Environmental Issues in the Regulation of Energy. The UK's renewable energy strategy: the return of the central planners?

George Yarrow
Regulatory Policy Institute, Oxford, UK
www.rpieurope.org, george.yarrow@rpieurope.org
ACCC Conference, Queensland
July 2008

A selection of current UK issues

- Ofgem's statutory duties, ministerial guidance and re-politicisation.
- The EU emissions trading scheme.
- Renewables Obligation Certificates (ROCs).
- The EU large plant combustion directive.
- Offshore transmission investment and access.
- Energy efficiency.
- Fuel poverty.

- *Policy statements italicised.*
- The return of the central planners?

Statutory duties of the regulator

- Now:
  - Clear primary duty of protecting the interests of consumers, where appropriate by promoting competition.
  - security of supply, sustainability, etc. feature lower in the hierarchy of duties/objectives.
  - Ministerial guidance on priorities, which has to be taken into account but not necessarily followed.
- The debate:
  - Various suggestions to put other duties up top.
  - Stronger guidance, eg on social and environmental matters.
- Major issue: re-politicisation?
  - Regulator would play a larger role in determining policy weights.
  - Instability of policy objectives? Compare with the days of public ownership: Sir Peter Parker – "the first job I did where I didn't have a clue what would constitute 'success'." Déjà vu?

The EU Emissions Trading Scheme (EU ETS)

- *The scheme covers electricity generation and the main energy intensive industries - power stations, refineries and offshore, iron and steel, cement and lime, paper, food and drink, glass, ceramics, and engineering and vehicles. Overall, these account for around 50% of UK CO2 emissions.*
- *It works on a "cap and trade" basis. EU Member State governments are required to set emissions limits for all installations in their country covered by the scheme. Each installation is then allocated allowances equal to that cap for the particular phase in question. The allocations of allowances is set out in the National Allocation Plan for the particular period. The first phase of the EU ETS ran from 2005 – 2007; Phase II runs from 2008 – 2012.*
- *Installations may meet their cap by either reducing emissions below the cap and selling the surplus, or letting their emissions remain higher than the cap and buying allowances from other participants in the EU emissions market in order to meet the cap.*
- Major issue: a politicised supply side?

Renewables Obligation Certificates (ROCs)

- *The Renewables Obligation requires licensed electricity suppliers to source a specific and annually increasing percentage of the electricity they supply from renewable sources. The current level is 7.9% for 2007/08 rising to 15.4% by 2015/16.*
- *It is expected that the Obligation, together with exemption from the Climate Change Levy for electricity from renewables, will provide support to industry of up to £1bn per year by 2010.*
- *At the end of 2006 generation from renewable sources eligible under the Obligation stood at 4.4%. This rises to 4.6% if non-eligible sources are included.*
- Eligibility determined by administrative categories. Scheme administered by Ofgem.

How the ROCs scheme works: a mixture of markets and bureaucracy

- *The Obligation requires suppliers to source an annually increasing percentage of their sales from renewables. For each megawatt hour of renewable energy generated, a tradable certificate called a Renewables Obligation Certificate (ROC) is issued.*
- *Suppliers can meet their obligation by:*
  - *acquiring ROCs*
  - *paying a buy-out price equivalent to £34.30/megawatt hour in 2007/08 and rising each year with retail price index;or*
  - *a combination of ROCs and paying a buy-out price.*
- *When a supplier chooses to pay the buy-out price, the money they pay is put into the buy-out fund. At the end of the 12-month Obligation period, the buy-out fund is recycled to electricity suppliers presenting ROCS.*
- Additive to market price, which incorporates EU ETS carbon values. Issue: double counting?
- Proposals for banding will increase administrative influence.

The EU large plant combustion directive

- *The aim of the LCPD is the regulation of emissions to air from large combustion plants ("LCPs"); plants with a rated thermal input of 50 MW or more, including power stations, petroleum refineries, steelworks,and other industrial processes burning solid, liquid, or gaseous fuel.*
- *The emissions regulated are sulphur dioxide (SO2), nitrogen oxides (NOX) and dust (particulate matter).*
- *Operators of "existing" LCPs (i.e. those first licensed before 1 July 1987) have the option of meeting LCPD requirements either by:*
  - *accepting the concentration-based emissions limit values (ELVs) specified in the LCPD,*
  - *participating in the UK mass emission based National Emission Reduction Plan (NERP), or*
  - *accepting the limited hours derogation by which the LCP is opted out of the requirements of the ELV or NERP, implying a maximum of 20.000 operational hours between 1 Jan 2008 and 31 Dec 2015.*

Issues raised by the LPCD

- Not dealing with climate change here. These are older environmental policy concerns.
- *These pollutants are known to damage human health and contribute to acid deposition, which acidifies soils and freshwater bodies, damages plants and aquatic habitats, and corrodes building materials.*
- LPCD effects may be implicated in creating the high premium for wholesale electricity in the UK, as compared with continental Europe.
- If so, is this disproportionate regulation? But does anyone care now that the focus is on climate change?

Offshore transmission investment and access: features of the proposed regime

- *Licences will be issued on an open ended basis such that they will apply for not less than 20 years but may apply for longer.*
- *The period of revenue stream will be 20 years with the Authority having the right to set a shorter period if the tender competition has been less than optimal.*
- *Should there be a demonstrable ongoing need for the assets beyond the 20 year revenue stream then the Authority will decide whether to extend the period or retender on a case by case basis.*
- *We are seeking further views on provisions for addressing unexpected and/or uncertain cost changes for transitional and enduring projects, including potential arrangements for provision of additional capacity.*
- *There will be penalty only incentives for availability/reliability and for delivery date. Targets and incentive rates may be set on a case by case basis. We are seeking views on the appropriate structure and level of performance incentives and the generator's role in defining this, and how much of an OFTO's revenue should be exposed to incentives.*
- *Generator affiliates will be allowed to bid for OFTO licences subject to appropriate ring-fencing and compliance with European Union requirements.*

Offshore regime continued

- Competitive tendering for offshore transmission operator licences.
- Revenue stream determined for 20 year period, four times longer than the conventional review period.
- No ownership separation of generation and transmission, only the usual ring fencing requirements. Importance of investment complementarities?
- Effectively a compromise between:
  - Licensed, regulated monopolies covering large areas (the classic utility model), and
  - Merchant transmission, subject only to open, non-discriminatory access (the traditional Ofgem/GEMA preference).
- A 1-1 draw between planners and regulators?

Energy Efficiency

- EU/UK renewables strategy: 15% of total energy requirements from renewables by 2020.
- *The Carbon Emissions Reduction Target (CERT) is an obligation for energy suppliers to achieve targets for promoting reductions in carbon emissions in the household sector. Under the new Carbon Emissions Target (CERT), energy suppliers will promote energy efficiency, microgeneration and behavioural measures that will deliver financial benefits to consumers and contribute to the eradication of fuel poverty.*
- *Ofgem have procedures to assess suppliers' schemes, and oversee progress and compliance. Ofgem will approve a scheme if they are satisfied that it will lead to an improvement in energy efficiency.*

Energy efficiency: old, familiar dysfunctions

- A reduction of 100 MWh in energy demand will reduce the renewables target by 15MWh. A 100 MWh demand reduction is therefore treated as equivalent to a 15MWh increase in renewables capacity, even though the effect on carbon emissions of the former is an order of magnitude greater than the effect of the latter.
- Ofgem has to approve CERTs projects developed by energy suppliers to meet specified targets. This really is getting close to STE (Soviet-type economy) arrangements.
- Ofgem has separated its environmental administration activities internally, to reflect the different cultures.

Fuel poverty

- Another dysfunctional metric – the number of households spending more than 10% of income on fuel in order, among other things, to maintain their house at an adequate level of warmth – leading to an infeasible policy commitment to abolish fuel poverty when the numbers are rising sharply.
- Behind the silliness are the very real problems of the distributional implications of rising energy prices.
- Bad environmental regulation is having regressive distributional effects:
  - Effects of the allocation methods for EU ETS allowances.
  - Effects of high cost, low productivity carbon abatement.
- Effective economic regulation, clearly focused on consumers and competition, potentially has a major role to play.