UNIVERSITY OF CAMBRIDGE | Electricity Policy Research Group

Why Energy Policy is 'Failing' in the UK

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E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Outline

- Three types of failure
- Market Failure
- Government Failure
- Corporate Failure

- Policies to combat Failure
- Sensible Energy Policy?

Market Failures

- Monopoly and lack of competition
  - E.g. Power pool in early 1990s
- Environmental externalities
  - E.g. Carbon pricing
- Public goods problems
  - E.g. R&D and learning value of renewables
  - E.g. national energy security

Government/Regulatory Failures

- Policy instruments ineffective
  - E.g. Too little/too late OR too much/too early
- Jurisdictions in government poorly defined
  - DECC vs Ofgem; EU vs nation states
- Unrepresentative democracy
  - E.g. Onshore wind
- Government ‘corruption’
  - E.g. technology ‘pork barrel’
- Failure to sell polices properly to electorate
  - E.g. True cost of climate policy

Corporate Failures

- Business miscalculations
  - E.g. California IOUs
- Dishonest practices
  - E.g. Enron
- Bad luck
  - E.g. BP in Gulf?

Is Energy Policy different?

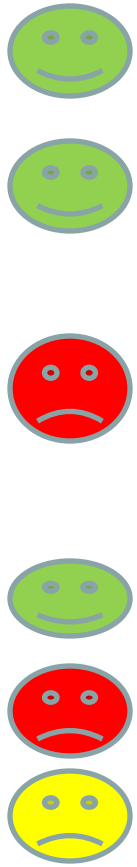
- Widespread view that it is:
- Market failure more likely
- Government failure less likely
- Corporate failure more likely

- View reflects general beliefs about all sectors

- Energy policy used to be more sensible than policies towards agriculture, transport and banking.

Assessment: Market Failure

- Monopoly and lack of competition
  - Monopoly regulation
  - Competition in wholesale and retail
- Environmental externalities
  - Carbon pricing
- Public goods problems
  - R&D
  - Learning value of renewables
  - National energy security



Assessment: Government Failure

- Policy instruments ineffective
- Jurisdictions in government poorly defined
- Unrepresentative democracy
- Government ‘corruption’
- Failure to sell polices properly to electorate

- Government policies increasingly complex and lacking a proper strategy.
- Widening gap between the ambition and scope of the policy and the likelihood of success.

Assessment: Corporate Failure

- Business miscalculations
- Dishonest practices
- Bad luck

- Energy market in UK characterised by responsible firms – little reason why it would not be!
- Good examples from elsewhere of orderly response of corporates to extreme financial stress (e.g. Argentina crisis, British Energy).

Corporate Responsibility

- Danger of failure to promote sensible policy package rather than just lobby for individual schemes.
- Industry should argue for sensible approach which has some chance of delivery at reasonable cost and ignore more obviously partisan elements.
- Industry needs to encourage sensible national debate and not try and arrange things behind the scenes.
- The industry should align itself with consumer interest not with government ‘policy mess’.

Conclusions on Policy Failures

- All the red dots/faces (like Project Discovery) are overwhelmingly government failures.

- Failure to properly acknowledge basic facts:

- Carbon externality needs to be priced
- Subsidies where learning effect exists
- Net and gross *cost effects significant*

A sensible energy policy?

- Emphasis on high and stable carbon prices
- Reliance on market mechanisms for low prices
- Incentivising security of supply directly
- Technology neutral subsidies for learning

- Many individual UK policies have a rationale but are poorly targeted…

Are policies working?

- Lack of high and stable enough carbon price:
  - Inhibits demand response.
  - Has delayed nuclear investment (if truly efficient).
  - Has led to more coal and less gas being burnt (and more CO2).
  - Has slowed development of bio-fuels (land fill gas and co-firing) and prolonged their subsidy.
- As a result:
  - Mature low carbon technologies have not emerged strongly.
  - Large reliance has been placed on subsidies to less developed technologies.
  - General policy uncertainty has delayed investment and unnecessarily raised issues of ‘will the lights go out’.

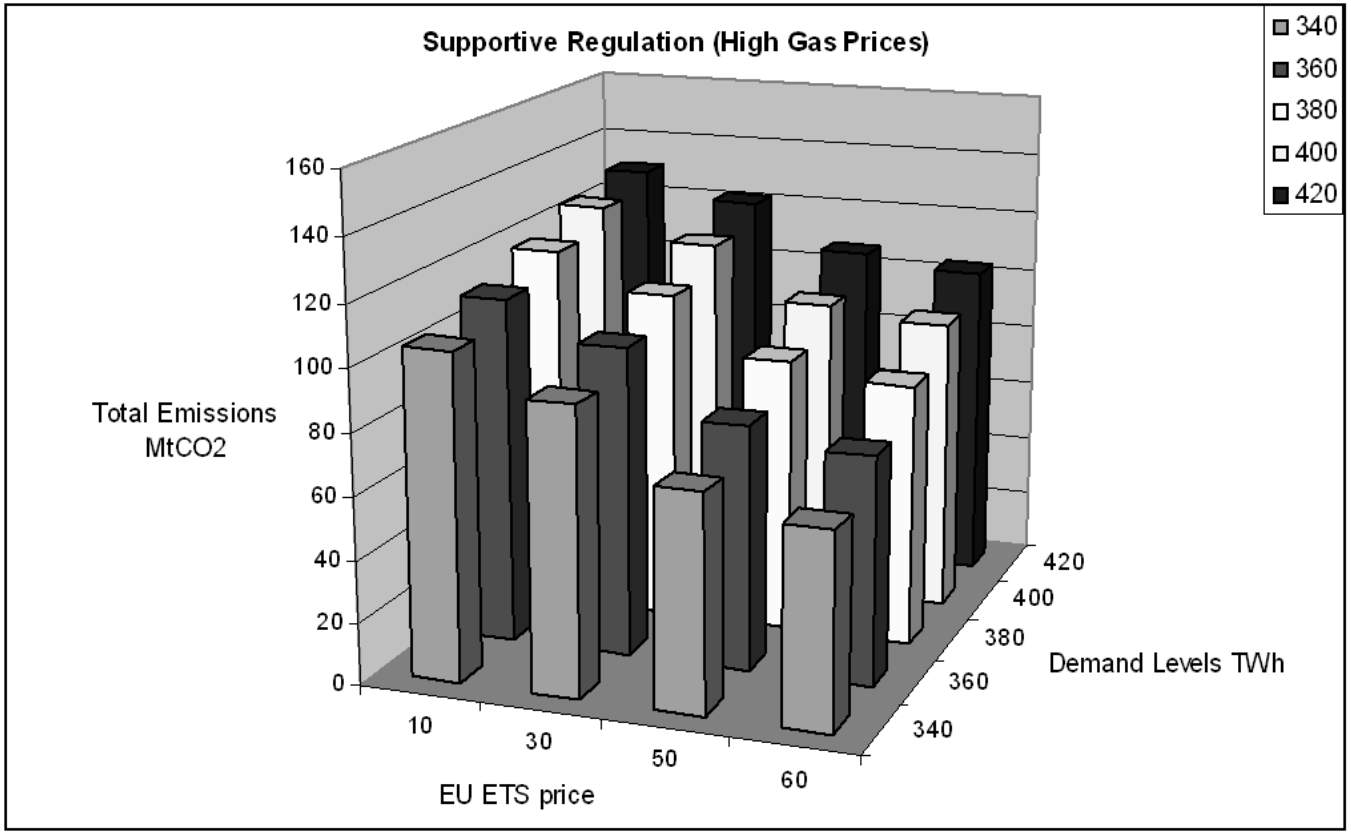
Renewables Obligation

	Target renewable share in GB	% Delivery in UK	Nominal Buyout Price £/MWh	Total Cost £m
2002-03	3.0	59%	30.00	282.0
2003-04	4.3	56%	30.51	415.8
2004-05	4.9	69%	31.59	497.9
2005-06	5.5	76%	32.33	583.0
2006-07	6.7	68%	33.24	719.0
2007-08	7.9	64%	34.30	876.4
2008-09	9.1	65%	35.36	1036.2
2009-10	9.7		37.19	
2010-11	10.4		+ inflation thereafter	
2011-12	11.4			
2012-13	12.4			
2013-14	13.4			
2014-15	14.4			
2015-16	15.4			Estimated: ~1753m (2008-09 prices) assuming no demand growth

Renewables support in the UK

- The general policy context has placed pressure on the RO scheme to deliver.
- The performance of this scheme is poor.
- There are two scale-able renewable options:
  - Onshore wind where planning issues are key.
  - Offshore wind where cost issues are key.
- RO scheme ok for onshore: just remove unnecessary revenue recycling.
- Offshore much better to move to annual auctions for capacity (as we have for transmission capacity to wind farm) to reveal true cost. Banded ROCs costly alternative.

EUETS and Demand (Fixed plant mix)



Source: Grubb et al., 2008, p.469. Gas price 50p/therm.

Current technologies and policy

- Sensible carbon pricing only basis for a way forward for nuclear and CCS
  - Could have technology neutral auctions for carbon reduction
- Renewables
  - Need to reduce costs relative to delivery
  - Need to adjust carbon target in line with delivery
- Demand Reduction
  - Energy service model a long-term option
  - Needs to address fuel poverty issues
- Learning benefits need to be financed by taxpayer

Current policies

Scheme	Description	Cost	Paid by
Renewables Obligation	Electricity suppliers must buy a proportion of their sales from renewable generators, or pay a buy-out charge	£874 million in 2007/8 [a]	Electricity consumers
EU Emissions Trading Scheme	Renewable generators indirectly benefit from the increase in electricity prices as other companies pass the cost of emissions permits into the price of power	Perhaps £300 million in 2008, given current permit prices [b]	Electricity consumers
Carbon Emissions Reduction Target	Energy companies must install low-carbon items in homes, which could include microgeneration from 2008	Total cost will be £1.5 billion over 3 years—most spent on energy efficiency	Gas and electricity consumers
Renewable Transport Fuel Obligation	Fuel suppliers must supply a proportion of biofuels or pay a buy-out charge	No more than £200 million in 2008/9 [c]	Consumers
Climate Change Levy	Electricity suppliers need not pay this tax (passed on to non-domestic consumers) on electricity from renewable generators	£68 million to UK generators; £30 million to generators abroad in 2007/8	Taxpayers, via reduced revenues
Lower fuel duty for biofuels	The rate of fuel duty is 20 pence per litre below that for petrol and diesel	£100 million in 2007	Taxpayers, via reduced revenues
Environmental Transformation Fund	Grants for technology development and deployment, including subsidies for installing renewable generation, planting energy crops and developing biomass infrastructure.	£400 million over three years from 2008/9	Taxpayers
Research Councils	Grants for basic science research	£30 million in 2007/8	Taxpayers
Energy Technologies Institute	Grants to accelerate development (after the basic science is known) of renewables and other energy technologies	Allocation (and eventual size) of budget not yet announced.	Taxpayers and sponsoring companies

Source: http://www.publications.parliament.uk/pa/ld200708/ldselect/ldeconaf/195/19509.htm#a53

Plus support for: CCS via levy

Total direct cost: c.£2.5bn in 2008/9

Plus: c.£2bn more for EUETS

Total current cost: £4.5bn+ p.a.

Are the policy objectives sensible?

- Renewables target should not have been agreed to (see document on *The Guardian* website).
- Much energy security rhetoric is grossly irresponsible.
- Many individual policies un-costed and not being independently evaluated.
- Multiple objectives add up to a VERY EXPENSIVE policy wish list.
- Best guess is that ‘policy’ will be substantially abandoned without achieving its targets when cost of government schemes combine with high gas prices to drive a critical percentage into energy poverty. (Pick your own numbers on this.)

Conclusions

- Market, Government/Regulatory and Corporate failures all exist to some extent in the energy market
- The fundamental issues are nothing to do with the UK's emphasis on competitive private provision.
- Government failures are central to the failure of policy but this in the nature of government policy.
- What is needed is an emphasis on the objectives of policy not on the means to achieve it.
- Individually sensible policies don't add up to a coherent strategy, which must have price signals at its heart.

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