

“Frackademics”

Presentation summary and references

Commissioned by Talk Fracking, produced by Paul Mobbs,
Mobbs Environmental Investigations, April 2015

This paper summarises the slide presentation of “Frackademics”, produced by Paul Mobbs. It expands the content of the original report to look more generally at the issue of fossil fuels funding.

This presentation summary should be read in conjunction with the original report.

The original study was commissioned by Talk Fracking to map the connections between the fossil fuels industry and academic – concentrating in particular on the relationships to unconventional fossil fuels companies and government agencies.

The report and further information about the campaign is available on-line at –

<http://www.talkfracking.org/news/frackademicsblog/>

A PDF version of this paper with clickable links, and the presentation slides, are available at –

http://www.fraw.org.uk/mei/archive/fractured_accountability/frackademics_notes.pdf

http://www.fraw.org.uk/mei/archive/fractured_accountability/frackademics_slides.pdf

“Frackademics”

A study of the relationships between
academia, the fossil fuels industry
and public agencies

Paul Mobbs
Mobbs Environmental Investigations
February 2015

Commissioned by Talk Fracking
<http://www.talkfracking.org/>

Slide 1: Introduction

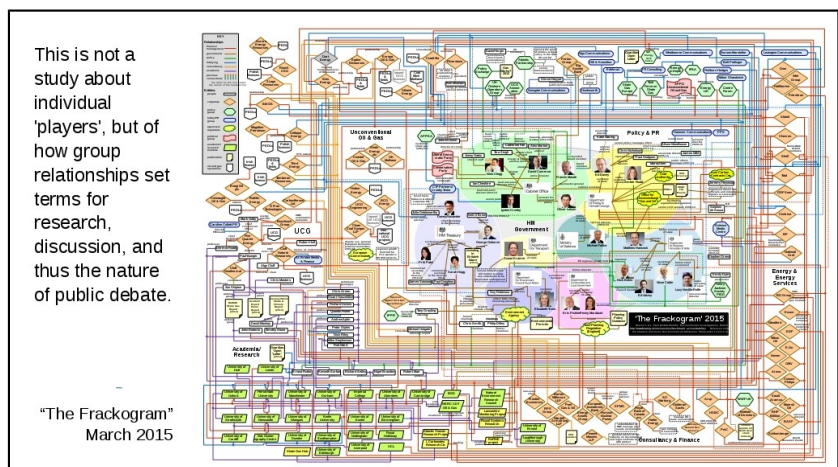
When examining the issue of “fracking”, and more generally the issue of unconventional gas and oil development and policy in Britain, it is very easy to concentrate on the specifics of the technology – and the impacts which that technology creates.

In reality the policy and business of unconventional oil and gas in Britain is based upon far more than just ‘technology’.

Policy is based upon a whole set of economic and technical assumptions; and over the last few years regulatory processes have been amended to reflect the requirements implicit in these assumptions.

In fulfilling Talk Fracking's requirements to identify the links between “fracking”, fossil fuels and academia in Britain, six case studies were produced to illustrate different elements of the issue:

- ◆ Each case study represents an intensifying 'sliding scale' of involvement between (in case study 1) the role of academia as a centre for research and the development of knowledge, and (in case study 6) the objectives of the fossil industry to secure a particular view of the benefits of their technology via PR-based 'corporate strategy' companies.
- ◆ The basis of each study is a 'map' showing the relationships between the principal players involved in the topic of the case study.
- ◆ Specifically the focus of the case study is not simply about the roles of individual 'players' in that process, but rather how group relationships set terms for research, discussion, and thus the nature of public debate.



[‘The Frackogram’](#), Paul Mobbs, March 2015

Slide 2: Key questions

It would be easy to dismiss anyone accepting funding from the fossil fuels industry as a 'pawn'. The reality is far more complex, and nowhere near as polarised an issue.

Over the last fifteen to twenty years, just as students have had to accept the uncertainties of ever-more expensive education, so academics have faced a [diminishing security of tenure](#)¹.

Depending how you assess the figures, perhaps only one-fifth of academics have secure jobs.

Most work on a variety of short-term and rolling contracts with far less security of tenure. This has an impact upon how 'radical' academia is able to be, whilst being able to keep their post within this increasingly casualized employment system.

In parallel to the [Browne Review](#)² of funding, the review of academic funding has sought to involve more private funding in order to reduce the public contribution to research science. While there are various criticisms we could make of this, that involves a far wider – *presently insoluble* – issue about the public-private split within the funding of public services.

It is more efficacious to talk instead of the specific purposes of funding academia: what is that funding for?; should it principally target those areas of public need where the market fails to provide support?; and in particular, should it focus on our future need to transition to a more sustainable society? – which presently the business world seems reluctant to support.

Most importantly we have to discuss the general 'social licence' for academic funding; specifically whether there is a social licence for the public funding of [fossil fuels extraction-related studies](#)³ given the public concern regarding climate change. This represents the [logical extension of 'divestment' campaigning](#)⁴ at universities, to cover not just finance but also the research interests of institutions.

“Frackademics” throws up three key questions:

- ▶ How does the 'social licence' of funding university posts and training affect the choice/scope of research?;
- ▶ Related to the above, should public funding address “market failures” (e.g. training nurses, social workers, teachers) rather than backing £multi-billion industries?;
- ▶ Within the industrial/jobs field, should public funding primarily address 'sustainability' needs? (e.g., CCS, addressing resource depletion, low impact lifestyles)

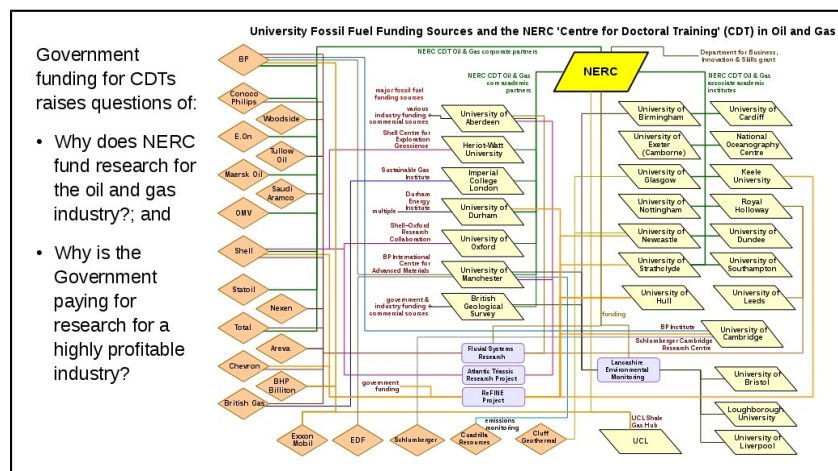
Slide 3: Case Study 1 – Centres for Doctoral Training (CDTs)

The Con-Dem Government's higher education reforms established CDTs as public-private partnerships to channel funds to specific research areas.

Doctoral research is a gateway to holding senior positions in academia. Therefore the availability of funding for doctoral research represents a way in which funding agencies can skew the academic agenda in the future – favouring certain fields of research over others.

Government funding for CDTs raises questions of:

- Why does NERC fund research for the oil and gas industry?; and
- Why is the Government paying for research for a highly profitable industry?



1 *Academia: The changing face of tenure*, Karen Kaplan, Nature, vol.468 pp/123-125, 3rd November 2010 – <http://www.nature.com/naturejobs/science/articles/10.1038/nj7320-123a>

2 Wikipedia: 'Browne Review' – http://en.wikipedia.org/wiki/Browne_Review

3 *Global Warming's Terrifying New Math*, Bill McKibben, Rolling Stone, 19th July 2012 – <http://www.rollingstone.com/politics/news/global-warmings-terrifying-new-math-20120719>

4 'Frackademia' Report Reveals Ties Between Government, Universities, and Shale Industry, Ben Lucas, DeSmogBlog UK, 19th March 2015 – <http://www.desmog.uk/2015/03/19/frackademia-report-reveals-ties-between-government-universities-and-shale-industry>

The Natural Environment Research Council (NERC) is Britain's première science research institute for the natural environment, funded by a grant from the Department for Business, Innovation and Skills. This innate conflict – between “placing environmental science at the heart of responsible management of our planet” and developing more sources or enhancing future fossil fuels production – raises questions about the role of the organisation:

- Why does NERC channel funds for research which supports the oil and gas industry?; and
- Why is the Government paying for research for a highly profitable industry when other areas of environmental science are more relevant to the transition towards a more sustainable society?

Slide 4: Case Study 2 – Academic involvement in shale gas studies

The Government's case for the efficacy and safety of shale gas is based upon a logical fallacy – *the argument from authority*⁵.

Objective knowledge, irrespective of its source, must be based upon observed evidence of causes and effects; and the analysis of this evidence should be repeatable and verifiable.

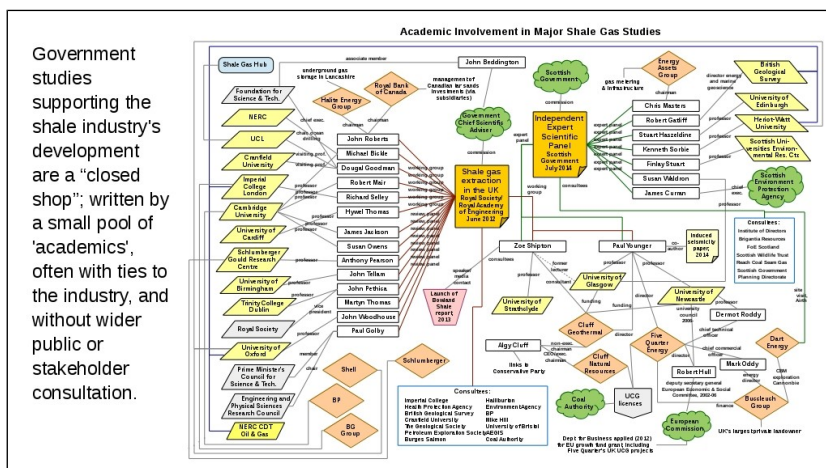
In the case of 'fracking' there is no such evidence to provide an unequivocal statement on safety. Instead, the Government has recruited academics to write reports, and they have used these reports to substantiate their policy by this fallacious proxy.

The reports commissioned by the Government – most notably the Royal Society and the Public Health England reports (and in Scotland, the Independent Expert Scientific Panel report) – have a common conclusion; that shale gas development will be safe with appropriate regulation. The problem with the Government's call for 'regulation' in response to criticism is that it defers the need to produce reasoned, evidence-based solutions today – allowing the policy to proceed unhindered.

Reviews by other [academic institutes and public interest organisations](#)⁶ have questioned whether the available evidence is of sufficient quality to be reliably understood. Reviews by Canadian and US public health agencies have questioned the quality of available evidence, stating that no ruling on safety can be made at present. For example, the recent [independent review by MedAct](#)⁷ – which reviewed evidence from [the 400+ peer reviewed papers](#)⁸ on the impacts of 'fracking' in the USA and elsewhere – found that the claims made by Public Health England could not be substantiated.

In the case of environmental policy, the public have a legally-based expectation of consultation under the [Aarhus Convention](#)⁹. In practice [no honest, objective consultation on policy](#)¹⁰ has taken place.

The Government's policy on unconventional gas has been validated by a small, 'closed shop' group of 'academics' – often with direct ties to the industry, or industry funding of their parent institutions. Given that other similarly qualified bodies elsewhere find wholly different results, this raises questions about the reliability of the 'proxy' evidence within the reports used by the Government.



5 Wikipedia: 'Argument from authority' – http://en.wikipedia.org/wiki/Argument_from_authority

6 *Health professionals call: ban fracking for five years*, Paul Mobbs, The Ecologist, 31st March 2015 – http://www.theecologist.org/blogs_and_comments/commentators/2813669/health_professionals_call_ban_fracking_for_five_years.html

7 *Health & Fracking: The impacts & opportunity costs*, David McCoy and Patrick Saunders, Medact, March 2015 – http://www.medact.org/wp-content/uploads/2015/03/medact_fracking-report_WEB3.pdf

8 PSE Study Citation Database on Shale & Tight Gas Development – <http://www.psehealthyenergy.org/site/view/1180>

9 Wikipedia: 'Aarhus Convention' – https://en.wikipedia.org/wiki/Aarhus_Convention

10 *Fracking trespass law changes move forward despite huge public opposition*, Guardian On-line, 26th September 2014 – <http://www.theguardian.com/environment/2014/sep/26/fracking-trespass-law-changes-move-forward-despite-huge-public-opposition>

Slides 5 & 6: Case Study 3 – the Mackay-Stone review

The best example of the Government's 'proxy science case' is the [Mackay-Stone report](#)¹¹.

The report claims to demonstrate that shale gas would not impact upon Britain's climate obligations. However, if we [pull apart the detail](#)¹² of those claims they cannot be substantiated.

At the root of the report lies a calculation of the climate impacts of natural gas produced from shale. Their method of calculation is correct – although there is an issue over whether the use of a 100-year 'global warming potential' (GWP) for methane is correct, given that [the IPCC now states](#)¹³ that a broader view, including 10 and 20 years impacts, is more appropriate.

The problem with the report is the source data used in those calculations, which does not correlate to the range of statistical evidence currently available. The impact figure is calculated by dividing the level of fugitive emissions by the level of gas production:

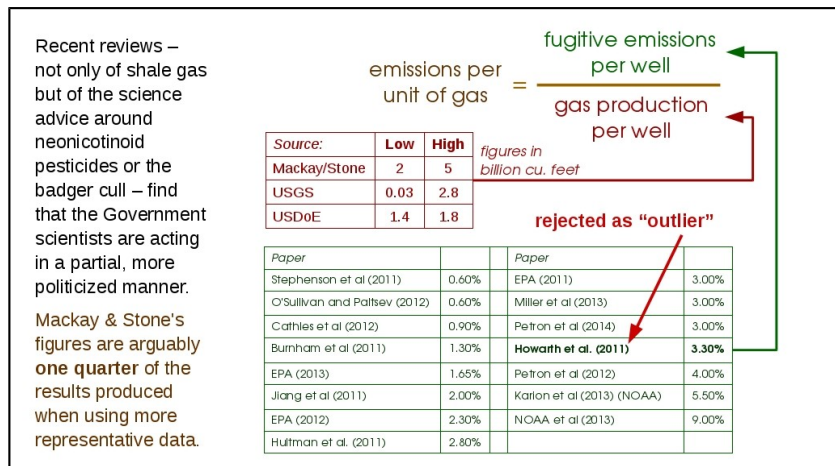
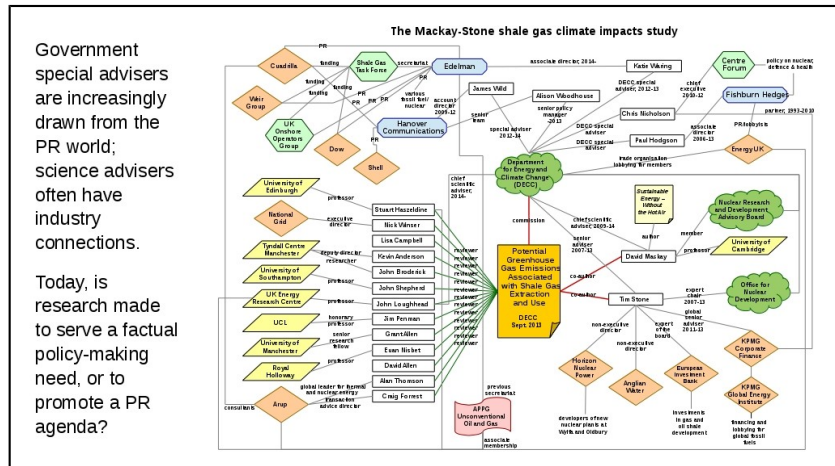
Currently there is a [great debate over fugitive emissions](#)¹⁴, as [acknowledged by IPCC](#)¹⁵.

As a fraction of gas production, the results of recent studies range from 0.4% (the Allen study of September 2013, which Mackay-Stone rely upon to justify their figures) to over 9%.

In fact the Mackay-Stone report rejected Howarth's 3.3% figure as an 'outlier' – arguing it was unrepresentative of the available research. Instead they used figures in the range of 0.4% to 2% – *arguably half the value of the representative range of current studies*.

The figure used for gas production per well has no clear source, and may have been supplied by Cuadrilla Resources. If we look at recent US studies, utilising data from well logs, per-well production is well below the values used by the report – *the Mackay-Stone figures are twice as high*.

In summary: the value for fugitive emissions was half the likely value; the value for production emissions was twice the likely value; this results in a figure which is only one quarter of the likely level of emissions per unit of gas produced when we consider a [broader range of research studies](#)¹⁶.



11 *Potential greenhouse gas emissions associated with shale gas production and use*, DECC, 2013 – <https://www.gov.uk/government/publications/potential-greenhouse-gas-emissions-associated-with-shale-gas-production-and-use>

12 *Extreme Energy and Climate*, Paul Mobbs/Mobbs' Environmental Investigations, May 2014 – http://www.fraw.org.uk/mei/archive/extreme_energy_and_climate-critical_review.pdf

13 *A bridge to nowhere: methane emissions and the greenhouse gas footprint of natural gas*, Robert W. Howarth, Energy Science and Engineering, 15 th May 2014 – http://www.fraw.org.uk/files/extreme/howarth_2014.pdf

14 *Why measuring fugitive methane emissions from shale gas production matters*, The Carbon Brief, 24th July 2014 – <http://www.carbonbrief.org/blog/2014/07/two-papers-show-why-measuring-fugitive-methane-emissions-in-shale-gas-production-matters/>

15 page 527, chapter 7, *Climate Change 2014: Mitigation of Climate Change*, IPCC WGIII AR5, November 2014 – http://report.mitigation2014.org/drafts/final-draft-postplenary/ipcc_wg3_ar5_final-draft_postplenary_chapter7.pdf

16 *Fugitive emissions estimates from natural gas production: papers and Carbon Brief graph data*, Google Docs – <https://docs.google.com/spreadsheets/d/1yRbMX02JpoBA2AeLdSfmGSFlqTzzL04OaiSLotrU7I/pubhtml>

Whether it is the impacts of shale gas, or the ecology of [bees](#)¹⁷ or [badgers](#)¹⁸ – it is arguable that much of the Government's recent research to support policy has been politicized, and does not represent the current state of knowledge around these issues. This portends a much greater issue for 'public interest' science in the future.

This reflects a shift within the origins of the Government's advisers over recent years – favouring those who have experience in public relations but not direct experience of the issue they advise the relevant minister upon. These, [often 'revolving door'](#)¹⁹, relationships are degrading the role and validity of science advice in policy-making.

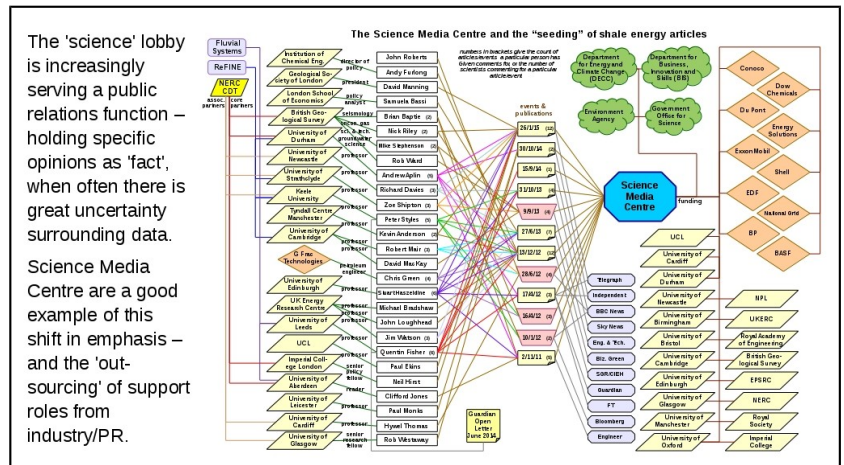
Slide 7: Case Study 4 – The Science Media Centre

The Science Media Centre (SMC) was established by the Royal Society in 2002, following a House of Lords report on science and public perception.

The Science Media Centre arguably does have a useful role. However, we return once again to the issue of the fallacy of the 'appeal to authority'; such commentary is only valid when it is backed up by reference to representative evidence and analysis.

SMC essentially ghost-writes press releases for consumption, free, by the media. The 'Frackademics' report, as shown in the slide, traces the relationships between specific SMC activities and media reports – and how they have misrepresented available evidence.

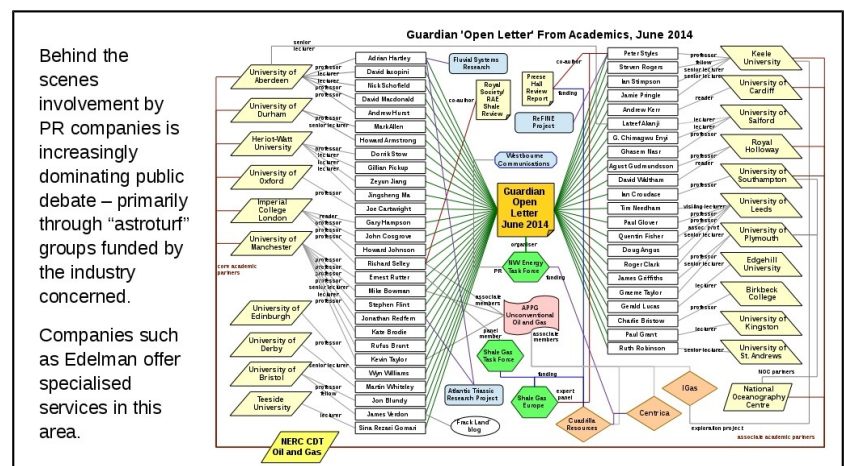
The problem with the SMC's reports is that they take comments by 'experts' in isolation, and thus fail to relate statements to the wider body of evidence – and the complexity over impacts and effects which this greater body of evidence embodies. This is the point at which we have to question whether the role of bodies such as SMC is to provide "evidence", or whether it is less factually-based "PR".



Slide 8: Case Study 5 – Guardian Open Letter

This slide represents a transition point in this issue: the point at which the role of academic objectivity ceases to be an issue of interpretation, and shifts into a straightforward public relations role.

This also relates back to the issue outlined earlier over academic tenure. At a time when academics have to regularly renew their role with their institution and/or sponsors, is there 'soft pressure' upon lower-level academics to partake in PR activities to support industry?



17 UK drew wrong conclusion from its neonicotinoids study, scientist says, Guardian On-line, 26th March 2015 –

<http://www.theguardian.com/environment/2015/mar/26/uk-drew-wrong-conclusion-from-its-neonicotinoids-study-scientist-says>

18 A restatement of the natural science evidence base relevant to the control of bovine tuberculosis in Great Britain, Charles et al., Proceedings of the Royal Society B, 7th August 2013 –

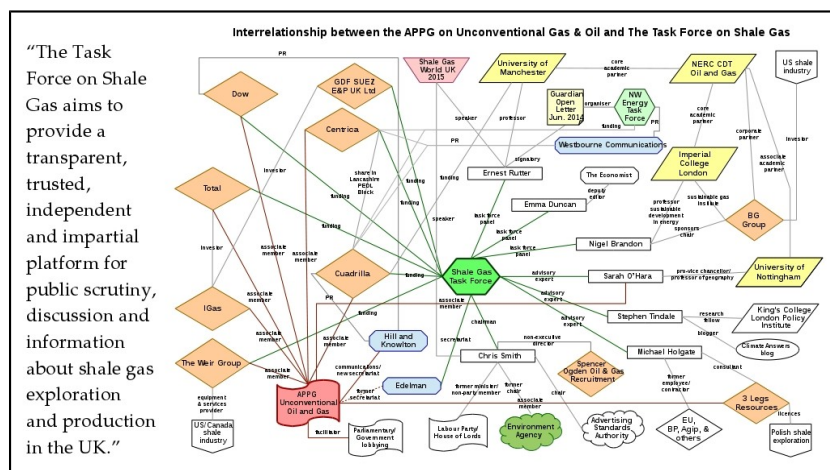
<http://rspb.royalsocietypublishing.org/content/280/1768/20131634>

19 Lifting The Lid On Lobbying, Transparency International UK, February 2015 – http://www.transparency.org.uk/our-work/publications/18-press-releases/download/251_dd6a4ae9b4e9aa45021527dc42211e5d

The Guardian letter was drafted and circulated by the [North West Energy Task Force](#)²⁰ (NWET) – a body, funded by Cuadrilla and Centrica, which represents the business case for shale gas in the region. Though signed by geoscientists, the content of the letter was largely focussed on economics.

Slide 9: Case Study 6 – The Task Force on Shale Gas

It is noted for what is known as 'grassroots advocacy'²⁴ – operating within communities via proxy groups on behalf of those employing its services. This came to light most recently in late 2014 – when Edelman's strategy documents produced for the tar sands oil pipeline company TransCanada, designed to quell public opposition to a new east-west pipeline, were leaked.



The Task Force on Shale Gas (TFSG) was set up by Edelman in late 2014 – and they run the secretariat for the Task Force for their London headquarters. Almost simultaneously Edelman dropped its support services for the All Party Parliamentary Group on Unconventional Gas and Oil. As the 'Frackademics' report outlines, the “independent and impartial” panel of academic experts recruited by Edelman have either direct connections to fossil fuel companies via their institutions, or have previously expressed support for shale gas.

If you read the Edelman reports for TransCanada, and then [look at the creation and role of the TFSG](#)²⁷, the background and process behind the TFSG looks very similar to an Edelman astroturf operation – fronting the case for shale via an 'expert panel'. The Task Force could change that diagnosis by demonstrating their impartiality. However, unless they prove otherwise, we must clearly highlight the TFSG as a probable 'proxy' organisation which does not work on behalf of the public.

20 Powerbase: 'North West Energy Task Force' – http://powerbase.info/index.php/North_West_Energy_Task_Force

21 Wikipedia: 'Astroturfing' – <https://en.wikipedia.org/wiki/Astroturfing>

22 Wikipedia: 'Doubt is their product' – https://en.wikipedia.org/wiki/Doubt_Is_Their_Product

24 *The Shadow Lobbying Complex*, Lee Fang, The Nation, 20th February 2014 – http://www.theinvestigativefund.org/investigations/politicsandgovernment/1929/the_shadow_lobbying_complex?page=entire

25 There are five leaked reports, produced by Edelman for TransCanada:

- *East Energy Campaign Organization* – http://www.fraw.org.uk/files/direct_action/tc_edelman_20141.pdf
- *Grassroots Advocacy Vision Document* – http://www.fraw.org.uk/files/direct_action/tc_edelman_20142.pdf
- *Digital Grassroots Advocacy Plan* – http://www.fraw.org.uk/files/direct_action/tc_edelman_20143.pdf
- *Strategic Plan: Quebec* – http://www.fraw.org.uk/files/direct_action/tc_edelman_20144.pdf
- *East Energy Pipeline: Research Synthesis* – http://www.fraw.org.uk/files/direct_action/tc_edelman_20145.pdf

20 Environmental Risk and Trading, Commons Environmental Audit Committee, January 2016
<http://www.publications.parliament.uk/pa/cm201415/cmselect/cmenvaud/856/856.pdf>

Slide 10: *Fundamentally this is a contention about 'science', not 'gas'*

Science is not 'facts'. Science is a 'process' – by which evidence is tested, and inference drawn upon the basis of observed evidence.

Consequently 'science in the public interest' must be a process which is able to encompass public participation and comment as part of testing this process – analysing methods and evidence.

That has very little to do with the last Government's policies on unconventional gas and oil. Today – not just on 'fracking', but on farming, or economic, or health policy

– the basis of policy-making has become far more ideological. This has seen a parallel shift, via ['special advisers'](#)²⁸, in the way advice on technical and complex issues has become politicized.

Available, often peer reviewed scientific evidence shows there are significant impacts from 'fracking' and other forms of unconventional gas and oil production (tight oil/gas, coalbed methane and underground coal gasification). What we don't know is 'how significant' they are; or whether these impacts are symptomatic of the process itself, or of poor regulation, or different elements of both.

Legally, via the [Treaty of Lisbon](#)²⁹, there is a requirement that the Government enact the precautionary principle because of this lack of clear evidence – and the evidence of significant and poorly understood harm to the environment and human health. Likewise, there is a case under various environmental laws against issuing planning permission or environmental permits for these sites (because of the inter-relationship with EU law). There is also an [arguable case for misconduct](#)³⁰ against the ministers involved in promoting these policies. Unfortunately the Government have made judicial review more difficult, and expensive, to obtain now.

What is clear is that, if we take the 'process' used to identify the scientific case over the last ten years (this process began under New Labour around 2005), there is no objective support for Government policy. The available scientific evidence differs so markedly from the Government's case.

What is also clear is that the role of industry lobbying, revolving door political relationships, and the role of public relations in crafting the 'case for shale', indicates that a largely "technical" response to Government policy is not sufficient to oppose development.

We cannot respond to a political case with a technical one – it will be outmanoeuvred, or simply ignored. Instead we must study the political case, demonstrate how it was constructed, and then use this alongside the technical evidence to publicly demonstrate not just how, but why the Government have ignored the evidence on unconventional gas and oil.

That involves not only making the case for "science in the public interest", and a funding model to support that; but also identifying the mechanisms which the Government has employed to mislead the public over the evidence surrounding unconventional gas and oil development in Britain.

Science carried out in the public interest must, by necessity, be open and transparent, and be accountable to public criticism over methodology and data.

What is dominating the "official" discussion of unconventional oil and gas in Britain is an industry-backed agenda, utilising industry data sources and supportive figures drawn from the industry and/or academia. The public are excluded.



There have been a number of recent 'independent' reviews of the evidence produced by our own and other governments – most recently MedAct's review of Public Health England's report.

What most agree upon is that we do not possess certainty over emissions and impacts. Therefore we should apply the precautionary principle.

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28 Wikipedia: 'Special advisers (UK)' – https://en.wikipedia.org/wiki/Special_advisers_%28UK_government%29

29 Article 191, *The Treaty of Lisbon* – <http://www.lisbon-treaty.org/wcm/the-lisbon-treaty/treaty-on-the-functioning-of-the-european-union-and-comments/part-3-union-policies-and-internal-actions/title-xx-environment-climate-change/479-article-191.html>

30 *Fractured Accountability: A study of political decision-making and unconventional fossil fuel interests in the Coalition Government*, Paul Mobbs, Mobbs' Environmental Investigations, March 2015 – http://www.fraw.org.uk/mei/archive/fractured_accountability/index.shtml