Oxera

Agenda

Advancing economics in business

Is the competitive electricity supply market dying (and does it matter)?

Ofgem, the energy regulator in Great Britain, has always aspired to create 'effective' competition in electricity supply—which would require regulation only through the normal application of general competition law. Its recent Energy Supply Probe is notably pessimistic about achieving this. Tim Tutton, Oxera Principal, suggests that such pessimism is appropriate, but that it may matter less than Ofgem thinks

In October of this year, Ofgem published the initial findings from its Energy Supply Probe.[1] This report is set against the background of, among other things, the concerns of the House of Commons Business and Enterprise Committee that 'the UK's energy markets are not functioning as efficiently as they should, and that UK prices may be higher than those in competitor countries'.[2] The report is significant for a number of reasons—not least because it seems to represent a material evolution of Ofgem's view of the electricity supply market, and how it should be regulated.

For some years now, Ofgem has operated on the basis that competition was sufficiently 'effective' in the electricity market to allow economic regulation through the provisions of general competition law, rather than through licence conditions, albeit that Ofgem also tried (unsuccessfully) to introduce a Market Abuse Licence Condition (MALC) into generator licences in 2000. The Supply Probe, on the other hand, envisages at least the possibility of a significantly more interventionist approach, including new powers and licence conditions that are either similar to ones which have been dropped by Ofgem in the past (on the grounds that competition was sufficiently robust to make them unnecessary), or similar to the MALC, which was previously rejected by the Competition Commission.[3]

This article addresses the following two questions.

- Does the Supply Probe effectively mark the end of the road for the previous vision of a competitive and lightly regulated electricity supply market in Great Britain?
- Does it matter if this is the case, particularly against the background of (a) the increasingly complex political demands which are being made of, in particular, the electricity market, and (b) the problems which these demands pose for a conventionally competitive market?

The article therefore looks at:

- the market and regulatory vision which Ofgem and its predecessor bodies have had up until at least recently;
- the analysis and remedies contained in the Supply Probe;
- the reasons why Ofgem's original vision is now so difficult to sustain, both because of the inherent characteristics of electricity markets and the changing political context in which the GB market now operates;
- how the operation and regulation of the GB electricity market could evolve to align with political imperatives.

The vision of a competitive electricity market

During the 1990s, and against the background of the planned and actual liberalisation of the gas and electricity supply markets, both the gas and electricity regulators (Ofgas and Offer) articulated a vision of how supply competition would develop and how the regulatory regime would evolve accordingly. This vision had, in effect, three stages.

In stage 1, the incumbent supplier is still in a 'dominant' market position. In these circumstances, there would be a need for price controls on the incumbent, in addition to a prohibition on the incumbent unduly discriminating between different customers or classes of customer. In

The views expressed in this article are those of the author.

particular, if the incumbent wished to reduce its price to particular customers in order to meet a perceived competitive threat, it would also be required to reduce its prices to other, more 'captive' or (to use Ofgem's current phrase) more 'sticky' customers.

In stage 2, competition to the incumbent is 'established', not least through a material loss of market share by the incumbent. In this stage, there would be a relaxation of the various restrictions on the incumbent—eg, through relaxing the prohibition on undue discrimination. Specifically, it was envisaged that the incumbent could price to meet a perceived competitive threat in part of its market without an equivalent price reduction for other customers. Instead, the incumbent would be subject to broader prohibitions, not least in terms of 'predatory' pricing (in relation to customers more likely to switch to a competitive supplier) or 'onerous' pricing (in respect of relatively captive customers). Thus, for example:

> Under Standard Condition 13 of the Gas Suppliers' Licence, a dominant gas supplier is prohibited from showing undue preference or exercising undue discrimination against any person or class of persons. Condition 13 is less stringent after competition is established than before. When competition has been established, the dominant supplier is able to price in a way that is reasonably necessary to meet established competition, but not in a way that is predatory.[4]

In stage 3, and after (among other things) further loss of market share by the incumbent, competition is deemed to be 'effective' and there is no need for constraints on the incumbent's market behaviour beyond those entailed by general competition law. Thus, for example:

> The PESs[5] are subject to non-discrimination provisions in their licences which require them not to discriminate unduly in setting prices to their customers or to set predatory or onerous prices. The condition provides for these restrictions to be relaxed as competition is established, and removed when competition is effective. Nevertheless, PESs would continue to be subject to the constraints of general competition law.[6]

This vision has informed Ofgem's regulation of gas and electricity supply throughout this decade. Price controls of incumbent supply businesses were abandoned and non-discrimination clauses were dropped from supply licences, implying that Ofgem did consider that competition was 'effective'.

The 2008 Energy Supply Probe

Analysis of energy supply competition

As noted above, Ofgem undertook the Supply Probe against the background of rising energy prices and increased political concern about the effectiveness of markets. Indeed, the House of Commons Business and Enterprise Committee has resumed hearings on these issues in the wake of the publication of Ofgem's report, and in the context of concerns that falls in wholesale oil and gas prices have not been reflected in retail gas and electricity prices.

Partly in answer to questions raised by the Committee, Ofgem concluded in the Supply Probe that:

– there was no evidence of a cartel operating among the 'Big Six' suppliers (E.ON UK, EDF Energy, RWE npower, ScottishPower, Scottish & Southern Energy and Centrica): 'We have examined this issue carefully and are satisfied the suppliers' key pricing decisions are made independently and without unlawful agreements or information exchange between suppliers';[7]

– although 'there is clear evidence of a lag between changes in wholesale and retail prices … We have found no evidence that the lag is greater when prices are falling than when prices are rising'.[8]

Nevertheless, Ofgem did not give the gas and electricity markets a clean bill of health. In particular, the Supply Probe notes that:

– no significant 'competitive fringe' has developed to offer a material threat to the Big Six, not least because of 'the difficulty that entrants have in securing adequate access to wholesale energy supplies';[9]

– the five former incumbent electricity suppliers charge more to customers in their former monopoly areas than comparable 'out-of-area' customers and earn the bulk of their profits from in-area sales;

– those same suppliers charge more to single-fuel customers (including those who have no connection to the gas main) than dual-fuel ones, without apparent cost justification;

– some of the premiums charged to customers on pre-payment meters do not appear to have a sound cost justification.

In sum, the Supply Probe is concerned that there are significant chinks in the effectiveness of competition, not least because of the 'stickiness' of some customers (whether by choice or because of a lack of options, such as the option to have a dual-fuel agreement), and the difficulty that 'independent' suppliers have in accessing wholesale energy supplies.

The proposed remedies

Some of Ofgem's proposed remedies are staples of its tool kit for making competition work more effectively, including:

– improved information for customers;
– simpler supplier switching;
– an 'urgent' programme of work to identify the causes of low wholesale market liquidity.

However, other proposed remedies imply that 'regulated' competition—and regulated in quite a heavy-handed way—may be here for the long term. Specifically, Ofgem is proposing that, among other things:

– suppliers have a new licence obligation that differences in charges for different payment types must be cost-reflective;

– the Big Six suppliers will be required to publish separate regulatory accounts for their generation and supply businesses;

– consideration should be given to either reintroducing a prohibition on undue price discrimination into the licences of the Big Six or introducing a form of relative price control;

– Ofgem will seek views on whether it should have 'additional powers to guard against potential market abuses' (which could be taken to mean a version of the proposed MALC which was rejected by the Competition Commission back in 2001).

What does it all imply?

Arguably, the combination of the Supply Probe's analysis and remedies implies that Ofgem has accepted that, for the foreseeable future, competition alone (and the normal enforcement of competition law) will not be enough to take care of customers' interests. In particular:

– it is now considering options (relative price regulation and a licence prohibition on undue discrimination) which have been previously rejected as either unnecessary or potentially harmful;[10]

– a licence requirement for cost-reflective pricing between different payment types would similarly recognise the ineffectiveness of competition in delivering cost-reflectiveness, a fairly basic corollary of effective competition;

– Ofgem's original proposal for a MALC always appeared anomalous alongside its professed faith in, and optimism about, the ability of the New Electricity Trading Arrangements to deliver wholesale market competition in electricity—and any successor to MALC would now look equally inconsistent with a belief that effective competition is in prospect.

So, is Ofgem being unduly pessimistic about the prospects for effective competition in energy supply, and how much does it matter? (For the most part, the following sections focus on competition in *electricity* supply, partly in the interests of brevity and partly because it is electricity where the increasingly complex political context poses particular problems for the survival of the competitive model.)

Why Ofgem's vision may be (increasingly) hard to realise

There are at least three reasons why Ofgem's desired model for a competitive electricity market, *in which a significant competitive fringe operates alongside the Big Six vertically integrated suppliers*, is unlikely to be realised:

– the *economics* of efficiently delivering security of supply (ie, a sufficient volume of total generating capacity);

– the *politics* of leaving security of supply to a competitive, energy-only market;

– government energy and climate change policy and its implications for the *composition* of electricity generation.

The economics of electricity supply

Investing in long-lived assets which have only one use, and where demand is uncertain, is obviously a risky business. One traditional way of reducing those risks in electricity supply has been to organise a national or regional electricity supply market as a vertically integrated monopoly. In the absence of a statutory monopoly, industries faced with this sort of problem often evolve through both vertical integration and horizontal consolidation, as has occurred (and will probably continue) in the GB electricity market. The risks of being a generation-only or supply-only company have been demonstrated in Great Britain by the high failure rates of such businesses, especially since the introduction of new wholesale trading arrangements in 2001, and the very small surviving presence of supply-only businesses.

On top of the problems for competition (and, in particular, for Ofgem's desired competitive fringe of supply-only businesses) which are inherent in the economics of electricity supply, the design of the GB electricity market makes it more difficult for a fully competitive market to deliver security of supply. Specifically, the GB electricity market is an 'energy-only' market—the default is that generators are paid only for energy generated, rather than also for generating capacity made available to the market. As shown by, for example, Paul Joskow, such markets will typically struggle to build sufficient peak generation capacity (capacity which actually generates only occasionally), especially where there is a credible threat of regulatory intervention to stop power prices going to the required competitive level at times of high demand.[11] Ofgem's stated intention (in the Supply Probe) to consider additional powers to deal with market abuse, alongside the inherent difficulty of deciding whether price spikes are due to market abuse or to competitive supply and demand, makes that threat eminently credible in Great Britain—and all of this at a time when the prospective growth of wind generation will substantially increase the requirement for low load factor generation.

In general, therefore, and on economic grounds alone, it is not surprising that, as acknowledged by Ofgem in the Supply Probe, less than 0.3% of electricity is currently supplied by suppliers other than the Big Six. Thus, *to the extent that effective supply competition requires a substantial competitive fringe of supply-only entities* (and that certainly seems to be Ofgem's belief), economics alone means that the prospects of effective competition in the GB electricity market are poor.

The politics of leaving security of supply to a competitive market

Even in the event that a competitive electricity industry is able to continuously deliver security of supply, the politics of this situation would still be unattractive. This is because efficient competitive markets work by not having very much spare capacity sitting around idle and by building required new capacity at the last possible minute. Therefore, even a successful competitive electricity market would mean that politicians would always be having to explain why the lights will not go out in a few years' time. This situation is unlikely to be sustainable in the longer term in respect of an industry as political as electricity supply has always been.

Government energy and climate change policy and the generation mix

Finally, the UK government does not only want the electricity industry to deliver a sufficient volume of generating capacity, it also wants that capacity to be of particular types. Government plans for meeting climate change targets currently envisage 30–40% of generation to come from renewable sources by 2020.[12] The government also envisages substantial new build of nuclear generation and may indeed be moving to a similar position on coal-fired plant with carbon capture and storage (CCS).[13]

As far as renewable generation is concerned, the government has thus far been content to try to achieve its objectives through obligations on suppliers and through subsidies (as well as reforming planning legislation and access to the electricity transmission system). However, its formal position is that nuclear generation will not be subsidised. Would a genuinely competitive energy market deliver the required amount of new nuclear generation or, in time, of CCS-equipped coal-fired plant? Relatively 'market-friendly' ways of achieving government objectives may be available (eg, underwriting the carbon price), but the more the government is involved in effectively making decisions about plant mix, and the more multifarious its underlying policy objectives become (energy security, and a diverse mix of generating plant, alongside emissions reduction), the chances of any conventionally competitive market surviving become slimmer.

In sum

The implicit pessimism in Ofgem's Supply Probe about the prospects for effective competition in electricity supply (the sort of competition where a substantial competitive fringe would facilitate light-touch regulation) is justified.

Where from here?

The logic underlying this article is as follows.

– Ofgem has premised its current regulatory regime for electricity supply—in which reliance is on general competition law, rather than on licence conditions—on the existence of 'effective' competition.

– It now judges that competition is not effective in its defined sense of obviating the need for more intrusive regulation.

– If, as according to Ofgem, effective competition requires a 'significant competitive fringe' of supply-only companies, such competition is unlikely to happen. The economics of electricity supply militate against the long-term competitive survival of supply-only entities, and Ofgem itself has made such survival more difficult by introducing new wholesale electricity trading arrangements in 2001, which increase the risks of being a generation-only or supply-only entity. In other words, the development of a vertically integrated oligopolistic industry has been an efficient response to both the inherent economic characteristics of electricity supply and to the specific design of the GB wholesale electricity trading arrangements.

– In addition, the politics of electricity supply—both the need for more assurance than the current market provides about longer-term security of supply and government's increasingly complex objectives for the electricity supply industry (not all of which have been covered in this article)—militate against a conventional consumer-led competitive industry.

Given that electricity supply is unlikely to be a conventionally competitive industry, what are the options for having a viable industry which achieves the objectives that are being (explicitly or implicitly) set for it? There are at least two broad ways forward, which could be labelled ‘Clean Sheet’ and ‘Incremental’.

– The Clean Sheet approach, arguably more a thought experiment than a realistic prescription given where the industry currently is, starts from the recognition that much of how the industry develops, notably the impetus for new generating capacity of particular types, will be driven by government. Given this, an efficient industry structure would be one that aims to achieve those government objectives at least cost. A ‘Single Buyer’ model would arguably be one logical way of achieving this. The Single Buyer (which could be government-owned) would specify how much new generating capacity would be required and of what type, and would then competitively tender long-term contracts to build and operate the new capacity. Supply companies would buy wholesale electricity on non-discriminatory terms from the Single Buyer and would compete on customer service. ‘Regulation’ of the industry would, at least over time, be achieved mainly through the contracts signed with the Single Buyer.

– An Incremental approach would recognise that the industry has gone some way to realising many of the available economies through horizontal consolidation and vertical integration (albeit that there may be further to go in both dimensions). It would seek to build on this model in a variety of ways, probably including (a) an increasingly complex set of subsidies designed to achieve the government’s desired mix of generating plant; (b) corporatist ‘understandings’ between government and industry to achieve other government goals, including assurances that enough new generating capacity will be built and that particular classes of customer will be treated ‘fairly’; and (c) modification of the existing wholesale electricity trading arrangements to include remuneration of available generating capacity, in addition to payments for MWh generated. In this model, it would be accepted that (oligopolistic) competition would not be ‘effective’ in Ofgem’s meaning of the word, and regulation of the industry would be continuous and fairly intrusive.

So, in answer to the questions posed by the title of this article:

– competition in electricity supply *is* dying *if competition is defined, as by Ofgem, as requiring a significant competitive fringe of non-vertically integrated market participants*;

– the fact that it is dying does not matter that much because a conventionally competitive industry would not be able to deliver efficiently the government objectives which are currently being set (and will probably continue to be set) for the industry.

Tim Tutton

[1] Ofgem (2008), ‘Energy Supply Probe: Initial Findings Report’, October.
[2] House of Commons Business and Enterprise Committee (2008), ‘Energy Prices, Fuel Poverty and Ofgem’, Eleventh Report of Session 2007–08, July, Volume 1, p. 3.
[3] Competition Commission (2001), ‘AES and British Energy: A Report on References Made under Section 12 of the Electricity Act 1989’.
[4] Ofgas (1998), ‘A Review of the Development of Competition in the Domestic Gas Market’, October.
[5] Public Electricity Suppliers, the combined distribution and supply incumbent companies, which were created at the time of electricity privatisation but which ceased to exist once distribution and supply licences were separated.
[6] Offer (1998), ‘Reviews of Public Electricity Suppliers 1998–2000: Price Controls and Competition’, consultation paper, July.
[7] Ofgem (2008), op. cit., para 1.16.
[8] Ibid., para 1.22.
[9] Ibid., para 1.7.
[10] For more details about Ofgem’s case against relative price regulation, see, for example, Ofgem (2001), ‘Review of Domestic Gas and Electricity Competition and Supply Price Regulation: Evidence and Initial Proposals’, November. The various supply licence obligations on non-discrimination were excised in 2001 and 2007.
[11] Joskow, P.L. (2008), ‘Capacity Payments in Imperfect Electricity Markets: Need and Design’, *Utilities Policy*, **16**:3.
[12] See, for example, House of Lords Select Committee on Economic Affairs (2008), ‘The Economics of Renewable Energy’, November, para 24.
[13] Department of Business, Enterprise and Regulatory Reform (2008), ‘Meeting the Energy Challenge: A White Paper on Nuclear Power’, January.

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d_holt@oxera.com

Other articles in the December issue of *Agenda* include:

- **competition law in pharmaceuticals: a moving target?**
  Pat Treacy, Sophie Lawrance and Helen Hopson, Bristows
- **dealing with uncertainty: how to encourage investment in NGA networks?**
- **drug abuse? the Commission, the sector inquiry, and generic entry**

For details of how to subscribe to *Agenda*, please email agenda@oxera.com, or visit our website

www.oxera.com