and coal, the British public have not been so convinced. In our first survey only 25.3% considered shale gas to be a clean energy source, compared with 44.8% who did not, giving a negative rating of -19.5%. But the UK public seemed to be shifting their opinion and in the July 2013

⁴ <http://www.gaslandthemovie.com/>

survey a third (33.5%) of the respondents who recognised shale gas believed it to be a clean energy source compared to 36.5% who believed the opposite, leaving an negative rating of -3% (Fig. 4). In September 2013 the differential has risen sharply and now stands at -9.9%. Although slightly less than in the 2012 surveys, it is nonetheless a marked reverse in what appeared to be a gradual change in the UK view.

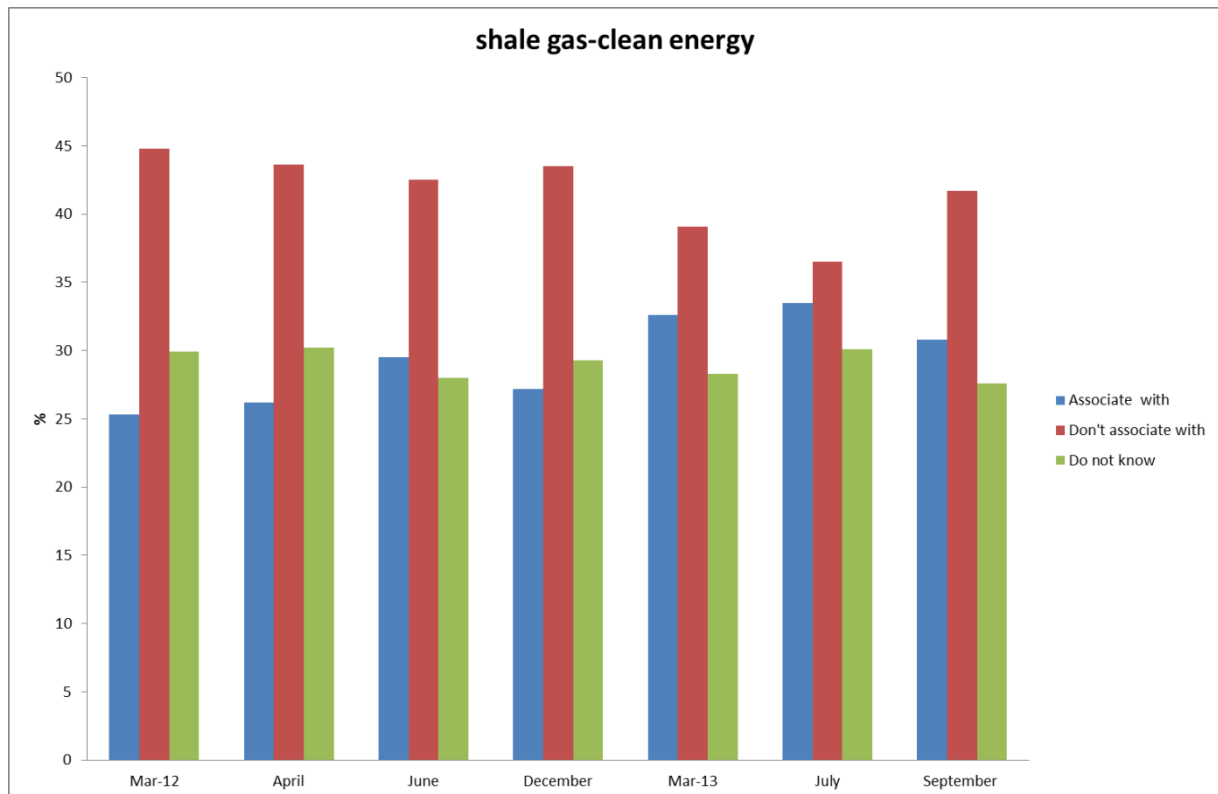


Figure 4: The association between shale gas and clean energy in the UK: March 2012-September 2013.

Is shale gas a cheap energy resource?

One of the potentially attractive features of shale gas is that, compared with other sources of energy such as renewables, it may be seen as cheap at the point of sale. The number of people who associate shale gas with being a 'cheap fuel' rose in each of the first six surveys from 40.5% in the March 2012 survey to 55% in July 2013 (Fig. 5), and the positive rating for shale (the 'do associate' minus the 'don't associate') in July 2013 was +33.4%, up from +11.4 % in the first survey. Again we are seeing a slight reversal in trends post-Balcombe with the number of respondents viewing shale gas as a cheap energy source dropping slightly to 51.7% while the number of respondents who do not associate it with being a cheap energy source has increased to 25.4%. The overall differential is now 26.3%, a drop of just over 7% since July 2013.

Will shale gas help the UK's energy security?

The issue of energy security for the UK has been much debated and one of the arguments that has been made by both government and energy companies alike is the role that indigenous shale gas could play in the UK's energy security. Because this issue has become increasingly important in debates around the shale gas issue we decided to ask respondents whether they associated

shale gas with energy security. Of the 2,385 people who correctly identified shale gas in our gateway question 58.8% stated that they associated shale gas with energy security compared to just 20.5% who did not giving a positive association of +38.3 %.

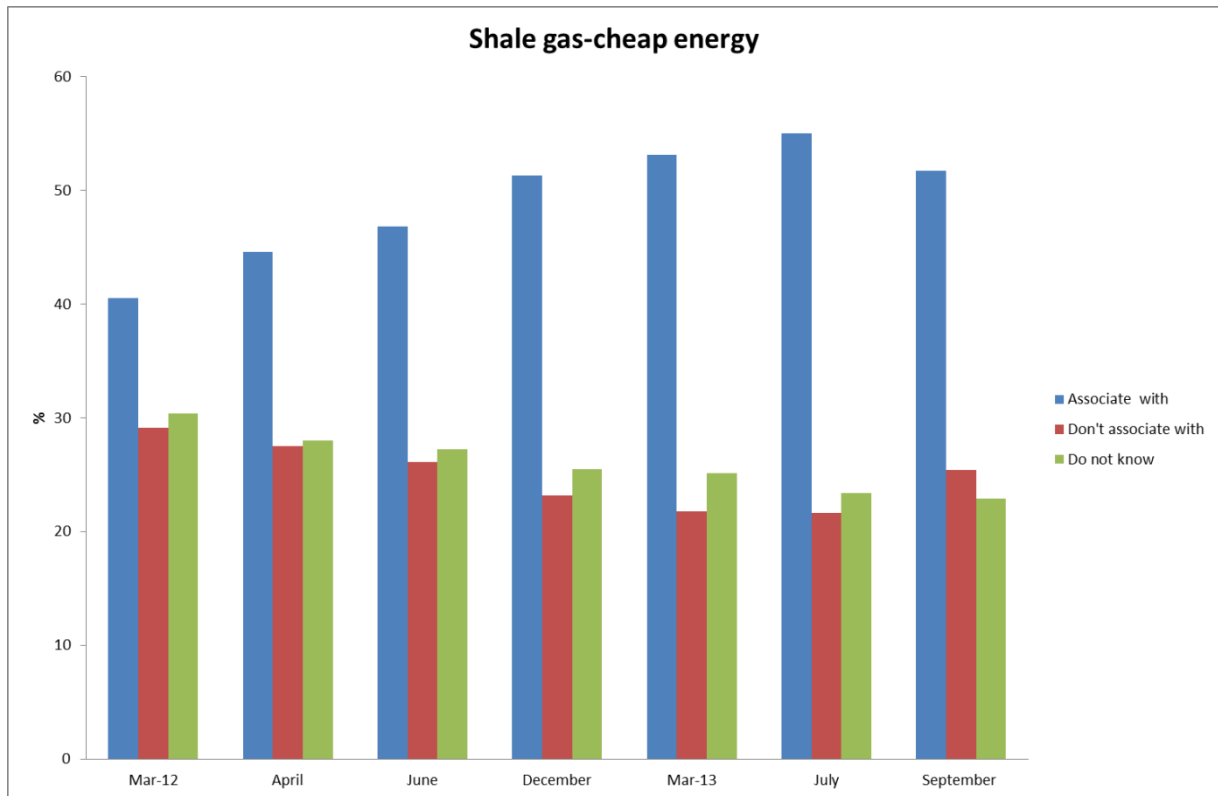


Figure 5: The association between shale gas and cheap energy in the UK: March 2012-September 2013.

Shale gas and greenhouse gas emissions

The survey respondents were also asked about their views on whether they considered the use of shale gas would result in lower or higher greenhouse gas emissions (GHG). In all seven surveys a plurality of respondents stated that they don't know whether shale gas had a positive or negative impact on GHG emissions, with the figure varying between 43% and 48% (Fig. 6). But significantly while almost an equal number of respondents in our first survey stated that shale gas would result in either lower or higher GHG emissions there has been a subtle shift in people's views with an increasing proportion of respondents believing that shale gas will result in lower GHG emissions (Fig. 6). This remains true post-Balcombe although the differential has decreased from 13.5% in July 2013 (the maximum over the surveys thus far) to 9.8% in September 2013. But interestingly, while the differential has decreased there has been little change in the percentage of respondents who think it will lower GHGs, with most of the change coming from an increase in those individuals who believe its use will lead to higher GHGs.

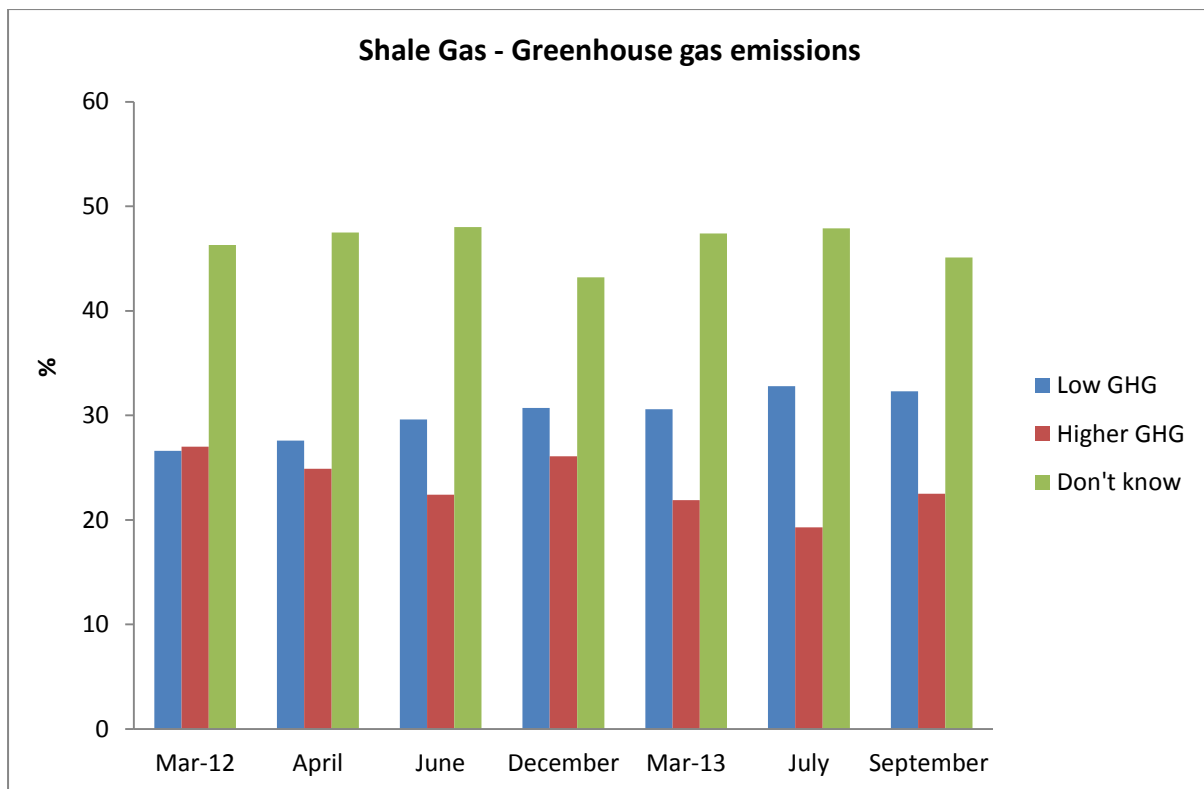


Figure 6: The association between shale gas and greenhouse gas emissions in the UK: March 2012-September 2013.

Should shale gas exploration be allowed in the UK?

The public have also been asked whether shale gas extraction in the UK should be allowed, a question intended to capture people's 'all-things considered' judgement on shale. This question was first asked in June 2012, with 52.6% in favour and 27% against (+25.6%); in July 2013, these figures stood at 58.3% and 18.8% (+39.5%). Post-Balcombe we have seen a decline in 'yes' and an increase in 'no' responses with the differential in September 2013 being 30.2%. So while still a positive figure with a majority of the population in favour of shale gas extraction, there has been a noticeable drop in approval ratings since July 2013 (Fig. 7).

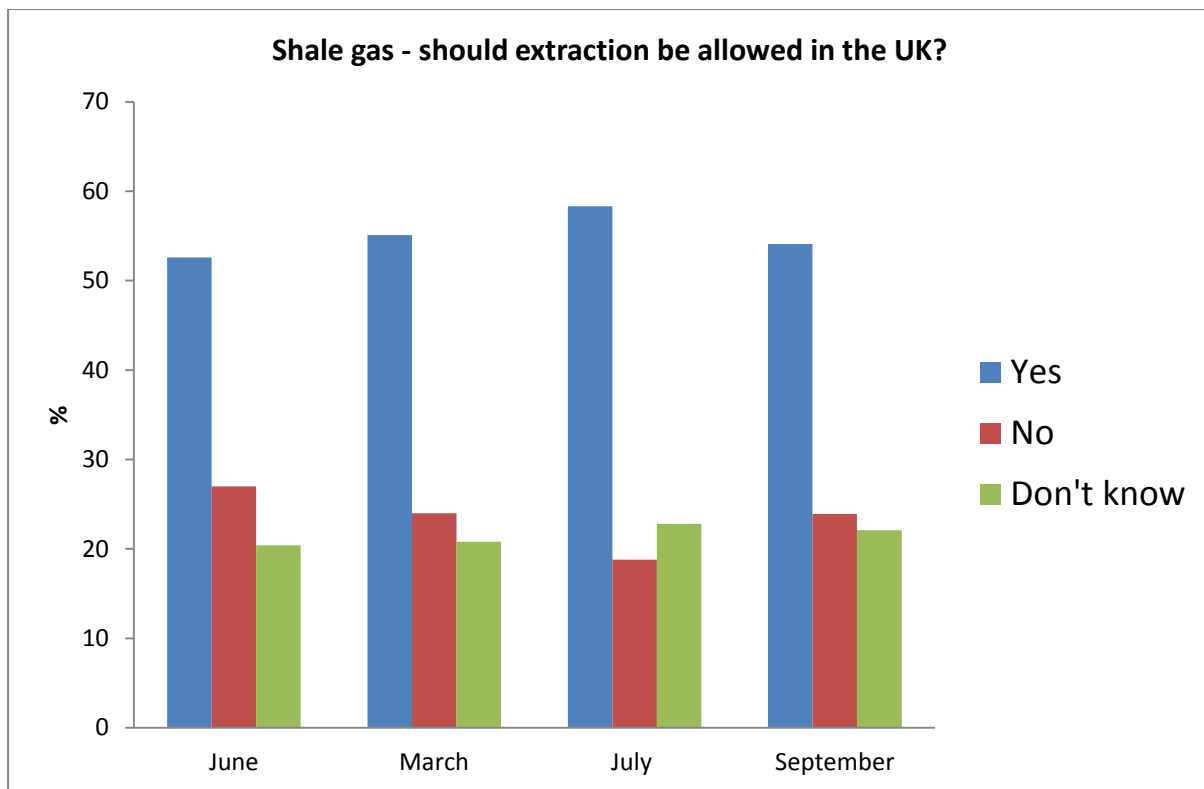


Figure 7: Should shale gas extraction be allowed in the UK? June 2012 – September 2013

Future Energy Mix

We have also seen shale gas drop in peoples' view of what energy types should be part of the UK energy mix in 2025. In July 2013 we asked respondents (for the first time) to state whether shale gas should be part of the UK's energy mix in 2025 putting it against a range of alternatives, and we have repeated this question in the September 2013 survey (Fig. 8). In July, although a majority of respondents (61.6%) believed that shale gas should be part of the energy mix, it ranked second bottom in the list we provided and was below nuclear, oil and coal in terms of acceptability. In the September 2013 survey this figure has dropped to 54.7 % and it ranks at the bottom of the ten energy sources that we asked about. Significantly, 'conventional' gas scores much higher than shale gas. In September 2013 it had a rating of 82.3%, and was by a significant margin the most acceptable fossil fuel to the UK public. This raises a question as to whether some of the public object to fracking techniques, or whether they believe (mistakenly) that 'unconventional' shale gas is a different gas to 'conventional' natural gas.

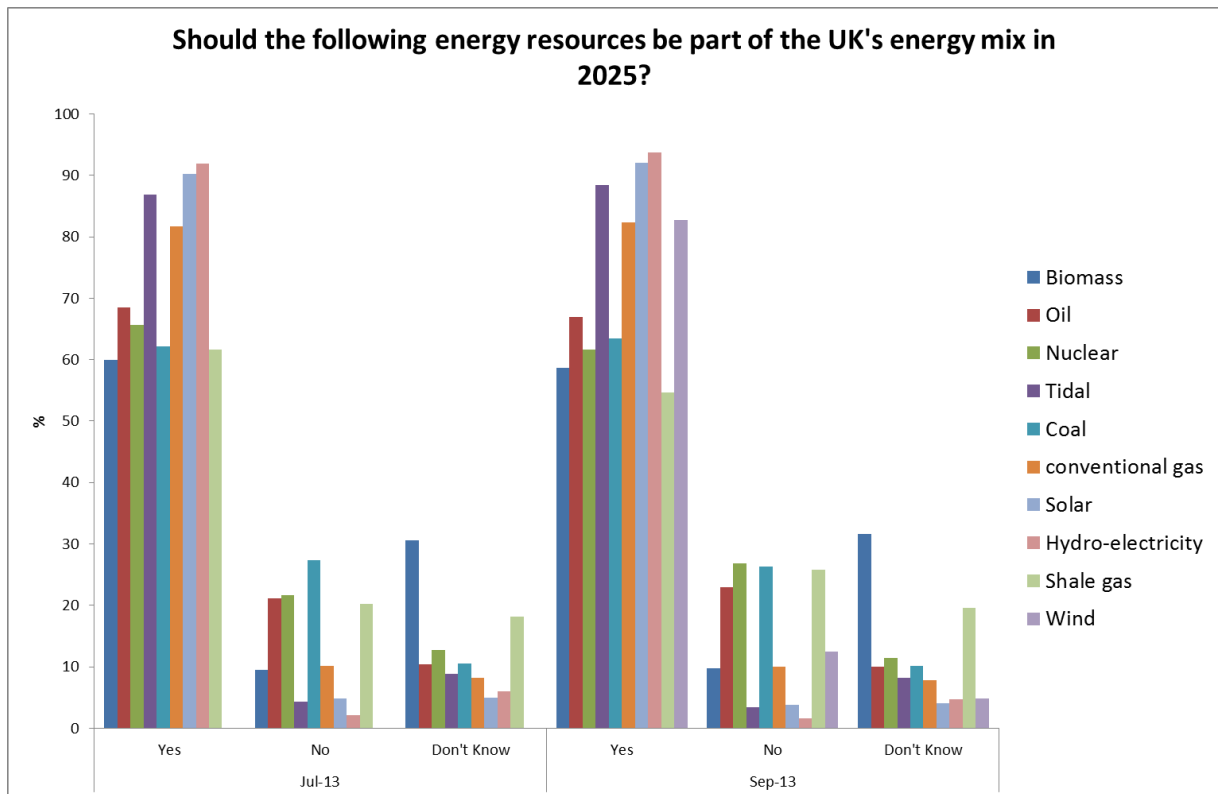


Figure 8: Should the following energy resources be part of the UK's energy mix in 2025?

Summary of the survey results

Our surveys indicate that significantly more people are aware of shale gas compared to 17 months ago. More substantively, up to September 2013 the survey data showed that, amongst those of the public who recognised shale gas from the opening question, there was an increasing acceptance of it as a cheap, clean energy source (although it is important to add that this was a trend, not necessarily a majority view). It is interesting that, in the first survey subsequent to the protests at Balcombe, we see this trend go into reverse on most measures. This may have important implications for the politics of fracking in the UK, if the anti-fracking lobby come to believe that highly visible forms of protest at potential sites for hydraulic fracturing are the most effective means of changing the public mood.