



In Search of 'Good' Energy Policy

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ETUI Meeting

21 September 2015

Partners



UNIVERSITY OF CAMBRIDGE | Energy Policy Research Group

Energy @Cambridge

CRASSH

Tyndall^oCentre[®]
for Climate Change Research



UNIVERSITY OF CAMBRIDGE
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Department of Politics and International Studies (POLIS)

CSaP

Centre for Science and Policy



The Faraday Institute
for Science and Religion



UNIVERSITY OF CAMBRIDGE
Judge Business School

Centre for Risk Studies

The Kirby Laing Institute For Christian Ethics



Background

- Energy@Cambridge is a UoC strategic initiative (1 of 12) involving >300 academics and £190m of funding.
- This project is now an Energy@Cambridge ‘Grand Challenge’ seeking funding for substantial research and stakeholder engagement activity.
- Completed 16 initial internal interviews with 22 participants.
- HEIF funding for initial activity over next 18 months.
- CRASSH seminar series this year.

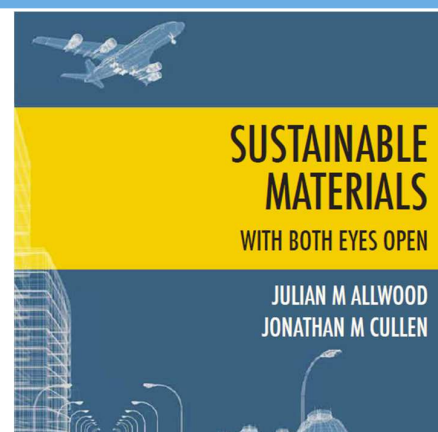
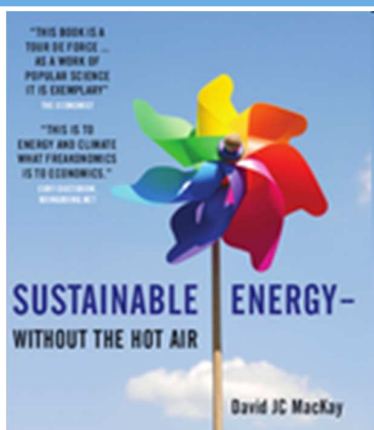
In Search of ‘Good’ Energy Policy

- Affordable, clean, efficient and secure provision of electricity, heating and transport fuel difficult to reconcile.
- Many developing countries have clearly disastrous policies.
- Many developed countries just have ‘mess’ of policies.
- Difficult to move from current reality to the clearly better, especially given trade-offs with non-energy policies.

Plan

- Technology, Technologists and Energy
- Themes for 'Good' Energy Policy
- An Interdisciplinary approach
- What we aim to do

The 'right' technology can 'save' us



...not just about technology...



Scientists and Engineers can do anything!

[Cost of Apollo Programme from 1961-72 = \$170bn (2005), to put 12 men on the moon]



Policy makers cannot!
Excess Defence expenditure in UK,
c.1% of GDP p.a.

The technology plan to 2050 in the UK

- Decarbonise Power (completely by 2035)
- Decarbonise Heat (completely by 2050)
- Decarbonise Transport (by 50% by 2050)

Source:

ETI (2015) *UK scenarios for a low carbon energy system transition* Loughborough: Energy Technologies Institute.

Starting point: What is 'good' and 'just'?



'The Good Life' for us



Oil spill in Niger Delta

Starting point: Vested Interests



SIEMENS

ABB

SSE

npower

British Gas
Looking after your world

EDF
ENERGY

e-on

SCOTTISHPOWER
The Energy People

Starting Point: Failure of Prediction

Oil Price Forecasts and Actual Prices

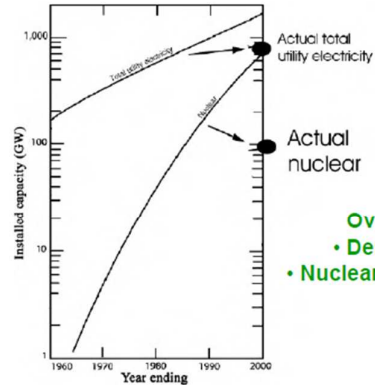
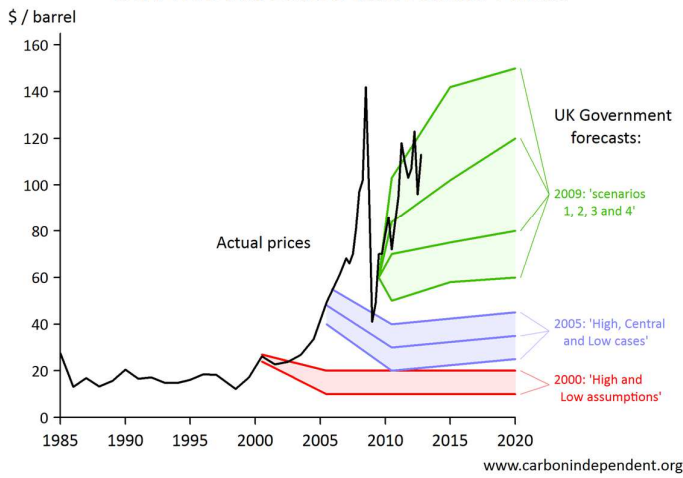
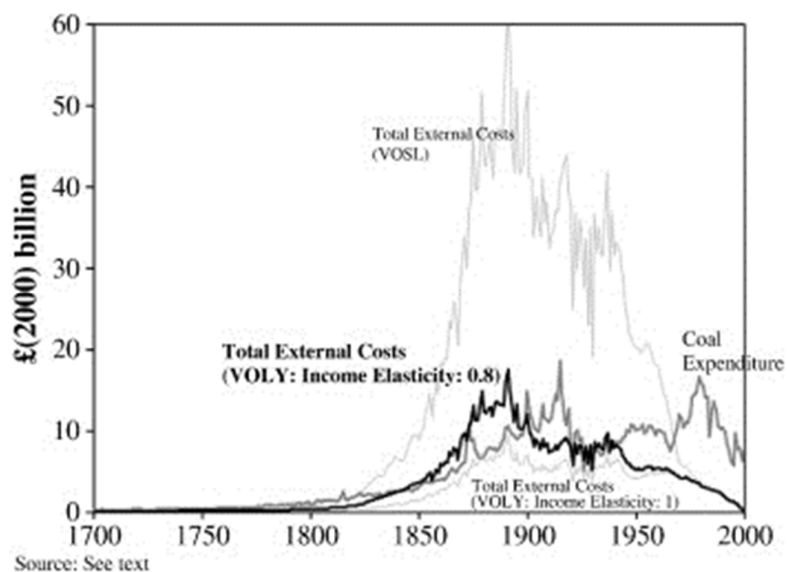


Figure 3 An Atomic Energy Commission forecast from 1962, designed to show demand for nuclear power plants. The curve of interest here shows electricity demand. The authors judiciously assumed a growing nuclear market share. Actual electricity and nuclear electricity in 2000 is indicated (10).

Starting point: Persistence of 'bad' and difficulty of 'good' policies



Peak (VOLY): 17.3% of GDP in 1891; VOLY = Value of Life Year; VOSL = Value of Statistical Life

Source: Fouquet, 2011, *Ecological Economics*, p.2385. <http://dx.doi.org/10.1016/j.ecolecon.2011.07.020>

Starting Point: Democracy *is* messy



Research theme: Perception

- Theory of planned behaviour, nudge and mindset change
- Perception of object and problem



Research theme: Quantification

- Demand for evidence and prediction
- Burden of proof
- Role of scientists
- Why can't public be more sensible?



Research theme: Well-being

- Quality of life
- Rational choice, risk and fairness
- The Green Book?



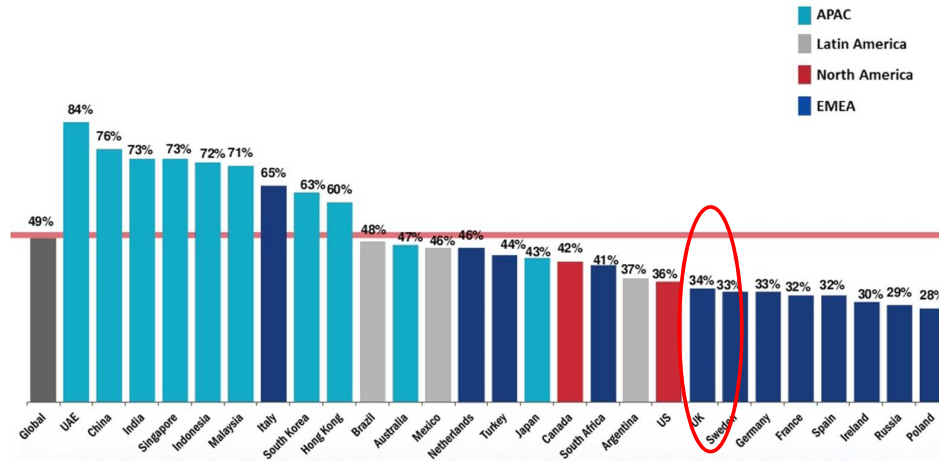
Research theme: Public Trust

THAT SAID, WITH THE EXCEPTION OF APAC COUNTRIES, POLICYMAKERS ARE NOT TRUSTED TO APPROPRIATELY REGULATE THE ENERGY INDUSTRY



PERCENTAGE AGREEING WITH EACH STATEMENT

I trust policymakers to develop and implement appropriate regulations on the energy industry



33 Q265270. Please indicate how much you agree or disagree with the following statements? Informed Publics, 27-country global total.



Research theme: The Role of the State

- Personal responsibility
- Stewardship and public theology
- Governance in a liberal democracy
- Incoherence and a restrained role?



Research theme: Competence

- Long term commitment important
- Competence in delivery required



Flamenville 3

Research theme: Parallels to healthcare

- Parallel with sugar consumption
- Messy policy area
- Good policies can be found, e.g. right to second opinion in Germany



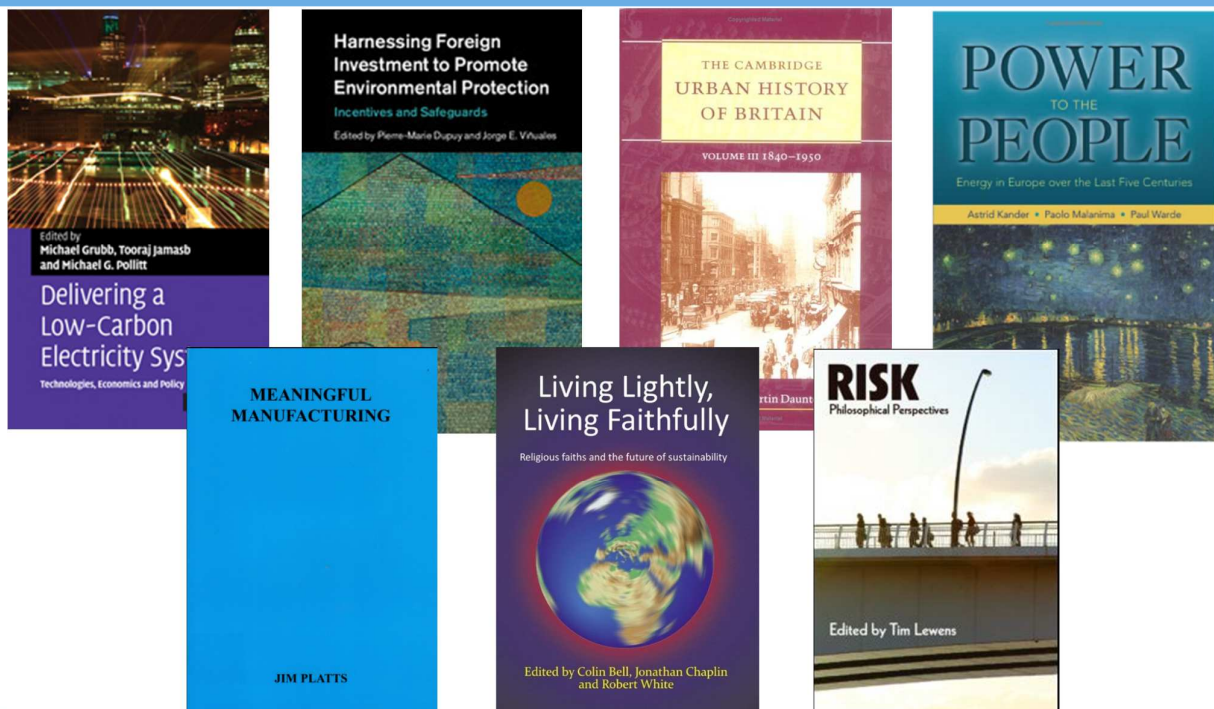
Groups involved

26 named individuals

13 faculties:

- Management
- Economics
- Politics (POLIS)
- Land Economy
- Law
- History
- Social Anthropology
- Philosophy (HPS)
- Divinity
- Psychology
- Earth Sciences
- Computer Laboratory
- Engineering

Some starting points...



How we plan to operate...

1. Research on process of policy and how good and bad decisions get made based on case studies.
2. A series of reports on 'In Search of Good Policy', e.g. power, heating, Brazilian energy etc..
3. Dissemination of research on methodological (what impacts to include), theoretical (how to make trade-offs), empirical (how much), institutional (how to deliver) aspects.

Possible outcomes

- Stakeholder engagement in different forms engaging with industry, policy community, government and public. For example theologians keen to engage on the 'Common Good'; an art exhibition of energy objects to illustrate social anthropology; Radio/TV programmes; PPEng undergraduate degree!
- How to promote technological developments and new business models in energy consistent with 'good' policy.

Potential case studies identified

- UK Clean Air Act 1956
- Oil Sands in Canada
- Fracking in the US vs in Europe
- Spanish vs UK wind industry development
- French vs British nuclear power
- West Siberia – West Europe gas pipelines
- Gothenberg Protocol on Black Carbon 2012
- Local Requirements for FiTs
- Regulation and public ownership of gas in UK in C.19th
- National Electricity Grid expansion since 1950 in GB
- Development of Milford Haven gas pipeline
- Peterhead Power Station – Miller Field CCS

Further suggestions from DECC

Nuclear shutdown policy in Japan, Germany etc.

Innovation policy and Institutional arrangements

Comparative demand reduction policies in Europe

Shifts in energy supply from coal to gas and historical energy transitions

Enforcement of building codes on energy efficiency

Building Trust with NGOs on policy

Local vs. central policies

Comparative CCS Policy in US and EU

National energy security attitude differences

CRASSH Seminar Series

Academic year 2015-16

Seminars examining historical cases to identify aspects of 'good' and 'bad' energy policy making

Discovery process...researchers from different disciplines will analyse cases

In addition to Cambridge faculty, guest researchers from other universities participating

Policy makers are also participating

Fortnightly Tuesdays from 12:00-14:00 at the Centre for Research in the Arts, Social Sciences and Humanities (CRASSH) beginning with lunch



CRASSH Seminar Series – Michaelmas programme

6 October

Topic: **Introduction to the series, In Search of 'Good' Energy Policy**

20 October

Theme: Geopolitics of European natural gas

Topic: **Russian-European natural gas pipelines**

3 November

Theme: Philosophy and ethics of energy

Topic: **French vs. British nuclear power**

17 November

Theme: History of energy

Topic: **UK Clean Air policies**

1 December

Theme: Theology and ethics of energy

Topic: **Oil Sands in Canada**



Concluding thoughts on good policy

- *Examples of good policy:*
 - Successive raising of pension age
 - Improvement in primary school performance
 - Drink driving campaign and Smoking bans
 - Inheritance taxes in C19th
 - Etc...
- *Common characteristics of good policy:*
 - Good use of quantitative evidence
 - High engagement and positive public support
 - Fairness and distributional issues addressed
 - Etc...

Key readings

- Allwood, J.M. and Cullen, J.M. (2011), *Sustainable Materials: With Both Eyes Open*, UIT.
- Bell, C., Chaplin, J., White, R. (eds.) (2013), *Living Lightly, Living Faithfully*, Faraday Institute for Science and Religion.
- Daunton, M. (ed.) (2001), *The Cambridge Urban History of Britain, Vol.3 1840-1950*, Cambridge University Press.
- Dupuy, P.-M. and Vinuales, J. (eds.) (2013) *Harnessing Foreign Investment to Promote Environmental Protection: Incentives and Safeguards*, Cambridge University Press.
- Grubb, M., Pollitt, M. and Jamasb, T. (eds.) (2008), *Delivering a Low Carbon Electricity System*, Cambridge University Press.
- Kander, A., Malanima, P. and Warde, P. (2014), *Power to the People: Energy in Europe over the Last Five Centuries*, Princeton University Press.
- Lewens, T. (ed.) (2007), *Risk: Philosophical Perspectives*, Routledge.
- MacKay, D.J.C. (2008), *Sustainable Energy - Without the Hot Air*, UIT.
- Platts, J. (2003), *Meaningful Manufacturing*, William Sessions.