

ENERGY MARKET INVESTIGATION

Response to the CMA's Statement of Issues

George Yarrow¹

1. The CMA's Statement of Issues invites parties to tell the CMA, with reasons, if they believe that either (a) the issues so far identified should not be within the scope of the investigation or are mischaracterised, or (b) there are further issues not identified or that the CMA has indicated it is not minded to pursue, but which should be considered. This response addresses those two points and adds a few further comments. All paragraph references relate to the Statement of Issues.

Characterisation of the issues: general remarks

2. In the context of a market investigation the CMA is required to determine whether any 'feature' or 'combination of features' in relevant markets prevents, distorts or restricts competition in the reference markets, or in other words has an 'adverse effect on competition' (paragraph 3). Another way of putting this is that to say that the CMA is required to identify what, in other contexts, might be referred to as the 'root causes' of AECs.
3. Market conduct and market outcomes are almost invariably jointly determined/influenced by combinations of factors and this has two immediate consequences:
 - a. Potential combinations of factors are large in number and a methodological approach based chiefly on *ex ante* identification of the possibilities is inefficient at best and usually infeasible in practice. It is also prone to error: things easily get missed.
 - b. Identification of the root causes of AECs may lead to combinations of factors such that some of the component factors are beyond the direct influence of the CMA and others are not. I therefore strongly support the sentiments expressed in paragraph 20: some things in a combination of factors can reasonably be taken as given, others not, but the distinction – which is relevant to consideration of remedies – should not stand in the way of proper analysis of the effects/consequences of the overall 'combination of factors'.
4. Given the first of these points, I personally find the language of 'theories of harm' unhelpful. It has too much of the feel of classroom economics about it, and classroom economics is characterised by an approach that involves abstracting from (i.e. ignoring)

¹ Chair, Regulatory Policy Institute. The views expressed in this submission are my own, not those of the Regulatory Policy Institute (RPI) or any other organization with which I am associated. The RPI facilitates contributions to consultation processes in furtherance of its objective to promote the study of regulation for the public benefit, but does not itself take positions on the relevant matters.

large amounts of information.² The qualifications expressed in paragraph 21 are therefore important if an overly presumptive approach is to be avoided.

5. These ‘theories’ are really *heuristics*, and regarding them as such serves as a reminder that they buy simplicity/expediency at a cost of increased risk of bias and error, including by mischaracterising an issue. This is a trade-off that confronts all decision makers.

The scope of the investigation

“If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question I could solve the problem in less than five minutes.” Albert Einstein.

6. The great professor exaggerated, but only to communicate an important truth: the formulation of questions is key to investigation and discovery. The same truth is embedded in the legal process. As Lord Diplock put it (in *Tameside*) in relation to judicial review standards: “... *the question for the Court is did the Secretary of State ask himself the right question and take reasonable steps to acquaint himself with the relevant information to enable him to answer it correctly?*” Further, in practice most investigations start with facts and/or observations and proceed to ask questions with a view to understanding why things are as they are or to identifying the root causes of problems. The formulation of questions is itself an iterative process.
7. If the importance of discovering and asking the most productive (‘proper’/‘right’) questions is accepted, broad answers to the CMA’s questions (set out in the first paragraph of this response) follow immediately:
 - a. All issues identified in the Statement of Issues are potentially within scope, and
 - b. Issues that the CMA has indicated that it is not minded to pursue are also potentially within scope, and the same is true for a range of issues not yet identified.
8. The reasons are straightforward: the scope of the investigation should be as broad as is necessary to get to satisfactory answers to the questions asked. It need not be any broader, but it certainly should not be any narrower. Investigation is a process of discovery and it is not possible to forecast *ex ante* where it will lead.
9. Given the above remarks, I hope that the CMA Panel will not to allow itself to get boxed in on issues of scope at an early stage of the investigation. Paragraph 63 points to a more appropriate approach, explaining that whilst wholesale gas markets will not be a focus of a ‘theory of harm’ the CMA will nevertheless seek to understand *why* wholesale gas

² A similar view was expressed in the excellent Minority Report of the Monopolies and Mergers Commission’s *Beer Inquiry* (1986-9), although that was long before theories of harm came into fashion.

markets appear to be working better than wholesale electricity markets and *why* vertical integration in the two cases differs.³

10. In this investigation the CMA already has large amounts of potentially relevant information and data by virtue of the prior work of Ofgem. This material should obviously not be accepted uncritically *en masse*, and nor should it be privileged over other sources of evidence. It does exist however, and in relative abundance. It therefore potentially allows the CMA to make a quick start on an investigative process that begins with observations/facts and works backwards to root causes by sequentially asking the most generic of productive questions: *why*?⁴

A concrete illustration: the 2009 non-discrimination licence condition

11. The general points can be illustrated by taking a closer look at the first part of ‘Hypothesis 4c’, concerning the non-discrimination licence condition. The Statement of Issues says that “... we will look to assess the impact on competition of two recent interventions by Ofgem in retail energy markets: the non-discrimination licence condition that was introduced in 2009; and the reforms introduced this year to simplify tariffs.”
12. It is not immediately clear that approaching matters this way will take things very far. Suppose that, having looked at the matter, the CMA concludes that – as the Gas and Electricity Markets Authority (GEMA) was advised would likely be the case – the 2009 measure did indeed serve to restrict competition in retail markets and thereby harmed consumer interests. Suppose further that it is concluded that Ofgem’s more recent simplification reforms contain elements that can also be expected to restrict competition. Hypotheses will then have been tested, but the conclusions do not identify a ‘feature’ of the regulatory arrangements that can be said to give rise to an AEC. These policies may simply have been two mistakes and, like all economic agents, regulators make mistakes from time to time. A finding that regulators are not infallible would not be news.
13. Whilst a Court or merits-appeal body might be interested in the correctness of the individual decisions, in a market investigation the CMA is, I think, required to go considerably further than that. Specifically, it needs to assess *why* the mistakes occurred. For this purpose it is potentially much more informative to ask: “Why were these decisions taken? Why was the economic advice of the time ignored? Why were internal legal opinions ignored? Why was a regulatory approach that had been developed over a period of nearly twenty years up to 2008 abandoned more or less overnight?”

³ On the other hand, the reference to a “need to integrate” in paragraph 63 is unhelpful since it *presumes* that there are *compelling* reasons (whether for good or bad) for vertical integration in electricity. It may turn out that the CMA concludes that such compelling reasons do exist, but that is something to be investigated rather than assumed. Alternatively it may be that choice of strategies is found to be a close-call, for example because contractual options are reasonably good substitutes for integration.

⁴ See, for example, the “5 whys” diagnostic technique developed by the Toyota motor company <http://businessanalystlearnings.com/ba-techniques/2013/2/5/root-cause-analysis-the-5-whys-technique> or, for an entertaining account of the approach, the journalist Matthew Parris’s piece at http://www.timesonline.co.uk/tol/comment/columnists/matthew_parris/article5679226.ece

14. It can be noted at this point that the answers to the further questions may have far-reaching implications: whilst any ‘root causes’ that are found are identified via examination of very specific events, those same root causes may turn out to have influenced many other events and outcomes as well.
15. For example, a dysfunctional ‘feature’ of a regulatory process that is discovered/identified by exploration of particular retail market decisions may also have adverse effects in wholesale markets. To the extent that such a feature is also characteristic of regulatory processes in other economic sectors, findings might also have implications for those other sectors too, and hence for the conduct of possible future CMA investigations.
16. In specific relation to the 2009 undue discrimination decision, the CMA will I think find a sharp change of direction in Ofgem’s approach to retail markets between 2007 and 2008⁵, as revealed in published documents (and even the intentionally opaque board minutes are incrementally informative). As just suggested, the question is simply *why*?
17. One benign answer – that there was a significant change in *relevant*, material circumstances – can quickly be ruled out. Among other things, no substantive evidence or reasoning to that effect is to be found in the documents of the time, including the impact assessments (where, if it had existed, it should have appeared).
18. The regulatory shift correlates precisely with a board-level change in Ofgem personnel and responsibilities on 1 January 2008, but “because different people were in charge” is not in itself a satisfactory answer to the question. It is a familiar empirical finding in regulatory studies that the characters of individual regulators can have substantial economic effects (unsurprising given that regulators exercise very substantial market power and tend to have substantial discretion). However, looking across the various regulated sectors in the UK, changes in senior regulatory personnel occur on a relatively frequent basis and it is by no means common to find U-turns as clear cut as the Ofgem 2007/8 episode. This suggests that there were other factors at work.
19. The prime candidate for inclusion in a combination of factors that together might give rise to an AEC is rapidly increasing world energy prices (see Chart 1). It is a common experience across jurisdictions and over time that regulatory tasks in the energy sector become more challenging when underlying cost pressures are strongly upward. The public, the media and politicians (reasonably) want to know *why* prices are rising. One job of a regulator is to discover and explain why.
20. Less reasonably, vociferous sections of the public, the media and politicians start to ask who is to blame and what is to be done about it. The regulator’s tasks are then subject to a step-increase in difficulty because it may (and often will) be necessary to try to explain that those are not necessarily sensible questions to ask: nobody may be to blame and ‘doing something about it’ may (and often will) make matters worse. Moreover, challenging the sense of these questions invites the inference that, in the absence of

⁵ “Something of a U-turn” is how one leading analyst described it in 2008 when he was interrogating me about what was going on.

simple answers to simple questions, it is the regulator who is to blame and that something should be done about the regulator.

21. The reality is that strong, upward cost pressures tend to place strains on the *institutional* structures of markets that are partly governed by a regulator who has powers to do things in those markets when stuff happens. In a system based on independent regulation, it is a large part of the job of regulators to protect and sustain these institutional structures in the face of the pressures and strains.
22. The evidence (see Charts 1 - 3) indicates that strong upward cost pressures in GB energy markets started to occur significantly before 2008 and, in the face of these pressures, Ofgem/GEMA performed its delegated tasks well up until 31 December 2007. From then on it didn't. The boundaries that independent regulators are supposed to defend were abandoned and Ofgem/GEMA started pointing the finger of blame for the higher prices that energy consumers were facing (see Chart 2). The narrative changed: the market was (somehow) failing, suppliers were ("possibly", in vague and unspecified ways) tacitly coordinating prices, prices were 'unfair',⁶ hobnail boots were needed, consumers were depicted as victims.⁷
23. There are other diagnostic questions that could be asked about the relevant episode: Why did GEMA ignore the option of making a reference to the Competition Commission? (The option was raised at a board meeting in early 2008.) Were the personnel changes on 1 January 2008 a cause or effect of the policy shift? (My view is that they were largely instrumental, a means of effecting a change in direction.) Why didn't at least one supplier challenge the incipient regulatory uncertainty via recourse to either the Competition Commission or Judicial Review? (The regulatory shift could have been impeded at the outset.) However, since the import of particular questions can be expected to depend on answers to prior questions, it is probably better not to compile too long a list at this stage.

The pitfalls of unduly narrowing the investigation

24. Paragraph 11 says that "The retail supply of larger business customers was excluded from the reference on the basis that Ofgem found little evidence of harmful features in these markets." Whilst there is no reason to doubt the Ofgem conclusion, it would be a manifest error to suppose that this implies that the CMA should not investigate these market segments. The reason is simple: they can be expected to yield information that is directly relevant to answering relevant ('proper'/'right'/productive) questions about the retail supply of energy to households and small businesses. As paragraph 63 implies, study of comparable market situations in which problems are found *not* to exist yields

⁶ Whilst the chief public concern was with generally rising prices, it is notable that the 'unfair' prices agenda was directed at relative prices, a different matter altogether. What can be seen is a transition to Politicians Logic: "Something must be done. 'This' is something. Therefore we should do 'This'." The notion of tackling 'unfair' price differentials was the 'This'.

⁷ The general shift can be characterised as a move towards a regulatory world of smoke and mirrors, where attention is drawn away from consideration of substantive issues toward how the regulator appears in the media ('how do we look?') and a preoccupation with being seen to be 'doing something about it', almost irrespective of the particular features of the 'it', of the 'something' or of the relationships between the two.

information about the root-causes of any problems that are found to exist in related or comparable contexts. It helps in identifying those root-causes.

25. In addition, wholesale market power, opaque wholesale prices, wholesale market liquidity and vertical integration are all things that might affect the large business retail segment. If remedies to any problems identified in these areas are to be considered, their possible effects on large businesses need to be evaluated. There may, for example, not be a problem in the large business segment now, but there is always a possibility that a change in market structure or market rules could create one. Empirically, this type of outcome appears to occur frequently: regulation directed at one market or market segment can easily have adverse effects on competition in related markets or market segments.
26. These points are just an extension of the logic of paragraph 63, where the comparison is between electricity and gas wholesale markets. The logic also encompasses markets other than electricity and gas. Suppose for example that, adopting a ‘theories of harm’ approach, a lesser degree of vertical integration in gas than in electricity is considered to be a candidate explanation of any observed differences in performance between the two wholesale markets. It might then be asked: how does the proposition stack up against evidence relating to the supply of petrol, in which there is significant vertical integration and on which in 1990 the Monopolies and Mergers Commission produced one of its best ever pieces of economic analysis? Another potentially informative comparator is the Australian National Electricity Market (NEM), which is also characterised by relatively high levels of vertical integration and in relation to which the CMA has access to a large volume of work undertaken by the Australian Energy Market Commission (AEMC)⁸ and the Australian Energy Regulator (AER).
27. More generally, the Statement of Issues is at pains to point out that the benchmark against which AECs are to be assessed is a market that works well for customers (a “well functioning market”) and that “the benchmark is not based on an idealised or theoretical market, but will reflect a realistic assessment of likely outcomes in the market in the absence of the AEC in question.” It would therefore be odd not to seek out and use information from comparable markets that have been assessed on previous occasions by other competition and regulatory authorities and, in some broad sense, have been judged to be “well functioning”. These cases provide “realistic” benchmarking information.
28. More generally still, the Enterprise Act framework requires evaluations that compare a less successful outcome (where AECs exist) with a more successful outcome (where they don’t exist). The comparison can only be made by studying success as well as failure, implying that sources of information about what success looks like should not be discounted. This is, after all, just everyday wisdom: my football club’s motto is *Consectatio Excellentiae*, but its supporters would not be well pleased if, in pursuit of excellence, Gus Poyet thought it sufficient to examine only the manifest limitations of his

⁸ The AEMC is right now engaged in assessments of the performance of retail markets in Australia and of generators’ bidding behaviours in the NEM. It has published and will continue to publish documents on these two matters, which have obvious overlaps with parts of the CMA’s indicated work programme.

own squad without regard to how other clubs, at home and abroad, have managed to do better.

In conclusion

29. My own view, therefore, is that anything that can provide information that is of material value to an evaluation of the reference markets should be in scope, including wholesale gas markets, larger business markets for electricity and gas at the retail level, gas interconnectors and storage, and so on.
30. This does not mean that an across-the-board mass information gathering exercise is required. As indicated, a much more limited set of facts or observations could be selected from the areas identified in the Statement of Issues, to be used as launch pads for an iterative, interrogative process aimed at understanding *why* things are as they are. As stated earlier, it is the reach of this iterative process that should not be constrained *ex ante*.
31. For the avoidance of doubt, I am not suggesting that the existing theories of harm be simply abandoned. Broad scanning of the landscape and delving into detail to find starting points for root-cause analysis are not mutually exclusive exercises, although they do compete for scarce administrative resources, including time. The CMA could start with both approaches and adjust resources over time in the light of emerging evidence on their relative efficacy.

Other points

Harm caused by the undue discrimination regulation (2009)

32. The undue discrimination licence condition was a small thing in itself, but also a signal that much more serious things were going wrong. That is, it was an effect of root causes that had, and continue to have, much wider effects and implications. In assessing it (theory of harm 4c), the CMA should take account of the various dimensions of potential harm caused, including:
 - a. Weakening of incentives to offer price discounts on a unilateral basis.
 - b. Facilitation of inter-firm price co-ordination. Constraining suppliers' pricing policies can be expected to increase price alignment. This is a particularly important consideration in the event that the CMA engages in substantive empirical work on testing for tacit co-ordination. Even a strong finding of tacit co-ordination today would provide little information about root causes. At a minimum, it would be necessary to study the situation pre-2008, when Ofgem found no evidence of coordination, with the position today. If there is a difference, it might be attributable to regulatory actions since 2008 (i.e. the latter would be the root-cause of the problem). Any remedy that might then be contemplated could have a very different nature to a remedy based on an

empirical finding that tacit co-ordination existed in both periods and that its significance had not changed very much between the earlier and later periods.

- c. A hike in regulatory uncertainty, with adverse consequences for prices (by chilling incentives for more aggressive suppliers to expand their customer bases via investment in customer ‘acquisition’, including by discounts and initial offers) as well as for investment more generally. After 1 January 2008, it was no longer clear what principles and policies, if any, were guiding Ofgem/GEMA in its approaches to retail and wholesale markets, as reflected in a perceptive Financial Times editorial of 4 February October 2010, which is well worth reading for its more general commentary on the state of play in energy regulation at that time.⁹

Trust and confidence

33. Paragraphs 9 and 10 raise questions of trust and confidence, which are rather broader matters than those that have been explicitly raised in many past MMC and CC investigations. I strongly support the views that these are matters that the CMA can and should address, and that there is much that the current investigation can contribute to improvements in both (related) dimensions.
34. Markets are social institutions whose chief function/purpose is to reduce costs of exchange. Trust and confidence are highly important factors in determining costs of exchange, and market rules – including the sub-sets of market rules determined by regulatory processes – are integral parts of the market (just as the rules of football are integral to the playing of the game), not things separate from it.¹⁰ The same can be said of rules concerned with the governance of regulatory conduct. All these things should be within scope: they make a market what it is and, among other things, affect trust and confidence. In this early and important case, the CMA has a great opportunity to set the standards for how markets should properly be assessed.

Market evolution and the clumsy hand

35. Technological change and environmental challenges will call for future adjustments of market rules in ways that, viewed on the basis of today’s information, are inevitably uncertain. It is appropriate, therefore, for the CMA to be both forward thinking and fully aware of the associated uncertainties, as indicated at paragraphs 18 and 19. What is being assessed is a complex, adaptive system that is still in its salad days, not a static, fossilized market. Today’s competitive retail markets chiefly exist not because of political ideology – although political factors are important in explaining why Britain was a pioneer – but because developments in information technology enable us to do things now at reasonable cost that could only be done thirty or forty years ago at prohibitive cost. That is, technological developments have tilted the transactions cost trade-off between markets and organisations in favour of markets.¹¹

⁹ <http://www.ft.com/cms/s/0/5726c590-11c6-11df-b6e3-00144feab49a.html#axzz39ZNco2B4>

¹⁰ This point will be developed in *The Political Economy of Markets*, a Zeeman Lecture scheduled for 9 September 2014, Merton College, Oxford.

¹¹ See Ronald Coase, “The Nature of the Firm”, *Economica*, 1937.

36. Further developments in information and control technologies can be expected to continue to reduce market transactions costs, possibly by substantial amounts, which in turn should increase the future benefits from retail competition in energy, provided that competition is not thwarted by Leviathan's clumsy hand. Anything that could be done to reduce the clumsiness would be beneficial (as is suggested in paragraph 20), recognising that the CMA likely doesn't have the authority to perform amputations.

Approach to the investigation

37. It should be apparent from the above that I favour the approach waiting to spring into life at the end of paragraph 22: take an interesting/contentious area, fact or observation, investigate/interrogate and follow the causal chain back until a significant problem is found (or is found not to exist) and its root causes are identified. Quite apart from anything else, this is the better way of doing policy economics.

Entanglement of the issues

38. I agree with the point made at paragraph 25 about the potential interrelationships among different aspects of the issues to be investigated. This points again to the advantages of starting with facts and observations and then seeking to work backwards along a causal chain in trying to understand *why* things are as they are. In practice, this approach serves to facilitate the discovery of the interactions. Top down theorising tends, in my experience, to be more prone to lead to an intellectual tangle in which the conclusion is often 'anything might happen' (see, for example, the 'indeterminacy' of economic theories of oligopoly).

Liquidity and vertical integration

39. In considering liquidity issues a number of points might usually be borne in mind:

- a. Liquidity issues in wholesale electricity were addressed by Ofgem in its attempt to introduce a Market Abuse Licence Condition in 2000, where a central preoccupation was the linkage between transient but recurrent market power, liquidity, and competition. Many of the points raised and discussed in that MMC investigation remain relevant.
- b. Among those points is the close relationship between contract positions and generators' spot market pricing strategies, an issue that has subsequently received significant factual coverage in the *Stanwell* judgment of the Australian Federal Court (2011).¹² A spot market coupled with extensive contracts for differences (CfDs) might, for example, look very similar to a market with extensive vertical integration.
- c. There is a prior question about whether wholesale market liquidity *necessarily* matters a great deal, which might merit attention before substantial effort is devoted to the detail of existing arrangements. Useful first questions could be: Why precisely would it matter if competition took the form of competition

¹² <http://www.judgments.fedcourt.gov.au/judgments/Judgments/fca/single/2011/2011fca0991>

between a number of fully vertically integrated companies? Would such integration materially harm the interests of end customers, large and small? Since fixed price contracts / CfDs can serve to weaken the payoffs from exploiting market power in the wholesale market¹³, might vertical integration have the same effect?

Thoughts on inactive and 'sticky' consumers

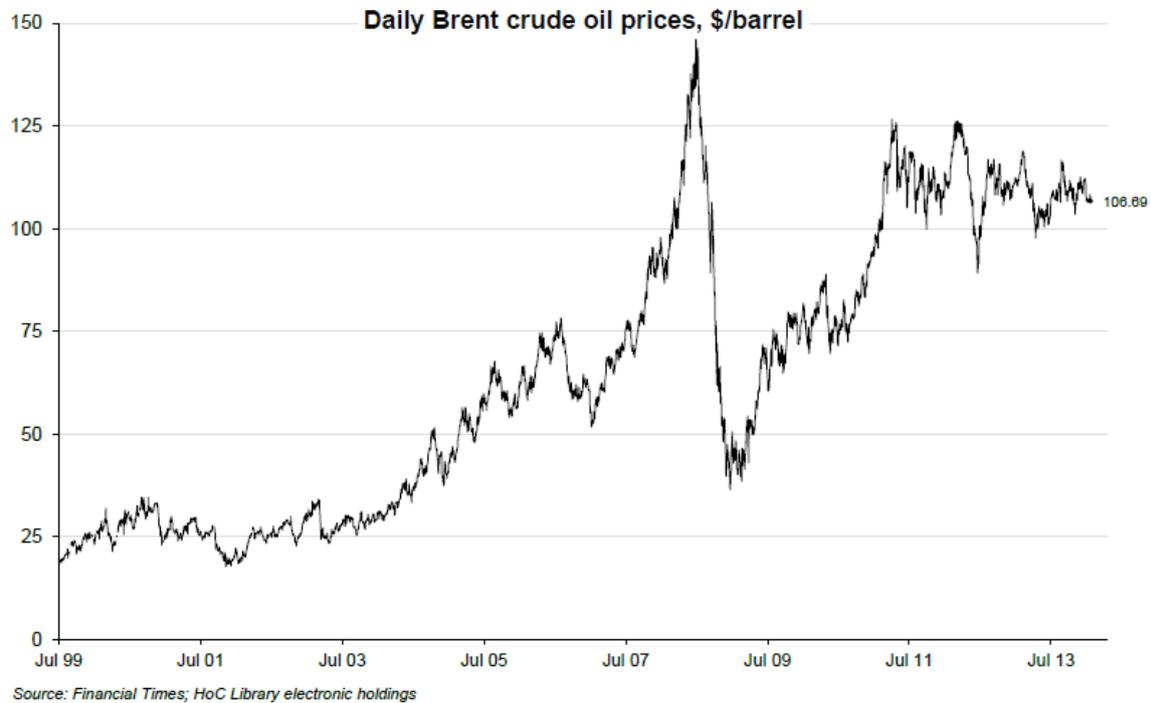
40. If the function/purpose of a market is to reduce costs of exchange (transactions costs), some caution is warranted before jumping to the view that high levels of consumer activity are necessarily a good thing. Engagement imposes costs on consumers in terms of time, hassle and cognitive effort, and *other things equal* the lower these costs are the better.
41. One of the central questions about the simplification agenda is: might Ofgem (or any other regulator following a similar course) be simply raising the costs of exchange (i.e. causing markets function less effectively when judged against their primary function/purpose, which is to reduce those costs) for few or no demonstrable benefits?
42. It might also be useful for the CMA to revisit the work of one of the predecessor panels in the Competition Commission days, in the Small Business Banking investigation which relied on the advice of Paul Klemperer when looking at similar issues. Since inactive or sticky customers are valuable to suppliers once they have been 'acquired', competing suppliers can be expected to be willing to pay a commensurate amount to acquire them, and recognition of this basic point can put some of the issues in a new light. The ability of suppliers to identify such customers and to target them in their pricing (i.e. to practice third-degree discrimination) could actually be beneficial to the customers (relative to a counterfactual in which third-degree discrimination is not feasible), provided only that a sufficient fraction of the amounts that competing suppliers are willing to pay to 'acquire' these accounts are channelled back to the account holders, for example by relatively deep price discounts for fixed, initial periods.¹⁴
43. This brings matters back to issues of price differentiation. The theoretical point rests on an assumption that third-degree discrimination is feasible, and that is a strong assumption. There are multiple factors that can work against it including regulatory rules based on inappropriate notions of 'fairness'. These factors are worth exploring, although there are also other lines of inquiry to be pursued on the relevant matters. Existing pricing patterns may be accounted for by relatively weak competition among suppliers, or it may be just a matter of time: the time period between full deregulation of retail energy markets and late 2007 was not long and suppliers may, at the end of it, have not yet discovered appropriate (to energy supply) variants of the targeted marketing strategies to be found in other markets.

¹³ See John Vickers and George Yarrow, "The British Electricity Experiment", *Economic Policy*, 1991.

¹⁴ There is some similarity here between acquiring a 'sticky' customer and selling on the basis of a longer-term contract (where the buyer, in effect, 'sells stickiness'): each implies supply of a larger, cumulative volume and might be expected to be associated with lower per-kWh account management costs (i.e. post-acquisition transactions costs) for suppliers, subject to the usual *ceteris paribus* qualification.

44. My final thought is simply that whilst consumer engagement issues appear to involve some quite subtle economic issues, there is an observable tendency in regulatory practice (across sectors, so not specifically in energy) to treat this area of work as almost ‘non-economic’ in nature, or at least to assume that it is an area where policy can be determined without paying much attention to the subtleties of the economic trade-offs. That I think is a mistake – ‘right’ questions are not asked, relevant information is not gathered – and, given that it appears to be a mistake that is made systematically, I suspect that it lies close to some root causes of AECs.

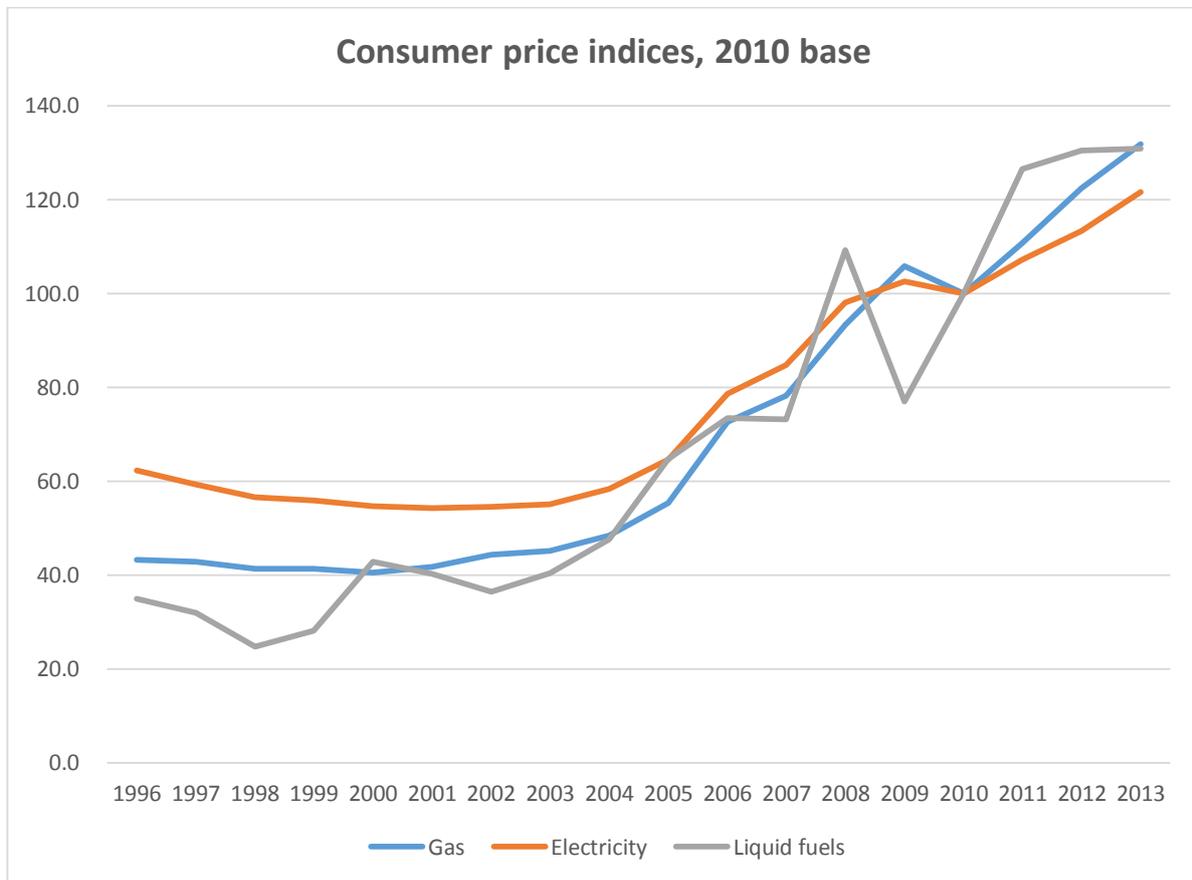
Chart 1. International oil prices as an indicator of upward pressures on costs



Note:

By virtue of significant gas interconnector capacity (since 1998) and flexibility in the destination of Norwegian sector flows, GB gas prices have heavily influenced by continental gas prices. The latter have in turn been heavily influenced by long-term supply contracts that index gas prices to oil prices (with modest lags).

Chart 2, to illustrate upward pricing pressure prior to 2008



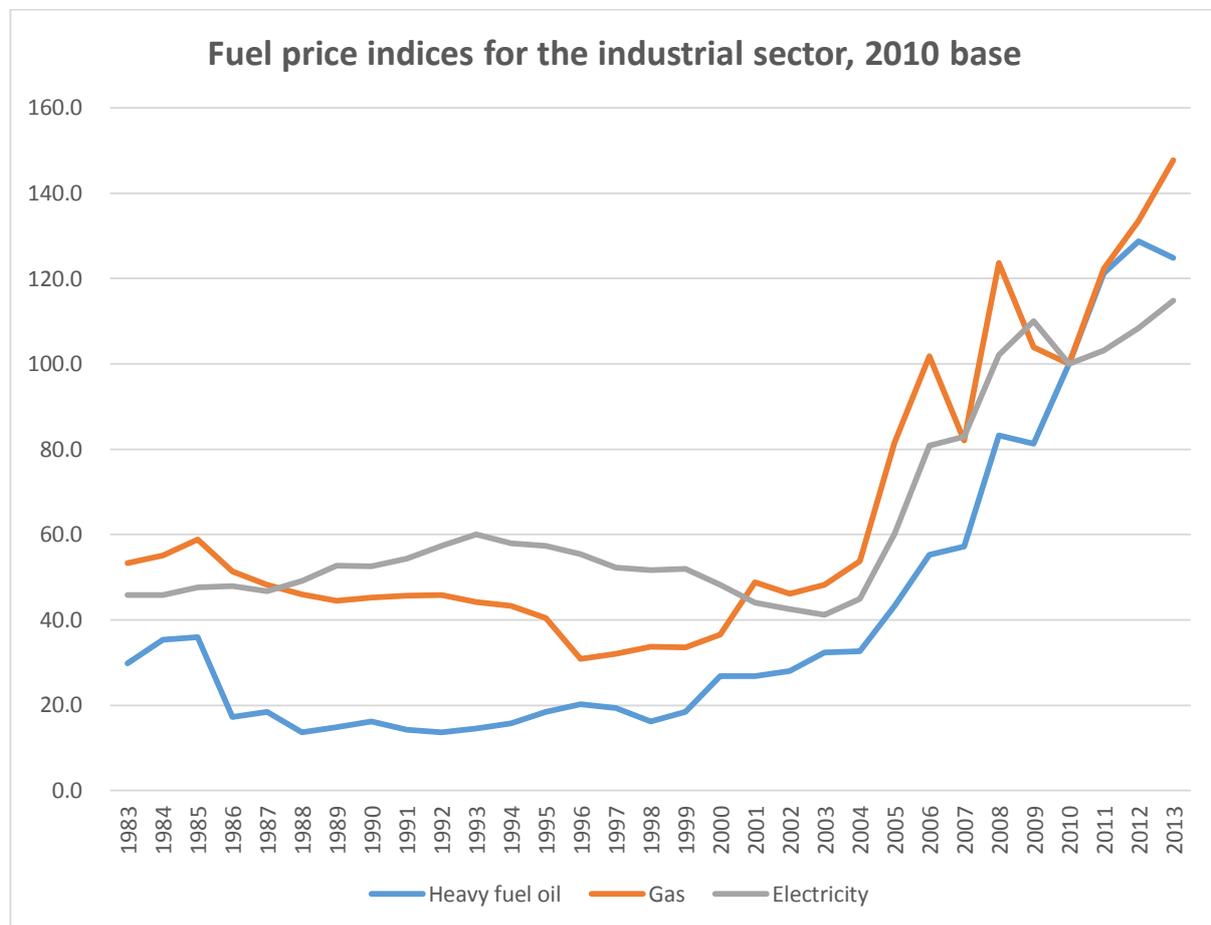
Notes:

Source is DECC Energy Statistics.

Liquid fuels (kerosene oil) are small in volume compared with electricity and gas, but provide a useful benchmark for comparison drawn from an unregulated, competitive market.

It is notable that the *relative* price of electricity has fallen significantly over the full period.

Chart 3, to illustrate upward pricing pressure prior to 2008.



Notes:

Source is DECC Energy Statistics.

The contribution of transmission and distribution to total supply costs tends to be lower for industrial prices (than for household prices) and hence industrial prices tend to be more sensitive to world energy prices.

Heavy fuel oil is the benchmark in this case.

Compared with the previous chart the DECC data cover a longer time period, showing some pre-privatization years.