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Agenda

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Is Ofgem setting sail for new horizons? The outlook for future GB energy regulation

As the sun sets on the UK Competition and Markets Authority's (CMA) GB energy market investigation, Ofgem, the energy regulator for Great Britain, is looking to new horizons. How is the external environment changing? And what could this mean for the future development of energy regulatory policy?

On 23 March 2016, Ofgem announced that it would undertake a horizon-scanning exercise (see the box).[1] The findings will be used to inform future regulatory policy development.

Now may be the perfect time for Ofgem to undertake this horizon-scanning analysis. The CMA's investigation into the GB energy market is drawing to a close, and the next electricity and gas transmission and gas distribution price reviews are five years away. Ofgem has explained that its key objective for the exercise is to understand which drivers of energy system change have the greatest potential impact on consumers and regulation. It has also said that its primary focus will be on managing consumer impact:[2]

> We know that the energy system of the future will be very different to the energy system of today. Our role as the energy markets regulator is to protect the interests of existing and future consumers. While we cannot be certain what tomorrow's system will look like, in order to best protect consumers' interests we need to understand what is driving system change, the likely impacts on consumers and the implications for regulation. This will help us set our future priorities for the evolution of regulatory arrangements.

Look out ahead

So what significant changes could occur over the next decade and beyond?

Over the coming months there is expected to be extensive debate about sectoral developments such as the growth of smart meters, emergent storage technology, an increased

What is horizon scanning?

Horizon scanning is a common management tool for assessing the external macroenvironment.

It often involves categorising external drivers into groups—such as through PEEST analysis, in which the drivers of change are defined as Political, Economic, Environmental, Social and Technological. Horizon scanning has existed in some form since at least the 1960s.[1] However, it gained significant popularity in the 1980s, driven in part by the growing discipline of management consultancy. More recently, following a review commissioned by the UK Cabinet Secretary, the government has sought to encourage effective horizon scanning across the Civil Service.[2]

One technique that Ofgem may choose to use in assessing the various macroenvironmental variables is scenario planning. This involves adjusting the outcomes of key variables in order to develop a range of potential scenarios for how the future could look. In constructing these scenarios, it is generally advisable to vary the factors that hold the greatest uncertainty and that would cause the greatest difference in future outcomes.

This is not a new technique for the energy sector. Indeed, electricity company, National Grid, has recently constructed four future energy scenarios based on the emphasis that the UK could place on affordability and sustainability.[3]

Note: [1] Aguilar, F.J. (1967), *Scanning the business environment*, Macmillan. [2] Cabinet Office (2012), 'Review of cross-government horizon scanning', www.gov.uk/government/uploads/system/uploads/attachment_data/file/79252/Horizon_Scanning_Review_20121003.pdf. [3] National Grid (2016), 'Future Energy Scenarios', http://www2.nationalgrid.com/uk/industry-information/future-of-energy/future-energy-scenarios/.

role for renewables, and new capacity installation (such as Hinkley Point C being brought online), as well as issues with ageing infrastructure. There may also be an impact of macro factors such as increased divergence between political parties on energy policy, and geopolitical arrangements that affect drivers such as supply, climate change and general population increases.

This article cannot cover all key potential trends. Instead, it focuses on four trends in the development of regulatory policy that may occur over the coming years. These particular trends are consistent with Ofgem's principal objective for the horizon-scanning exercise—to best protect consumers' interests amid energy system change. It should also be noted that, while this article refers primarily to UK developments, Ofgem's agenda is influenced by, and interlinked with, similar European initiatives and market developments. For example, Ofgem is an active member of the Council of European Energy Regulators (CEER),[3] whose Vision 2020 is entirely focused on delivering a better relationship between the energy industry and energy consumers as regards 'reliability, affordability, tariff simplicity, protection and empowerment'.[4]

The trends discussed in this article are:

- customer research and engagement;
- perceived legitimacy;
- customer segmentation and affordability;
- the treatment of major capital projects.

Customer research and engagement

During the RIIO price reviews,[5] the network companies were required to engage with their customers and stakeholders. This was taken further in the 2014 water industry price review, in which water companies in England and Wales engaged with more than 250,000 customers. Each company's own Customer Challenge Group[6] also played a key role in challenging companies' plans and providing assurance and critique to Ofwat, the economic regulator of the water industry in England and Wales. A negotiated settlement was also reached between Scottish Water and its Customer Forum. In addition, there has been a rise of 'constructive engagement' in the determination of airport controls, whereby airlines and airports are left to agree substantive aspects of the control—for example, this has been the case for London Gatwick Airport.

Customer research and engagement is here to stay, and can play a vital role in improving perceived legitimacy (as discussed below). Furthermore, companies and regulators are not expected to rest on their laurels. Indeed, Ofwat has already signalled that alternative research approaches, such as revealed-preference techniques in gauging likely consumer behaviour, may play an important role in the price control process going forward.[7]

Revealed-preference research can be technically demanding. It involves obtaining data on customer behaviour, and deriving empirically-based estimates of what customers want. For regulated networks, this can be a somewhat difficult concept. There are limited situations in which services and information can be varied in order to observe changes in customer behaviour. One example might be localised experiments (such as observing variations in house prices based on different external variables that may be within companies' control).

Within the general sphere of customer research and engagement, there is likely to be an increased focus on analysis that incorporates behavioural economics. This was the case in the CMA's investigation into the energy market, which included extensive analysis of consumers' responses within the market. While the CMA was somewhat critical of Ofgem's tariff simplification (which arose from an observation of consumers' behavioural biases), the CMA set out a series of proposed remedies that were intended to prompt customers to consider switching and accessing information. Such remedies, designed to encourage greater participation in the market, are underpinned by behavioural economics reasoning.[8] Going forward, it is expected that Ofgem and the industry will seek to further understand the behavioural biases of consumers, and develop targeted policies to help correct for these.

Perceived legitimacy

When energy prices rose during 2013, public confidence in the sector fell. There were calls for imposed price freezes and, from some quarters, for renationalisation. In order to avoid such a loss of public trust the next time global wholesale prices rise, the sector will need to focus on building a strong sense of perceived legitimacy in terms of the way it conducts itself.

This is something that Ofwat has placed firmly at the heart of its regulatory strategy, 'Trust in Water', which is focused on delivering trust and confidence across the sector.[9] It has involved requiring companies to publish details of their group structures, and an increased focus on board governance.

There is no silver bullet in terms of ensuring perceived legitimacy. Continued vigilance will be required from both companies and regulators to ensure that consumers are getting the assurances they need. However, increased transparency and communication with the public are clearly beneficial, as is avoiding 'own goals' within the industry—such as major service failures—and unethical business practices. The drive for greater customer engagement, as discussed above, is also likely to facilitate higher perceived legitimacy of the regulatory contract.

As such, Ofgem could be expected to seek to make targeted data requests to companies, and find ways to further encourage an open dialogue between those companies and their customers.

Customer segmentation and affordability

As well as the continual drive to ensure that services are provided in an efficient manner, in recent years regulators have placed increasing weight on including protections for vulnerable customer segments.

For example, Ofcom, the UK communications regulator, monitors the affordability of postal services across a variety of consumer segments, such as elderly and disabled people.[10] Ofwat has required companies to set out their approaches to ensuring affordability—including the use of 'social tariffs', whereby particular consumer segments are eligible for subsidised rates.

In the energy sector, relevant developments include:

- the 2012 'Hills Review', which recommended a more sophisticated degree of consumer segmentation when defining fuel poverty;[11]
- the CMA's proposal of 'a temporary safeguard price control' to protect customers on prepayment meters. Prepayment meters are generally installed in cases where a customer has a poor payment history, and therefore indicate affordability issues. The CMA's proposed price control is designed to reduce total bills paid by prepayment customers by £300m per year.[12]

Going forward, Ofgem is expected to continue this trend, and the sector is expected to develop more sophisticated approaches to customer segmentation. For example, the CMA's approach of applying protections to customers on prepayment meters could be targeted more closely towards those who meet specific vulnerability criteria.

Figure 1 provides a stylised illustration of how customer segmentation and behavioural economics analysis can be integrated within a regulatory policy design framework.

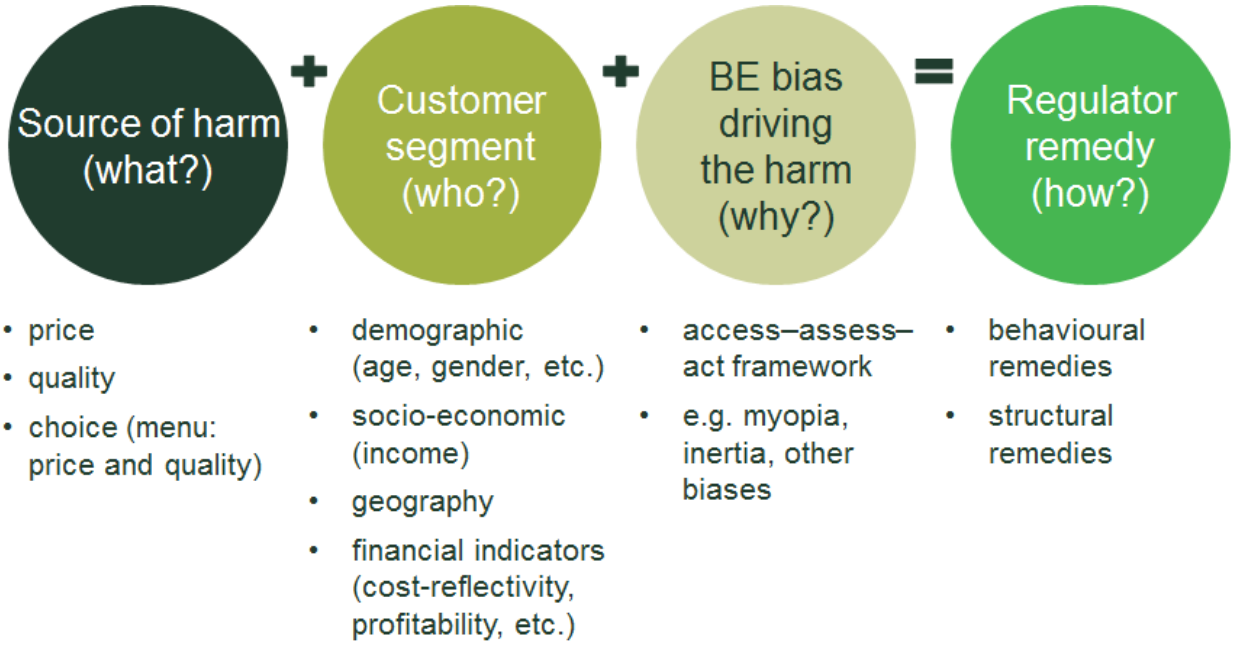
More sophisticated segmentation could also help in the provision of financial assistance or the installation of energy-efficiency measures where appropriate. Indeed, seeking to identify the causes of vulnerability is already central to Ofgem's affordability strategy.[13]

The treatment of major capital projects

Regulators are increasingly seeking to improve the environment for efficient investment in infrastructure. For example, in 2015 the UK Department for Transport commissioned an independent review into Network Rail's enhancements programme, which recommended further consideration of bespoke arrangements for major and complex projects.[14]

Ofwat also recently developed a bespoke regulatory approach for the delivery of a major project (the Thames

Figure 1 The role of customer segmentation and behavioural economics in regulatory policy design



Note: BE, behavioural economics. The 'access–assess–act' framework was developed by the UK Office of Fair Trading (now the CMA). It suggests that, to drive competitive outcomes, consumers ideally need to access information about the various offers available in the market, assess these offers in a well-reasoned way, and then act on this information and analysis by purchasing the good or service that offers the best value to them. Office of Fair Trading (2010), 'What does Behavioural Economics mean for competition policy?', March, section 2.2.

Source: Oxera.

Tideway Tunnel, TTT), and is currently working with the National Infrastructure Commission and other regulators to translate the experience gained in the process to other projects. The TTT is the largest construction project ever undertaken by the UK water industry, but it is being delivered at a bid cost of capital that is significantly lower than expected in the regulator's draft guidance on its economic regulation.[15] This project highlights how mechanisms for risk management and mitigation can be established in order to reduce financing costs. Specifically, the TTT has a government support package that is designed to mitigate high-impact/low-likelihood risks during the construction period. The package includes insurance cover of last resort, short-term liquidity in the event of financial market disruption, and an additional equity contribution in the event of a significant construction cost overrun.

Ofgem already has bespoke approaches for interconnectors and offshore transmission, and has started to adopt regimes with some similar features to some onshore transmission investments.[16] As energy production in the UK has fallen significantly over time,[17] and the population continues to grow, it is likely that further significant investment will be required in both supply and the networks for the foreseeable future. Adopting the most appropriate regulatory framework for such major capital projects—i.e. one that enables low-cost financing and strong incentives for efficiency—is likely to be a major focus in the RIIO-2 round of price controls.

So what?

How can the above observations be used within Ofgem's horizon-scanning project? First, as these trends are occurring across the regulated sectors, being explicitly mindful of them could help Ofgem to learn lessons from elsewhere and apply them within the energy sector. Second, Ofgem may wish to consider developing its regulatory toolkit within each of these areas (as well as others), with the explicit intention of shifting the sector towards or away from a particular future scenario.

In order to achieve the latter, Ofgem's assessment of the macroenvironmental factors could be of great importance. It could (either implicitly or explicitly) involve setting out some sort of future vision for the sector. This immediately poses questions about how the roles of Ofgem and the government should interact. The Energy Act 2013 allows for the Secretary of State to set out a Strategic Policy Statement (SPS), which must specify strategic priorities, particular policy outcomes to be achieved, and the roles and responsibilities of those involved in implementing the policies. Ofgem has a duty to carry out its functions in the manner best calculated to further the delivery of the policy outcomes. The UK Department of Energy and Climate Change (DECC) consulted on an SPS in 2014.[18] In general, the draft SPS was fairly high-level, which could potentially allow for a large degree of regulatory discretion in certain areas. However, the issues of role responsibility have not yet been fully addressed.[19]

Over the coming months Ofgem will need to work closely with DECC, and the government more broadly, to ensure that it is not perceived to be stepping beyond its remit. Furthermore, where appropriate, some of the findings from the horizon-scanning exercise may be used to inform government policy as well as regulatory policy.

The crystal ball clouds over (please leave the tent)

While horizon scanning and scenario planning can help to prepare for the future, an alternative school of thought claims that, given the amount of uncertainty in the world, long-term planning merely provides the illusion of control and knowledge. For example, few would have predicted the two large drops in wholesale prices that have occurred in the last ten years.

Such thinking suggests that the primary regulatory and industry focus should be on building resilience and flexibility to cater for 'unknown unknowns', rather than planning for 'known unknowns' that may or may not materialise. The drawback to building resilience and flexibility within a sector that requires large-scale and ongoing infrastructure investments is that such a strategy may be prohibitively expensive. Equally, not taking key decisions now may result in significant costs down the line—and energy security cannot be jeopardised under any circumstances.

There may, however, be a few 'no-to-low-regret' strategies. For example, a focus on customer engagement and understanding customer behaviour is likely to yield benefits regardless of the shifts in macroenvironmental factors.

If you build it...

Conversely, it could be argued that, when those with influence predict the future, there may be a degree of self-fulfilling prophecy. If policymakers anticipate a particular future, any decisions made today will (to a degree) steer the sector in that direction.

Energy infrastructure tends to have a long asset life. If particular infrastructure is developed today in anticipation of a specific future scenario, the infrastructure itself may steer the sector to develop in the envisaged direction. For example, if policymakers were to predict that the future was one where energy storage needed to play a large role, we might well see pro-storage policies, which in turn could result in a comparative reliance on storage assets as a means of balancing supply.

Conclusions

Over the coming months the sector will discuss at length the various drivers of change. In all likelihood this will reveal new insights, and will enhance the evidence base from which policy decisions are determined.

However, predicting the future is inherently difficult. While there are a number of trends (both in the macroenvironment and in the field of regulatory policy) that might currently be apparent, new objectives and constraints may develop. Indeed, such objectives and constraints could be directly shaped by decisions that Ofgem and the energy sector take over the coming years.

[1] Ofgem (2016), 'Open letter: call for engagement on insights for future regulation', 23 March, https://www.ofgem.gov.uk/publications-and-updates/open-letter-call-engagement-insights-future-regulation.

[2] Ofgem (2016), 'Open letter: call for engagement on insights for future regulation', 23 March, https://www.ofgem.gov.uk/publications-and-updates/open-letter-call-engagement-insights-future-regulation, p. 1.

[3] Ofgem website, 'Ofgem and Europe', https://www.ofgem.gov.uk/about-us/ofgem-and-europe, accessed 4 May 2016.

[4] Council of European Energy Regulators and The European Consumer Organisation (2012), 'A 2020 Vision for Europe's Energy Consumers', Joint Statement, 13 November, pp. 1–2.

[5] RIIO (Revenue = Incentives + Innovation + Outputs) refers to Ofgem's framework for setting price controls for network companies. The first price control reviews to use the RIIO framework were completed in early 2013.

[6] These groups, comprising customer representatives and other key stakeholders, were set up by each company to review its approach to customer research and how findings were embedded within the company's business plan.

[7] Ofwat (2015), 'Towards Water 2020 – policy issues: customer engagement and outcomes', p. 10.

[8] Competition and Markets Authority (2016), 'Energy market investigation – provisional decision on remedies', p. 392.

[9] Ofwat (2016), 'About us', http://www.ofwat.gov.uk/about-us/.

[10] Ofcom (2013), 'The affordability of universal postal services', http://stakeholders.ofcom.org.uk/post/affordability/.

[11] Hills, J. (2012), 'Getting the measure of fuel poverty', https://www.gov.uk/government/publications/final-report-of-the-fuel-poverty-review.

[12] Competition and Markets Authority (2016), 'CMA sets out energy market changes', press release, 10 March.

[13] Ofgem (2013), 'Consumer Vulnerability Strategy', Final decision, 4 July, https://www.ofgem.gov.uk/sites/default/files/docs/2013/07/consumer-vulnerability-strategy_0.pdf.

[14] Department for Transport (2015), 'Report of the Bowe Review into the planning of Network Rail's Enhancements Programme 2014-2019', p. 35.

[15] Ofwat (2014), 'Consultation on the regulatory framework for the infrastructure provider that will deliver the Thames Tideway Tunnel project. Annex 3: draft guidance on the approach to the economic regulation of the infrastructure provider for the Thames Tideway Tunnel', September, p. 23. See also Oxera (2015), 'The Thames Tideway Tunnel: returns underwater?', *Agenda*, September.

[16] Ofgem (2015), 'Integrated Transmission Planning and Regulation (ITPR) project: final conclusions', 17 March, https://www.ofgem.gov.uk/publications-and-updates/integrated-transmission-planning-and-regulation-itpr-project-final-conclusions.

[17] Department for Energy and Climate Change (2015), 'Energy: Chapter 1, Digest of United Kingdom Energy Statistics (DUKES)', 30 July, https://www.gov.uk/government/statistics/energy-chapter-1-digest-of-united-kingdom-energy-statistics-dukes.

[18] Department for Energy and Climate Change (2014), 'Strategy and Policy Statement'.

[19] This is one of the findings of the CMA's investigation. See Competition and Markets Authority (2016), 'Energy market investigation – Provisional decision on remedies', p. 36.