

# Energy Market Investigation: Initial submission to the Competition and Markets Authority

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## Overview:

This document sets out our thoughts on: key characteristics of the market which the CMA should have in mind as it conducts its investigation; the areas which we think are particularly important for the CMA to investigate further and the areas the CMA may wish to leave out of scope. The document also sets out the work that Ofgem has been doing to address the problems we have identified and the related areas of work we will continue with to protect consumer interests during the investigation.

The Authority is making this submission for the purpose of assisting the CMA in carrying out its investigation. The Authority is of the opinion that it is appropriate to provide the information set out in this submission, and is therefore under a statutory duty to do so. The relevant statutory provisions which establish this duty are s.36A(6) of the Gas Act 1986 and s.43(5) of the Electricity Act 1989.

# Context

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On 26 June 2014 we set out our decision to refer the retail energy market to the CMA for investigation. We have published a number of documents that explain our rationale for this referral. In those documents, as well as Ofgem publications as part of its wider work programme, we have set out the principal market features that may have a harmful effect on competition. We have provided supporting evidence on these concerns.

This document is intended to set out the wider context under which we think these issues should be considered. It does not seek to duplicate or expand on the detailed analysis provided in the earlier documents.

# Contents

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<b>Executive Summary .....</b>	<b>4</b>
<b>1. Characteristics of the energy sector.....</b>	<b>7</b>
Main sector characteristics .....	7
The consequences of these market sector characteristics .....	10
The market is changing.....	12
<b>2. Market features and areas to investigate further .....</b>	<b>16</b>
The features we identified in the Assessment.....	16
Features of the market which should be investigated further .....	18
Areas we do not think warrant specific investigation .....	22
Ofgem work to improve competition .....	26
<b>Appendices .....</b>	<b>34</b>

# Executive Summary

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Ofgem has referred the energy market to the CMA because competition is not working as well as it could for consumers. The State of the Market Assessment we undertook jointly with the OFT and the CMA identified problems that have persisted for a prolonged period, despite a series of Ofgem investigations and reforms over the past five to six years. The aim of the CMA investigation is to establish if there are market features which are having an adverse effect on competition and, if so, whether there are reforms, including those outside Ofgem's powers, which would make competition in the market more effective.

This document sets out our thoughts on: key characteristics of the market which the CMA should have in mind as it conducts its market investigation; the areas which we think are particularly important for the CMA to investigate further and the areas the CMA we consider do not warrant specific investigation. The document also sets out the work that Ofgem has been doing to address the problems we have identified and the related areas of work we will continue with to protect consumer interests during the CMA's market investigation.

This document does not provide a comprehensive overview of the energy market in GB. Throughout the investigation we will assist the CMA by providing further information and data as well as by sharing our knowledge and expertise.

## **Key characteristics of the energy sector**

Energy is an essential product. The cost of energy (especially how it impacts vulnerable consumers and the competitiveness of our economy) and security of energy supply are public policy matters and matters of significant public interest. In recent years, and against a backdrop of rising energy prices and tighter electricity margins, the policy agenda has expanded to include government's decarbonisation objectives, and progressing the European Union's objective of further integrating the region's energy markets.

The multiplicity of policy objectives is reflected in Ofgem's statutory duties, handed down by Parliament. Ofgem's principal objective is to protect the interests of existing and future energy consumers. We are required to carry out our functions in a manner we consider is best calculated to further this principal objective, wherever appropriate by promoting effective competition. However, before performing regulatory functions with a view to promoting competition, Ofgem must always first consider the extent to which the interests of consumers would be protected by the promotion of competition and whether there are other ways which would better protect those interests. We are also required to have regard to the interests of different groups of vulnerable customers, the need to ensure security of supply, the need to secure that licence holders are able to finance their activities, and the need to contribute to the achievement of sustainable development. At times, these duties may conflict with promoting effective competition.<sup>1</sup>

Partly as a result of the importance of energy in public policy, the sector is heavily regulated. The industry is subject to specific obligations and standards arising from

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<sup>1</sup> Our principal objective and duties in relation to competition in particular were modified in 2010. We discuss the statutory framework and its continued evolution in appendix 2.

European Directives, GB Primary and Secondary Legislation, as well as the licences overseen by Ofgem.

Moreover, competition in the wholesale and retail markets can exist only through a detailed and extensive set of rules. Many of these are required because of technical features of the energy systems. In particular, most market participants are dependent on access to monopoly networks and their participation entails connecting to a physical system which must be kept in balance (in the case of electricity, in real time). While essential for the facilitation of competition, along with other regulations, these rules may raise the cost of new entry. They may drive (as well as preclude) particular business models and behaviours, such as the vertical integration between generation and supply in the electricity sector, and could create the conditions for tacit coordination.

Specific factors affect the way consumers engage in the energy retail market and impact how competition, particularly retail competition, works in practice. For example:

- Electricity and gas supplied by different retailers appear much the same to an individual consumer, so the products themselves lack differentiating features
- Many consumers receive electricity and gas through an evergreen contract.<sup>2</sup> This means that for many, there is no natural prompt to look for a new energy deal
- Our consumer research suggests that the transaction cost of engaging can be significant compared to the savings – including long switching times and the difficulty of comparing different offers
- Our research tells us that consumers are often put off from switching by the fear of things going wrong. This is particularly true for certain vulnerable and low income consumers on low or tightly managed budgets, where the consequences of a “wrong” decision, or a difficult switching process, can be particularly severe.

These factors vary considerably across consumer classes, having much less (if any) real impact on larger industrial and commercial customers than they do for domestic customers and micro-businesses. However our research also shows that their impact on, for example, certain types of vulnerable customer or those with a particular meter type, can be much greater. These factors could go some way to explaining why, more than a decade since the removal of price controls, and despite tariff spreads of up to around £250<sup>3</sup> a year, the suppliers created through the privatisation process still hold around 40 per cent of legacy domestic customers.

The energy sector is going to change significantly over the next few years, for example as a result of the rollout of smart meters, the government’s Electricity Market Reforms (EMR), and closer integration and further interconnection with other European energy markets. Smart meters provide a significant opportunity to address some of the barriers to consumer engagement mentioned above, to provide consumers with the tools they need to manage their energy use and to provide a platform for new services and business models, including in switching and other intermediary services. A very significant amount of investment is required to replace ageing power plants and meet government’s decarbonisation targets.

We encourage the CMA to have close regard to these developments in its investigation and ensure that any remedies it develops are effective alongside these changes.

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<sup>2</sup> An “evergreen” contract is one which runs for an indefinite period of time: it has no specified end date (similar to traditional telecoms landline contracts).

<sup>3</sup> Difference between the average incumbent single fuel tariff and the best online dual fuel direct debit tariffs.

## **Areas to investigate further and those requiring less attention**

We have identified that five features may have a harmful effect on competition: weak customer response, incumbency advantages, possible tacit coordination, vertical integration, and barriers to entry and expansion. We think that the following issues in particular warrant further investigation by the CMA, and addressing them would help to restore consumer trust and create a more stable investment climate:

- The level of trading profits and margins in the market (retail and wholesale), particularly in relation to the vertically integrated companies, and the role that any tacit coordination plays in this regard
- The role and effects of vertical integration on competition, for example as a potential barrier to market entry and expansion. Our own investigations have identified both costs and benefits from vertical integration and we think this feature would benefit from further investigation by the CMA
- The impact of retail market incumbency on competition, including how it impacts on competition for particular categories of customers
- The extent to which the regulatory architecture and governance arrangements act as a barrier to effective competition, particularly for new entrants, new business models and smaller suppliers.

We think it would also be helpful if the CMA investigated the level of competition in the market for micro-businesses and the extent to which suppliers in this market should be subject to the same standards and obligations as those supplying domestic customers.

There are also areas of the market that we do not think warrant specific investigation. We do not think the CMA needs to focus its time investigating monopoly network activities. Further, based on the information we have we think there is less need for the CMA to investigate gas wholesale markets, gas storage, and the current regime for interconnectors. We also note that retail supply to large industrial and commercial customers is out of scope of the reference. We explain our reasoning why there is less need to investigate these in more detail in Chapter 2.

During the course of the CMA's investigation we will continue with our work to make the market work better for consumers. In particular, we will continue our work to:

- Improve the reliability of and access to third party intermediaries (TPIs) so that consumers are better able to engage through switching sites, brokers and other types of TPI
- Improve the speed and accuracy of the supplier switching process. This is part of our wider programme of work to prepare for mass domestic smart meter rollout
- Ensure that vulnerable consumers are well-protected and get support to help them engage in the market
- Engage with small suppliers and those with new business models so we can address their issues and help them engage in the regulatory process
- Improve the transparency of energy companies' profits, aimed at helping to restore consumer confidence
- Monitor market developments, including the impact of and compliance with our RMR and liquidity reforms.

# 1. Characteristics of the energy sector

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**Chapter Summary:** In this chapter we set out the key characteristics of the energy sector that we consider are important for the CMA to bear in mind during its investigation<sup>4</sup>. We then give our views on some of the consequences of these characteristics and their complex interactions. Finally, we note some of the key ways in which the energy sector is set to change in years to come.

## Main sector characteristics

### Energy is an essential product and a matter of public policy

1.1. Energy is generally considered to be an essential product which is indirectly and continuously consumed. Most consumers' demand for energy is not price responsive (ie their demand has a low price elasticity).<sup>5</sup> For many commercial energy consumers, energy costs can be a significant part of their cost base, affecting their international competitiveness.

1.2. Partly for these reasons, there are a number of significant public policy objectives relating to the energy sector, and a particular interest in ensuring satisfactory outcomes for vulnerable customers. In recent years, and against a backdrop of rising energy prices<sup>6</sup> and tighter electricity margins,<sup>7</sup> the policy agenda has expanded to include government's decarbonisation objectives,<sup>8</sup> and progressing the greater integration of European energy markets. In relation to the former, government has introduced a range of measures aimed at both reducing carbon emissions from electricity generation plant, and at improving energy efficiency.<sup>9</sup>

1.3. Government's Electricity Market Reform programme, which is in the process of being implemented, is seeking to provide support for renewable generation, while also safeguarding security of supply, through the following four components:

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<sup>4</sup> This document and the supporting appendices are not indented to provide a fully comprehensive description of the characteristics of the electricity and gas sectors.

<sup>5</sup> In response to government subsidies we have seen a significant increase in electricity self generation by individual households and businesses. However these customers typically remain connected to the electricity grid, and generally rely on it to provide continuity of supply. While electricity and gas are to some extent substitutable as sources of domestic heat and cooking, 15% of GB households do not have mains gas, and switching fuel source for heating is typically expensive, requiring significant up front capital expenditure.

<sup>6</sup> Analysis about how prices have risen, and are expected to rise, can be found in DECC's Estimated impacts of energy and climate change policies on energy prices and bills at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/172923/130326\\_-\\_Price\\_and\\_Bill\\_Impacts\\_Report\\_Final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/172923/130326_-_Price_and_Bill_Impacts_Report_Final.pdf)

<sup>7</sup> The capacity margin is the average excess of available supply over winter peak demand. Ofgem 2014 capacity assessment analyses the risks to the security of our electricity supply. See Appendix 4 for future detail.

<sup>8</sup> The 2008 Climate Change Act commits the UK to reducing emissions by at least 80% in 2050 from 1990 levels. The UK has also committed to a target of 15% energy consumption from renewable sources by 2020. The 2030 EU decarbonisation targets are currently under negotiation.

<sup>9</sup> For an overview of governments policies related to this see: <https://www.gov.uk/government/policies/reducing-the-uk-s-greenhouse-gas-emissions-by-80-by-2050>

- **Feed in Tariff with Contracts for difference (CfD)** – financial support mechanism designed to lower the cost of funding low-carbon generation, by making revenue more certain. A CfD provides a guaranteed price for the electricity generated by low-carbon generators. The CfDs will be funded by obligations on suppliers.
- **The Capacity Mechanism** – mechanism intended to encourage investment in capacity by providing new and existing power stations, electricity storage and capacity provided by voluntary demand reductions with more stable revenues. The capacity mechanism will be funded by obligations on suppliers.
- **The Emissions Performance Standard** – a restriction on the amount of carbon dioxide that new power stations can emit.
- **The Carbon Price Floor** – a tax on fossil fuels designed to make low-carbon generation more competitive compared with plant with higher emissions.

1.4. In parallel, government has introduced a suite of requirements on energy suppliers to help improve their customers' energy efficiency, through schemes such as the Energy Companies Obligation (ECO)<sup>10</sup> and the Warm Home Discount (WHD)<sup>11</sup>.

1.5. Meanwhile, legislation at the European level aims to, among other things, create a single internal EU Energy Market through the harmonisation of market rules. There will be new rules for interconnectors aimed making sure that their capacity is efficiently utilised and that flows of gas and electricity better respond to price signals. This means that both Europe and the UK government have a role in setting the GB policy agenda.

1.6. These competing objectives of the "trilemma" (affordability, energy security of supply and decarbonisation) are well documented and recognised at both a national and European level.<sup>12</sup> Similarly, the European Commission has pointed out the risk that domestic support schemes for renewables and to address security of supply might distort trade and undermine the objective of greater European energy market integration<sup>13</sup>.

### **The energy sector is highly regulated**

1.7. As explained above, a number of different policy makers play a part in setting policy for and regulating the energy sector. Technical characteristics of the electricity and gas systems mean that a large number of often complex rules are necessary to allow competition in the sector. This means that the market is subject to a range of specific obligations and standards. Some of these apply through the licensing regime overseen by Ofgem, and the industry codes that sit beneath the licences. However, many also arise from government primary and secondary legislation and EU legislation.

1.8. As set out in appendix 2, the Third Energy Package entered into force in September 2009. The key aim of the Third Package was to further liberalise European

<sup>10</sup> For more information see Appendix 3 and at <https://www.ofgem.gov.uk/environmental-programmes/energy-companies-obligation-eco>

<sup>11</sup> For more information see Appendix 3 and at <https://www.ofgem.gov.uk/environmental-programmes/warm-home-discount>

<sup>12</sup> For GB see Ofgem's Project Discovery at <https://www.ofgem.gov.uk/ofgem-publications/40354/projectdiscoveryfebcondocfinal.pdf>. Also see European Commission: "Delivering the internal electricity market and making the most of public intervention" at [http://ec.europa.eu/energy/gas\\_electricity/doc/com\\_2013\\_public\\_intervention\\_en.pdf](http://ec.europa.eu/energy/gas_electricity/doc/com_2013_public_intervention_en.pdf)

<sup>13</sup> See European Commission: "Sector Inquiry" at <http://ec.europa.eu/competition/sectors/energy/inquiry/index.html>

energy markets. The subsequent Network Codes form a legally binding set of common technical and commercial rules and obligations that govern access to, and use of, the European energy networks. Once adopted the European Network Codes will take precedence over national legislation, licences and domestic industry codes.

1.9. It is for government to determine the broad policy parameters for the GB energy market within the context of EU law. It is the responsibility of the government to establish strategic goals for the energy sector, and to ensure that an appropriate framework is in place to enable delivery. There have been six sets of primary legislation since privatisation, with the last Energy Act in 2013, which set the legislation required for government's EMR programme.<sup>14</sup>

1.10. Ofgem's own primary tool of economic regulation is the licensing regime. It is a requirement to hold a licence to engage in certain activities, including electricity generation<sup>15</sup>, gas shipping<sup>16</sup> and energy supply (but not energy trading). The licences set out the terms under which licence holders must operate.

1.11. Sitting underneath the licences are a number of highly detailed multi-party agreements, the industry codes<sup>17</sup>. These codes define the terms under which industry participants can access the networks and participate in the electricity and gas markets. They reflect the fact that all market participants are physically connected to an interconnected system, and the needs to balance demand and supply (in real time for electricity). Both individually and collectively, the codes significantly impact on the shape and development of the gas and electricity sectors and, by extension, on our ability to deliver competitive markets that best protect the consumer interest.

1.12. Codes are 'live' documents, meaning that they can be changed. Most changes to the codes must follow a very specific process: any code participant can raise a modification proposal;<sup>18</sup> this must then be discussed and developed by a panel of nominated industry representatives who make recommendations to Ofgem, which we must then approve or reject.

### **Specific factors impede the ability of consumers to engage in the market**

1.13. Electricity and gas supplied by different retailers appear much the same to an individual consumer, so the products themselves lack differentiating features. Electricity and gas are consumed continuously and for the majority of domestic customers who are on "evergreen" products there are no default points at which an energy customer must make a decision on how they engage in the market, or prompts to switch supplier.

1.14. Our consumer research<sup>19</sup> suggests that when customers do choose to engage in the market, the transaction costs of doing so have historically been relatively high compared to the potential savings on offer, ranging from the informational costs involved

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<sup>14</sup> See Appendix 2 for further detail.

<sup>15</sup> Some generators are licence-exempt, eg because their capacity is below a certain size.

<sup>16</sup> A gas shipper is responsible for buying gas from producers, selling it to suppliers and arranging for it to be transported to consumers.

<sup>17</sup> See Appendix 2 for more information.

<sup>18</sup> Code participants are licence holders and certain other interested parties such as Consumer Futures.

<sup>19</sup> Consumer research databases can be found at <https://www.ofgem.gov.uk/publications-and-updates/consumer-research-datasets>

in accessing tariff information and comparing tariffs effectively, through to the time taken for the switching process itself (which has historically been slow).<sup>20</sup>

1.15. Our research tells us that when customers do think about engaging in the market, they often fear the consequences of making a “wrong” decision, and do not have full confidence that the switching process will run smoothly.<sup>21</sup> This is particularly true for certain vulnerable and low income consumers on low or tightly managed budgets, where the consequences of a “wrong” decision, or a difficult switching process, can be particularly severe.

*Some of these features vary across consumer classes, affecting outcomes*

1.16. These factors vary considerably across consumer classes, having much less (if any) real impact on larger industrial and commercial customers than they do for domestic customers and micro-businesses. However our research also shows that their impact on, for example, certain types of vulnerable customer or those with a particular meter type, can be much greater; certain types of vulnerable customers may for instance have limited ability to access the market through certain routes (eg through using switching sites), or their ability to otherwise compare offerings may be compromised.

1.17. These factors could go some way to explaining why, more than a decade after price controls were introduced, and despite tariff spreads of up to around £250<sup>22</sup> a year, the suppliers created through that privatisation process still hold around 40 per cent of legacy domestic customers. Our research has also raised questions as to whether certain types of micro-business engage in the market in a way more similar to domestic consumers than (better informed and better resourced) I&C consumers. We discuss the non-domestic sector further in appendix 6.

## **The consequences of these market sector characteristics**

### **The market regulator has a role broader than ensuring competition**

1.18. Ofgem’s principal objective is to protect the interests of existing and future energy consumers. These interests are taken as a whole and include the reduction of greenhouse gases, the security of the supply of gas and electricity to consumers, and Ofgem’s fulfilment of the objectives for regulatory authorities as set out in the EU Third Package’s Gas and Electricity Directives (these objectives include the promotion of competition, helping to ensure consumer protection and contributing to the protection of vulnerable consumers).

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<sup>20</sup> Where information is relatively complex, difficult to obtain or process, or where the ‘search costs’ of finding a better deal are high, consumers may struggle to accurately identify a better alternative and engage effectively with suppliers. Our analysis found that the main barriers to effective engagement in the energy market are a combination of the complexity of tariffs, unclear and incomplete information and lack of trust in energy suppliers. That leaves many customers uncertain as to whether or not it will be beneficial to switch.

<sup>21</sup> See the State of the Market Assessment, chapter 3

<sup>22</sup> Difference between the average incumbent single fuel tariff and the best online dual fuel direct debit tariffs.

1.19. An example of the emphasis Parliament has put on Ofgem's wider range of responsibilities is the change in our responsibilities in 2010 which made it an explicit obligation on Ofgem to consider mechanisms other than promoting competition.<sup>23</sup>

### **Regulations can impact on competition**

1.20. There are a number of ways that the energy market rules in EU and UK legislation, codes and licences can create barriers to entry and/or expansion. These barriers may favour particular types of business model, particularly larger and vertically integrated models. For example:

- *Regulatory costs can be onerous.* Market participants need to have sufficient resource and staff to engage with and influence policy and rule change development, and there is a cost associated with this, as well as complying with any changes in regulation. While this regulatory environment may be seen as 'a cost of doing business' applicable to all suppliers, the costs are more burdensome for new entrants and smaller suppliers who have smaller customer bases over which to spread these costs.
- *The rules can place requirements which can be difficult/onerous for new entrants.* For example, there are incentives on market participants to ensure they 'balance' by matching their contractual position to their physical position<sup>24</sup>. Larger and vertically integrated market participants may be better able to do this, although we note that some non-vertically integrated companies have addressed this issue by engaging in contracts with larger companies/companies elsewhere in the supply chain.

1.21. Obligations on industry participants are not always applied evenly, in that in some cases they only apply where certain size thresholds are met, for example where a supplier reaches a particular threshold in terms of its customer numbers. Examples of this include ECO and WHD obligations, which are only compulsory for suppliers with over 250,000 customers<sup>25</sup>. This can create a barrier to expansion and potentially distort competition.

1.22. The regulations under which the industry operates have largely been designed to apply to a particular set of business models. There is a risk that this can make it harder for alternative business models to emerge. One such example relates to Demand Side Response (DSR).<sup>26</sup> Under current market arrangements, DSR used by one party may have negative implications on another party. For example, if a Distribution Network Operator (DNO) uses a consumer's DSR, it can change their supplier's imbalance position, without that supplier knowing or having the opportunity to react. This creates operational and financial risks to suppliers and also harms efficient use of consumers' DSR across the value-chain. We are working to create a framework that formalises cross-party interactions to enhance visibility of and coordination in the use of DSR.

1.23. The industry-based approach to code modifications has worked well in developing incremental change to industry codes. It allows industry experts to play a direct role in identifying areas for improvement and taking these forward. However, the process can

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<sup>23</sup> See Appendix 2 for further detail.

<sup>24</sup> Market participants are incentivised to do this by cash-out prices. See appendix one for further detail.

<sup>25</sup> For ECO, the amount of supply to domestic customers in a relevant year also forms part of the threshold.

<sup>26</sup> Demand side response involves electricity users varying demand due to changes in the balance between supply and demand, usually in response to price.

also lead to a number of potential downsides, which we consider must not be lost as part of the CMA's review of the wider regulation and industry governance framework:

- *Slow progress of rule changes can get in the way of making the market work.* The standard process for developing code modifications is effective for developing incremental changes, but may not be suitable for more complex and wide-ranging changes.
- *Some changes to industry codes may be in the interests of consumers, but not be in the interests of industry to introduce.* They may, for example, imply additional cost to industry – these sorts of changes are unlikely to be nominated and agreed by the industry led panel process.

1.24. In response to this, we developed the Significant Code Review (SCR) process<sup>27</sup>. This allows Ofgem to lead complex changes to industry codes, and consider cross-code changes.

### **The impact of incumbency**

1.25. The fact that the market has evolved from a publicly owned monopoly model, together with the factors that limit consumer engagement, has consequences for some of the characteristics we see in the market today.<sup>28</sup> We see a market where despite ten years since the removal of price controls, around 40 per cent of consumers still remain with their original incumbent gas and/or electricity supplier. We also see that the market is in some respects “polarised” between engaged and disengaged customers. The State of the Market Assessment found that for single fuel tariffs the incumbency advantage is particularly strong. The ‘home’ suppliers’ market share is on average 70 per cent for both electricity and gas. Customers who are with the incumbent supplier for their region are less likely to switch suppliers and most of them haven’t done so since market liberalisation, even though they are charged more for their energy than they typically would be by suppliers from outside the incumbent region.<sup>29</sup> This has implications for the effectiveness of competition in certain segments of the market. We discuss incumbency issues further in chapter 2.

### **The market is changing**

1.26. The energy market, both at the retail and the wholesale level, is in a period of rapid change. The key drivers are the transition to low-carbon electricity generation and technological change in the retail market. The changes we expect to see play a key part in how Ofgem approaches the market and how we think about the costs and benefits of possible interventions. We note that it will be important for the CMA to bear these changes in mind during its investigation, including when thinking about any remedies. We set out changes that we think are particularly relevant for the CMA investigation below.

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<sup>27</sup> See Appendix 2 for more detail.

<sup>28</sup> See Appendix 1 for more detail.

<sup>29</sup> Note that for gas, the incumbent region is national. See the State of the Market Assessment pg 11 for further detail of this analysis.

## **Retail market**

1.27. The roll-out of smart metering<sup>30</sup> to domestic and non-domestic consumers has the potential to make smarter energy markets that work better for consumers, including by strengthening competition between suppliers. These meters will be capable of recording consumption for each half hour for electricity and daily for gas and will give consumers much greater visibility and control over their energy use, and enable them to make better choices about the products they buy. There is the potential for smart meters to reduce a number of the factors which stand in the way of active consumer participation in the energy market such as more accurate information about the cost of their energy and a less onerous switching process.

1.28. Smart metering also presents opportunities for innovation, for example in offerings to help consumers to use energy more efficiently. We would hope to see existing suppliers, demand aggregators and energy service providers compete to provide services that are better suited to consumers' needs.

1.29. The introduction of government subsidy schemes such as the Feed-in Tariff (FITs) has led to greater investment in small scale renewable generation by both domestic consumers and businesses. For example, by mid-June 2014, the number of registered FIT installations was over 500,000, far exceeding initial predictions of around 230,000 by this stage (year 4) in the scheme. By encouraging greater consumer participation in small-scale electricity generation, these schemes may have also contributed to the rise of the "prosumer", who by definition is more engaged in the market.

1.30. We are already seeing the emergence of some alternative business models supported by improvements in information technology and the investment by consumers in small scale renewable generation. Examples include Energy Service Companies who offer a range of services aimed at helping their customers increase energy efficiency (particularly in the non-domestic sector) and aggregators who bring together the demand side response capabilities of groups of commercial and industrial customers. In the domestic sector, the growth in community energy schemes is another example – it has sparked an increased interest in Ofgem's "licence lite" which allows these schemes to participate in energy supply without having to meet the full suite of "mainstream" supply licence obligations. We discuss licence lite further in chapter 2.

1.31. Ofgem's Retail Market Review<sup>31</sup> reforms seek to build trust and engagement through the creation of a simpler, clearer and fairer market. In this way, the reforms help to lay the foundation for smarter markets, helping to improve consumers' ability and confidence to interact with the new products and services that smart metering enables.

## **Wholesale electricity market**

1.32. As noted above, the government is introducing EMR a programme of reforms aimed at ensuring security of electricity supply while helping the UK achieve its decarbonisation goals. The scale of investment required to ensure that the UK continues to be able to sustain energy security of supply while achieving its decarbonisation goals is very significant. For example, Ofgem's 2009 Project Discovery estimated that investment

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<sup>30</sup> The government is requiring energy companies to install smart meters for their customers. Smart meters will be rolled out as standard across the country by 2020. See:

<https://www.gov.uk/smart-meters-how-they-work#supplier-led-roll-out>

<sup>31</sup> <https://www.ofgem.gov.uk/gas/retail-market/market-review-and-reform/retail-market-review>

of approximately £200bn was needed to achieve these goals.<sup>32</sup> The Levy Control Framework, which covers the expected expenditure on CfDs, the Renewables Obligation (RO), FITs and Warm Home Discount indicates an expected expenditure of £7.6 billion by 2020-21. More recently, DECC has announced that it expects to contract for over 50GW of capacity through its Capacity Mechanism (CM).<sup>33</sup> It is important that the wholesale market framework is able to bring forward the scale of investment needed (both in new capacity and in keeping existing capacity in the market) at an efficient level of cost.

1.33. The combination of these reforms to the electricity market is set to bring significant changes to the role of the wholesale market, and the way in which generators (and suppliers) compete and contract within it. It will mean that an increasing proportion of the final bill will be driven by the cost of government schemes, and a lesser proportion from wholesale market prices<sup>34</sup>. An increasing proportion of generators are expected to rely on CfD or CM contracts as their main funding source, rather than from selling their generation on the wholesale market. CfDs will increase the proportion of (predominantly wind and nuclear) generation on the system that “must run”, and this, along with the CM support is likely to depress wholesale market prices. Overall, we expect the wholesale market to play less of a role in providing a signal for investment in new generation plant.

1.34. The primary aim of the CM is to incentivise sufficient investment in capacity to ensure security of electricity suppliers. As DECC have noted in their impact assessment, the CM is also expected to reduce prices in the wholesale market<sup>35</sup>. This will reduce the role that the wholesale market price currently plays in providing a signal for investment in new generation plant.

1.35. Increased intermittency on the system (as a result of the increased renewables generation such as wind) will in turn increase the value of flexible generation to the system (such as gas-fired generation). Ofgem’s Electricity Balancing Significant Code Review (EBSCR) seeks to make prices in the wholesale market more reflective of the costs to National Grid of balancing the system, and is intended to improve the strength of the signal in the wholesale market for flexible generation and demand side response<sup>36</sup>.

1.36. Ofgem’s recent interventions to improve liquidity are also expected to bring about material changes in the wholesale electricity sector. By improving the access that smaller, non-vertically integrated suppliers have to the products they wish to buy and at a reliable price, we expect our reforms to reduce some of the benefits of vertical integration.

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<sup>32</sup> Ofgem Project Discovery <https://www.ofgem.gov.uk/ofgem-publications/40354/projectdiscoveryfebcondocfinal.pdf>

<sup>33</sup> Letter from Edward Davey confirming auction parameters at: <https://www.ofgem.gov.uk/ofgem-publications/40361/discoveryscenarioscondocfinal.pdf>  
<https://www.gov.uk/government/publications/letter-from-edward-davey-confirming-auction-parameters>

<sup>34</sup> For a break-down of consumer bills see Appendix 3

<sup>35</sup> DECC’s Capacity Market Impact Assessment at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/324430/Final\\_Capacity\\_Market\\_Impact\\_Assessment.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/324430/Final_Capacity_Market_Impact_Assessment.pdf)

<sup>36</sup> See final policy decision at <https://www.ofgem.gov.uk/publications-and-updates/electricity-balancing-significant-code-review-final-policy-decision>

## **Wholesale gas market**

1.37. In the gas sector too, security of supply considerations play a critical role, and the market continues to evolve in this regard. Domestic production is declining. GB has responded to this by relying on an increasingly diverse range of supply sources, including imports from Norway, continental Europe and global Liquefied Natural Gas (LNG) markets to meet its gas requirements. Gas fired power generation is also set to rise, increasing the importance of secure gas supplies<sup>37</sup>.

## **European developments affecting both gas and electricity markets**

1.38. Greater physical connection and harmonisation of market rules with Europe will also impact on the GB wholesale market. This is likely to require changes to the GB electricity and gas markets and other aspects of arrangements, such as System Operation. These reforms will further encourage more effective cross border competition by ensuring gas and electricity flow to the markets where it is most valued and guarding against capacity hoarding. The process to develop these instruments is set out in law and will enter into force following a vote by Member States. Once they enter into law they take the form of European Regulations, which are directly applicable and take precedence over GB law.

1.39. There are three new financial regulations, detailed in appendix 4, that are being adopted in Europe that will apply to GB. Some of these regulations may impact on the capital requirements of traders, trading strategies and liquidity in the market.

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<sup>37</sup> See Appendix 4.

## 2. Market features and areas to investigate further

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**Chapter summary:** We do not think that competition is working as well as it could for customers. This chapter summarises the key features we think could be having a harmful effect on competition. It then sets out the areas that we think the CMA should investigate further, and areas that we think are less deserving of investigation. It also sets out work Ofgem has conducted to improve competition and the work we expect to continue in parallel with the investigation.

2.1. In recent years Ofgem has held a series of investigations and implemented a range of reforms in order to make competition work better. This chapter provides a brief overview of these including: the Probe (conducted in 2008); the Retail Market Reforms (RMR) (which have been coming into effect from summer 2013); and the liquidity reforms (which took effect at the end of March 2014). Finally in this chapter, we set out the work we expect to continue in parallel with the investigation.

### The features we identified in the Assessment

2.2. In the State of the Market Assessment (the Assessment)<sup>38</sup>, produced jointly with the CMA and the OFT, we found that competition is not working as well as it could for consumers. We identified five market features that may have a harmful effect on competition. As a result of these findings, and the persistence of problems we referred the market for the supply and acquisition of electricity and gas to the CMA for further investigation. A brief summary of the five areas we identified is provided below.

#### Weak customer response

2.3. The main barriers to consumer engagement are a combination of the complexity of tariffs, unclear and incomplete information, and a lack of trust and confidence in suppliers and the market. All of these contribute to an overall lack of engagement in the market. This feature of the demand side also has implications for the continuing incumbency advantage discussed below.

2.4. Weak customer response is a feature of this market that we have consistently observed for some years. Reducing some of the barriers to engagement is the focus of many of the RMR measures we have introduced. Customer response is not showing enough signs of improvement to allay our concerns about it preventing the competitive process from working, and the impact of the RMR remedies is yet to be seen.

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<sup>38</sup> In our response to the Energy and Climate Change Committee we committed to producing this assessment annually. The Secretary of State subsequently asked Ofgem to work with the Office of Fair Trading (OFT) and the Competition and Markets Authority (CMA) to deliver the first assessment by the end of March 2014.

## **Continuing incumbency<sup>39</sup> advantage and market segmentation**

2.5. The six largest suppliers retain a disproportionately high number of customers located in their incumbent regions, most of which will be customers who have not switched away from that supplier since market liberalisation.<sup>40</sup>

2.6. The Assessment found that suppliers are able to segment their customer base, and charge different groups of customers different prices, in some cases for the same product. This suggests the market is not working effectively for all consumers.

## **Possible tacit coordination**

2.7. Many features of retail energy markets, such as high concentration, similar product and cost structures across suppliers and observable pricing, may facilitate tacit coordination.

2.8. The large suppliers' market shares have been relatively stable over time, their price announcements tend to be more aligned and their profitability has shown signs of converging and increasing as prices rise more than costs.<sup>41</sup> We also found evidence that large suppliers raise prices more quickly when costs increase than they reduce prices when costs fall, leading to profits being higher than they would otherwise be. This evidence supports previous findings that many features of the retail energy markets may facilitate tacit coordination.

## **Vertical integration**

2.9. Vertical integration in the electricity market could have many benefits, for example allowing companies to reduce their collateral requirements, and giving them the ability to better source energy in an illiquid wholesale market. However, it could also be harming competition: creating barriers to market entry and expansion by reducing liquidity in the wholesale market. We therefore think this key feature of the market warrants further investigation by the CMA.

2.10. This feature is less relevant to the gas market, which is less vertically integrated and where imports through pipelines and Liquefied Natural Gas (LNG) terminals link the GB market to international commodity markets.

## **Barriers to entry and expansion**

2.11. Barriers to entry include not just the effects of vertical integration discussed above, but also several other factors including:

- Credit and collateral costs
- Regulatory arrangements and industry system requirements

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<sup>39</sup> An incumbent is the company of the former monopoly supplier in a particular region. Centrica is the incumbent in the gas market.

<sup>40</sup> Some parts of the market exhibit even higher incumbent market shares, such as the market for customers on dynamically-teleswitched meters.

<sup>41</sup> Ofgem recently wrote to the largest suppliers, challenging them to explain to consumers the impact of falling wholesale prices on their retail prices.

- Incumbent supplier pricing strategies (particularly charging sticky customers more than active customers: we discuss this issue further below)
- Reputational risks (eg arising from the high level of political and media attention, and the poor reputation that the sector faces)

## Features of the market which should be investigated further

2.12. Based on the work we have conducted so far, and our assessment of the key issues impacting on consumer trust in the market and investor confidence, we have identified a number of specific areas the CMA should focus on during its investigation, alongside the features noted above. It is important to note that in some areas we are already undertaking work to address these issues, this is set out in appendix 4.

### Profits and transfer pricing

2.13. As discussed in the Assessment Framework and Assessment reports, a key question with regard to outcomes in the market is whether profitability, both upstream and downstream, is higher than we would expect in a competitive market. The level of profits amongst the large vertically integrated companies in particular is an area of significant public interest. To assess this, we need reliable data, including data on the costs and profits.

2.14. We note that the CMA is well placed to look further at these issues given its cross-sectoral expertise, including its experience in considering issues of profitability within a context where the need for significant capital investment plays an important role.

2.15. Ofgem has taken steps to improve transparency around revenues, costs and profits in the market. Licence conditions<sup>42</sup>, require certain suppliers and generators to publish 'consolidated segmental statements' annually. This provides information on the annual costs, revenue and profits for each segment of the business (electricity generation, electricity supply (domestic and non-domestic) and gas supply (domestic and non-domestic)). Suppliers must publish these statements on their website. From next year, they will be audited by an external auditor. We also publish analysis on the data provided<sup>43</sup>.

2.16. A key component underpinning the allocation of costs and revenues in these statements is transfer prices. These are the prices used for internal transactions within each of the vertically integrated suppliers. So, it is the price that the generation arm receives for the energy (or capacity) it sells to the trading arm. Similarly, it is the price the supply arm pays to the trading arm for the electricity and gas it buys to supply final customers. We do not regulate transfer prices and prices will vary depending on each supplier's business model.

2.17. Improving transparency is part of a wider public policy initiative, a key objective of which is to help improve consumer trust. We are reviewing in reasonable depth suppliers' transfer pricing practices to better understand any implications on the revenues, costs and profits they publish in the segmental statements, and to identify

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<sup>42</sup> Refer to SLC 16 for generation and SLC 19A for supply.

<sup>43</sup> The most recent report can be found here: <https://www.ofgem.gov.uk/publications-and-updates/revenues-costs-and-profits-large-energy-companies-2012>

possible risk areas.<sup>44</sup> At the same time, stakeholders have argued that increased transparency on the Consolidated Segmental Statements may lead to the appearance of tacit co-ordination.

### **Vertical Integration – specific considerations**

2.18. In our State of the Market Assessment, we noted that we see both costs and benefits to vertical integration in the electricity industry. We remain undecided on the relative weight of these costs and benefits and consider that this is an area that would benefit from thorough investigation by the CMA. We note that this will involve the CMA taking a further look at the electricity wholesale market and how its features impact on electricity retail market competition.

2.19. As part of its investigation, we think it would be useful for the CMA to assess the extent to which any cost savings and other advantages that might arise from vertical integration are likely to be transferred to consumers. We note that experiences in other market models may be helpful in this regard.

2.20. We expect our own liquidity reforms to remove some of the potentially harmful effects of vertical integration, particularly as it affects independent players' access to the products they need to participate in the market. However, we note that some market participants and opinion formers do not consider our reforms have gone far enough and that some form of vertical separation (whether through ring-fencing, a self-supply restriction or full ownership separation) is required. We are monitoring the impact of our reforms and will keep the CMA informed of our findings.

### **Impact of retail market incumbency including how it impacts on particular customer categories**

2.21. We think the CMA should focus on the impact that incumbency has on competition. Around 40 per cent of consumers still purchase energy from their legacy supplier. According to our research, these consumers are less likely to be active in the market. Absent interventions from Ofgem<sup>45</sup>, the six largest energy suppliers are able to segment the market and charge their legacy customers a higher price, in some cases for the same product.

2.22. While we note that market segmentation is a normal feature of a competitive market, this issue is relevant to the investigation for two reasons. Firstly, it could be distorting competition. It places incumbent suppliers at an advantage over new entrants, potentially allowing them to undercut new entrant prices when they compete with new entrants for more active customers, and thereby limit their ability to gain market share.<sup>46</sup>

2.23. Secondly, we are concerned that market segmentation, and the practice of charging more for less active customers, could mean that the market is not working for all consumers. Moreover, vulnerable consumers are likely to be disproportionately

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<sup>44</sup> The Energy and Climate Change Committee has asked us to take forward work to further increase transparency.

<sup>45</sup> We have ended so-called 'dead' tariffs and placed a limit on the number of tariffs a supplier can offer. These measures are set out in more detail below.

<sup>46</sup> We note that in their interviews with the CMA earlier this year, several independent suppliers highlighted this as a barrier to entry and growth

affected, because our research has shown that they are more likely to be affected by the factors which impede engagement<sup>47</sup>, and less able to access the best deals.

2.24. In addition to our concern about the impact on vulnerable consumers in general, we note that the consumers with certain types of meters may be especially poorly served by competition through a combination of price discrimination, difficulties in engagement and weak competition between the incumbent suppliers. While the roll-out of smart meters will change the features of the market that are particular to certain meter types, we think it is worth exploring how well the interests of consumers with these meters are currently being met, and what this can tell us about the competitive dynamics at play. These consumers are:

- *Dynamic tele-switching (DTS) customers* – DTS meters are a time-of-use type of electricity meter, which rather than operating to set time periods, are controlled remotely by the relevant Distribution Network Operator. DTS meters operate on a specific type of technology which can create a practical barrier to switching, and DTS tariffs are not offered on price comparison websites. Our research suggests that elderly, less affluent and often less well educated customers are disproportionately represented in this customer group.<sup>48</sup>
- *Economy 10 / Economy 7 customers* – Customers on Economy 10 and Economy 7 electricity meters have time-of-use tariffs which offer different unit rates at certain times of the day. These customers typically face more limited choice of tariffs, and Economy 10 tariffs in particular are rarely included on price comparison websites. Our research has shown that vulnerable customers are disproportionately highly represented amongst Economy 10 and Economy 7 customers.<sup>49</sup>
- *Consumers with pre-payment meters* – Pre-payment meters (PPMs) are specific electricity and gas meter types which allow consumers to pay for energy in advance, through purchasing an electronic token, keys or card to be inserted into the meter. Tariff rates are usually higher than those offered for standard meters, and the range of tariffs on offer is typically smaller, and can be more difficult to find. Customers with PPM also have less contact with their supplier and therefore receive information relating to tariffs and their usage less frequently, which can mean they have less relevant information available if they choose to engage in the market. Options for customers to replace a PPM meter with a standard meter may also be limited – for example due to costs charged by suppliers for doing so.

## **Impact of regulation**

2.25. Specific policy interventions, and more generally how the market is regulated, can have an impact on the competitive landscape: a high degree of regulation in a market can constrain levels of competition, but in some cases regulation is needed to enable effective competition. There are a number of aspects we think the CMA should investigate.

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<sup>47</sup> FDS International, Vulnerable consumers research report, March 2011

<sup>48</sup> We are conducting further research in this area, and will keep CMA abreast of what we find.

<sup>49</sup> We are conducting further research in this area, and will keep CMA abreast of what we find.

### *Role of regulator*

2.26. As set out in appendix 2 Ofgem's role is wider than solely promoting competition – our principal objective is to protect the interests of existing and future consumers. Before performing regulatory functions with a view to promoting competition, Ofgem must always first consider the extent to which the interests of consumers would be protected by the promotion of competition and whether there are other ways which would better protect those interests.

### *Industry-led regulation*

2.27. Some changes to market rules are industry-led. Panels of nominated industry representatives discuss and develop proposed rule changes, before making recommendations to Ofgem. Some stakeholders have expressed concerns that membership of industry panels are dominated by the larger suppliers, and as such that decisions on industry codes do not adequately reflect the impact on small suppliers in terms of complexity and compliance costs. This could create a barrier to entry for smaller suppliers.

### *Regulatory costs*

2.28. All industry participants face the cost of monitoring changes in government policy, regulation and industry code developments. Development of Ofgem and Government policy involves intensive consultation with stakeholders through formal consultations and other publications, as well as stakeholder workshops and bilateral meetings. Market participants need to have sufficient resource and staff to engage with and influence policy development, and there is a cost associated with this, as well as complying with any changes in regulation. While this regulatory environment may be seen as 'a cost of doing business' applicable to all suppliers, the costs are more burdensome for new entrants and smaller suppliers who have smaller customer bases over which to spread these costs, and as such it has been described as a barrier to entry into the market.

### *Impact of specific policy interventions*

2.29. Specific policy interventions can distort competition. For example the Retail Market Review reforms, while aiming to improve competition, could stand in the way of innovation and that this package of new requirements on suppliers could make it more costly to participate in the market<sup>50</sup>. Also, how the costs of government's social and environmental schemes, such as ECO and WHD, are recovered from suppliers was said to distort competition. This is because obligations differ depending on the size of the supplier. For example, suppliers with fewer than 250,000 customer accounts are not obligated under these schemes<sup>51</sup>.

### **Micro-businesses**

2.30. We think it would be helpful if the CMA were to look further at competition in the micro-business sector, and particularly establish how competition is working for this sector compared to that for domestic customers. Research by the Federation of Small

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<sup>50</sup> For more detail on RMR see appendix 4.

<sup>51</sup> For ECO, the amount of supply to domestic customers in a relevant year also forms part of the threshold.

Businesses (FSB)<sup>52</sup> showed that over half of their members spend less than £3,000 per year on energy. Our research has shown that some micro-businesses face similar barriers to engaging in the market as domestic customers. But we also note that the lower level of regulation means that there are more suppliers active in this sector (former incumbents' volume market share for small businesses is around 90% for electricity and two thirds for gas<sup>53</sup>) and prices to these customers are generally lower than in the domestic sector.

2.31. Recently there have been calls from a number of organisations, for example the FSB, seeking further protections for micro-businesses compared to the status quo,<sup>54</sup> and public policy interest in relation to small businesses is generally high. Our proposals for micro-businesses were mentioned in the 2014 Budget and in July 2013, DECC and Number 10 convened the Small Business Energy Working Group. While this may offer micro-businesses a higher level of protection, it could also impact negatively on competition.

## Areas we do not think warrant specific investigation

2.32. While we have deliberately kept the scope of our reference wide, there are several parts of the energy market which we think do not warrant specific investigation:

- Networks
- Wholesale gas
- Gas storage
- Gas and electricity interconnector regimes
- Industrial and commercial (I&C) customers

2.33. These are discussed in more detail below.

### Networks

2.34. We do not consider that the monopoly network activities are having an impact on competition in the market for the supply and acquisition of electricity and gas and do not think that these activities should fall within the scope of the CMA's investigation.

2.35. For the most part consumers do not have a choice of network. As natural monopolies, there is no competitive pressure to bear down on prices, stimulate innovation or improve services for consumers. Ofgem therefore protects consumers by directly regulating network revenues as a surrogate to competitive pressures.

2.36. Network costs themselves are also unlikely to distort competition. The network companies set charges consistent with policies approved by us, and we look to ensure that how these charges are recovered support the competitive energy markets, and avoid undue discrimination. For these reasons we do not think that this area warrants specific investigation as part of an MIR.

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<sup>52</sup> <http://www.fsb.org.uk/policy/assets/fsb-2014-energy-survey-for-web.pdf>

<sup>53</sup> Cornwall Energy, Competition in British business energy supply market: An independent assessment for Energy UK, April 2014 <http://www.energy-uk.org.uk/publication/finish/5-research-and-reports/1099-cornwall-energy-competition-in-british-business-energy-supply-markets-report-april-2014.html>

<sup>54</sup> 'New FSB survey confirms the unfair energy market for small businesses', 22 May 2014 <http://www.fsb.org.uk/News.aspx?loc=pressroom&rec=8630>

2.37. We apply inventive regulation to the regulated monopolies. This involves:

- reviewing evidence to determine efficient revenues;
- setting a framework that encourages the network company to outperform these efficient revenues and penalises underperformance;
- holding the network company accountable for meeting its consumers' needs;
- making sure that consumers today and in the future share the costs of long-term investments through the regulatory asset value.

2.38. We apply this network regulation in broadly the same way to electricity and gas networks at transmission and distribution levels although there are subtle differences in detail, eg the use of comparative competition for evaluating the performance of the distribution companies.

2.39. We have an established track record in using and developing incentive regulation. Similar approaches have been adopted in other sectors and internationally including many EU countries, Australia and New Zealand. Furthermore, UK Network costs compare well with our European neighbours<sup>55</sup>.

## **Wholesale gas**

2.40. We see little in the wholesale gas market which suggests the CMA should focus its attention on this part of the sector. However, we note that concerns around the level of retail profits in this part of the sector are high and that British Gas, as the incumbent supplier, still holds a relatively high share of domestic gas customers. For this reason we note the CMA may want to look upstream in the course of its investigation. Highlights from our own market monitoring are set out below.

2.41. Our analysis suggests that the wholesale gas market is generally competitive. Concentration and market shares are low by international standards.<sup>56</sup> The potential negative effects of vertical integration appear to be largely absent.

2.42. The companies physically bringing gas into GB to sell in the wholesale market are generally large energy multi-nationals that have integrated upstream (production and wholesale) arms (eg Statoil, ExxonMobil, Total), but typically less integration into the retail sector than most of the large vertically integrated companies. Concentration in the physical upstream supply of gas is low with a HHI<sup>57</sup> of below 700. Flexible supplies (eg interconnectors and storage) also exhibit similarly low levels of concentration. Overall, GB's diverse supply mix appears to have helped foster a market with low levels of concentration at the upstream end, particularly when compared to other markets in Europe and even the USA.

2.43. The largest upstream player is Statoil, with a share of 16-18% of total supplies. This is consistent with their presence in Norwegian production and the fact that over a third of GB's supplies currently come from Norway. When compared to Gazprom's

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<sup>55</sup> Based on 2013 Datamonitor analysis

<sup>56</sup> ACER Market Monitoring Report 2012, AER State of the Energy Market Report 2013, EIA Form 176 database

<sup>57</sup> The Herfindahl-Hirschman Index (HHI) is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them. HHI ranges from 0 to 10,000. The lower the HHI, the more competitive the industry.

presence in much of Continental Europe, Statoil's position in the GB market seems relatively small.<sup>58</sup>

2.44. As for potential barriers to entry and expansion, the capital intensive nature of the upstream market means that there is little short-term direct disruption from new entrants. The credit requirements of trading in the wholesale market may pose a barrier to entry for new and small suppliers. However financial intermediaries can play a role in alleviating this constraint.

2.45. Levels of full vertical integration across the entire supply chain are low in the gas market (eg, compared to the electricity market). As such there is a low likelihood of market foreclosure (eg due to vertically integrated companies self-supplying). Most downstream suppliers must buy the majority of their gas from other companies in the wholesale market and most upstream producers/importers must sell the majority of their gas to other companies in the wholesale market. Almost no company is able to self-supply their consumers.

2.46. This has helped the traded market to enjoy significant levels of liquidity with churn ratios remaining between 15 and 30. Entry and exit has been more fluid in the traded segment than in the physical market, with a diverse range of participants, from suppliers and producers to banks and trading houses. This has led to very low levels of concentration in the traded market, with the largest market share rarely exceeding 8% and an HHI below 400.

## **Gas storage**

2.47. In GB there are currently seven gas and one LNG storage facilities. These have a total space of 4.6 bcm and deliverability of 154mcm/day<sup>59</sup>. Two further facilities are also currently under construction. Gas storage plays an important role in allowing shippers to meet fluctuations in gas demand levels and respond to movements in gas prices.

2.48. Importantly though, storage is not alone in providing this kind of flexibility. Storage competes with other flexible gas sources, such as gas from interconnectors and LNG terminals. The combination of these different sources is what we consider to be an overall flexibility market that can be viewed as a subset of the wholesale gas market. Because demand is volatile and unpredictable, there are situations where only flexible supplies are capable of clearing the market. This means that the holder(s) of flexible supplies could have market power in the event that there was a sudden spike in demand which only flexible supplies were able to meet. Concerns may therefore arise if one company held a large share of flexible capacity (including storage).

2.49. Our analysis shows that concentration in the market for gas flexibility is low. A HHI of around 700 largely reflects concentration levels seen in the overall supply market. Even when looking solely at storage, concentration levels remain below 1300 for deliverability and 1050 for space. We also expect the two facilities currently under construction to further reduce concentration when they come online.

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<sup>58</sup> See for example Gazprom's ~37% share of supply in Germany and ~60% share in Austria (Source: Eurogas). GB's upstream concentration also compares favourably with the vast majority of US states as well.

<sup>59</sup> National Grid Ten Year Statement 2013

2.50. Moreover, the regulatory framework for storage is explicitly designed to promote competition and access for new entrants. European legislation obliges owners and operators of gas storage to provide non-discriminatory access to their facilities to third parties. Storage facilities can request an exemption from third party access (TPA) requirements. Ofgem considers TPA exemption applications on a case-by-case basis and looks at whether a facility is technically or economically necessary, ie whether the exemption would adversely affect competition in the gas market. This assessment entails looking at various indicators of market power, as well as the likely effect of the exemption on market signals and the economic use of storage capacity. Ofgem also retains the power to review and revoke exemptions, for example if it was thought that an exempt facility became economically or technically necessary.

2.51. Currently there are two gas storage facilities that do not have exemptions and must therefore provide TPA capacity: Rough and Hornsea. Rough is the largest storage facility in GB and is owned by Centrica. When Centrica acquired Rough in 2002, the CC considered that competition in the markets for flexible gas and domestic gas supply would be weakened without interventions. In order to remedy the identified adverse effects of the merger, the CC requested a number of behavioural undertakings from Centrica, which remain in place today.

### **Gas and electricity interconnector regimes**

2.52. The capacity and nature of flow of gas and electricity interconnectors will be important information for the CMA to take into account as part of its CMA's investigation. However, we recommend that the CMA does not include the current gas and electricity interconnection regulatory regime as part of its investigation for three main reasons.

2.53. Firstly, flows across and access to gas and electricity interconnector capacity will be subject to the common European market and technical rules made under the Third Energy Package specifically aimed at improving competition.<sup>60</sup> This new legal framework was in response to the European Commission's 2007 inquiry into competition in gas and electricity markets that found insufficient cross-border transmission capacity and different market designs were hampering market integration.<sup>61</sup> More detail on the Third Package and network codes are set out in appendix 5.

2.54. Secondly, our analysis of gas interconnector flows and price data and have not found any significant evidence to point to competition concerns.<sup>62</sup>

2.55. Thirdly, interconnectors are one element of the flexibility market, making it more difficult for market power to be exercised. For example, gas from interconnectors is a substitute with gas from storage in particular and sources in the flexibility market. On the electricity side, interconnectors flows are substitutes primarily with flexible generation and demand side response.

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<sup>60</sup> The Third Energy Package consists of two Directives and three Regulations: Directive 2009/72/EC and 2009/73/EC concern the common rules for the internal market in electricity and gas respectively; Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity (governing ENTSO-E); Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks (governing ENTSG); Regulation (EC) No 713/2009 establishing an Agency for the Cooperation of Energy Regulators (ACER).

<sup>61</sup> [http://ec.europa.eu/energy/gas\\_electricity/legislation/third\\_legislative\\_package\\_en.htm](http://ec.europa.eu/energy/gas_electricity/legislation/third_legislative_package_en.htm)

<sup>62</sup> <http://ec.europa.eu/competition/sectors/energy/inquiry/index.html>

<sup>62</sup> Analysis can be found at: <https://www.ofgem.gov.uk/publications-and-updates/further-analysis-and-next-steps-review-gas-interconnectors-between-great-britain-and-belgian-and-dutch-markets>

## **I&C customers**

2.56. We have little evidence of significant issues for large business consumers, which is why they were not included in the terms of reference of the market investigation reference.

2.57. Although there is no single definition, I&C electricity customers will typically have one or more half-hourly electricity meters and multiple sites.<sup>63</sup> Contracts and prices are bespoke and there are a range of products available. These can vary from fully fixed price contracts to more flexible contracts where forecast volume can be purchased from the wholesale market and distribution, transmission and environmental charges are fully passed through to the customer. Many large businesses have their own staff for energy procurement or use third party intermediaries to manage their energy contract.

2.58. The supply market for large business consumers is less concentrated than for domestic and small business consumers. Incumbent suppliers face competition from large multinationals such as GDF Suez, DONG energy, ENI, Total Gas and Power, Statoil and Gazprom. Smaller players like Haven Power and Smartest Energy (electricity) and Corona Energy (gas) have also made inroads into the retail market. As of Dec 2013, 39 per cent of half-hourly metered electricity by volume and 92 per cent of daily-metered gas by volume was supplied by non-incumbents of daily-metered gas volume was supplied by non-incumbents.<sup>64</sup>

2.59. Our 2013 quantitative survey showed the majority of large business respondents<sup>65</sup> were satisfied with the overall service (84 per cent) and value for money (75 per cent) of their current supplier. Only 19 per cent of large businesses said they had never switched, compared to 41 per cent of micro-businesses, and a fifth of large businesses (19 per cent) reported switching supplier in the previous twelve months. Medium and large businesses were more than twice as likely as micro and small businesses to have contacted more than four alternative suppliers when they last switched. Larger businesses are also far more likely to review their energy contract and consumption on a regular basis. Nearly a third (32 per cent) of large businesses reviewed their energy costs every month, falling to one in eight (12 per cent) for micro-businesses.

2.60. Given these attributes, our regulatory interventions have focussed on smaller businesses and domestic customers.

## **Ofgem work to improve competition**

2.61. Ofgem has undertaken a number of investigations and reforms to address the problems identified with competition. These are summarised below.

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<sup>63</sup> On the gas side I&C customers are likely to be 'daily metered' or amongst the largest 'non daily metered' customers

<sup>64</sup> Based on Datamonitor analysis from December 2013

<sup>65</sup> A large business was defined as a company with more than 250 employees. There were 200 large businesses in the total sample of 1300. Half (49%) of these estimated spending more than £100,000 on electricity or gas in the last year.

## Energy Supply Probe<sup>66</sup>

2.62. The Energy Supply Probe ('the Probe') was an investigation into the functioning of the retail gas and electricity markets. It was launched in 2008 and resulted in a package of measures with the aim of making competition work more effectively for the benefit of consumers.

2.63. The Probe found that the fundamental structures of a competitive market were in place. However, the investigation did identify a range of features in the market that weakened competition and meant that the market was not working in the best interests of consumers. These included structural features, reinforced by the behaviour of suppliers, and the lack of engagement and poor decision making by consumers, and also that suppliers were able to charge higher prices to certain groups of consumers including those in their former monopoly areas, pre-payment meter consumers and electricity only consumers.

2.64. The resulting package of policy remedies had two parts. The first part aimed to promote competition and consumer engagement by obliging suppliers: to improve the information they provide to consumers; to help vulnerable and indebted consumers who are currently blocked from changing suppliers due to outstanding debts; to improve the conduct of sales and marketing activities; and to help small business consumers by providing them with better information regarding the terms and conditions of their contracts.<sup>67</sup>

2.65. Given that these remedies were likely to take time to have an effect, the second part of the package aimed to limit the impact on vulnerable consumers of unjustified price differentials. We introduced a rule which prohibited domestic suppliers from discriminating between different groups of consumers in the main terms and conditions for supply without objective justification (the Undue Discrimination Licence Condition)<sup>68</sup>. The main aim of this rule was to prevent suppliers from charging higher prices for their incumbent customers, compared to their non-incumbent customers. The rule incorporated a three year sunset clause as the intention was to provide a temporary period of protection to consumers before the Probe remedies had time to take effect. This licence condition was allowed to lapse following consultation and in the light of RMR remedies to simplify tariffs, which were expected to limit the scope for price discrimination.

2.66. We also introduced a separate enduring rule requiring domestic energy suppliers to ensure that any difference in the terms and conditions (including prices) for different payment methods are cost reflective<sup>69</sup>. This rule was introduced to better reflect the provisions of the EU gas and electricity directives<sup>70</sup> which relate to payment methods<sup>71</sup>.

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<sup>66</sup> Energy Supply Probe documents: <https://www.ofgem.gov.uk/retail-market-review/background-energy-supply-probe>

<sup>67</sup> Reference

<sup>68</sup> SLC25A ref

<sup>69</sup> SLC 27.2A ref

<sup>70</sup> Directives 2003/55/EC (gas) and 2003/54/EC (electricity) which were superseded by directives 2009/73/EC (gas) and 2009/72/EC (electricity).

<sup>71</sup> The relevant EU provisions are that household customers: "are offered a wide choice of payment methods, which do not unduly discriminate between customers. Prepayment systems shall be fair and adequately reflect likely consumption. Any difference in terms and conditions shall reflect the costs to the supplier of the different payment systems..." (paragraph 1(d) to Annex 1 to Directive 2009/73/EC and Directive 2009/72/EC).

We issued guidance on both rules<sup>72</sup> which was designed to limit the impact of the rules on competition, e.g. by clarifying that the rules would be subject to a materiality threshold and were not intended to prevent product innovation.

### **(Electricity) Liquidity<sup>73</sup>**

2.67. We have been concerned for several years that low levels of electricity wholesale liquidity act as a barrier to entry and expansion for non-vertically integrated suppliers and generators. This particularly applies to longer-dated and peak products. A lack of availability of longer-term contracts may also inhibit the ability of independent generators to secure finance for new investment, or raise their cost of capital.

2.68. The rationale for intervention in this area is based on the fact that the electricity market has been locked in a 'low-liquidity equilibrium' and is therefore unlikely to resolve these problems by itself. We allowed time for industry-led initiatives to emerge, but progress was insufficient to meet our liquidity objectives.

2.69. On 31 March 2014, the 'Secure and Promote' (S&P) licence condition was introduced. S&P is a package of three measures designed to address the concerns above. The Supplier Market Access rules address the specific difficulties faced by independent suppliers, while the market making obligation requires large firms to post prices at which they will buy and sell forward electricity products. These elements are supported by a reporting obligation, which also covers firms' trading on day-ahead auctions.

2.70. We will continue to monitor the impact of our reforms. S&P licensees will provide us with quarterly reports on their activities, and we will continue to monitor our range of liquidity metrics. We will also look for opportunities to seek qualitative feedback from market participants.

### **Retail Market Review<sup>74</sup>**

2.71. The RMR reviewed suppliers' progress in implementing the Probe reforms and considered whether further actions were necessary to address any remaining issues. It found that while there had been improvements in certain areas since the Probe, many of the problems with consumer engagement remained and there was evidence of persistent consumer harm.

2.72. We concluded that further action was needed to make the retail market work more effectively in the interests of consumers and introduced additional measures to the domestic and non-domestic markets. For example, we introduced binding standards of conduct, limits on and standardisation of tariff structures, and increased clarity on end dates for fixed term contracts. These (and other) remedies sought to promote consumer engagement and improve competition by making the market simpler, clearer and fairer for consumers and businesses. We think that these measures will help to "reset" the market in terms of addressing consumer mistrust and promoting engagement. We see these as important to ensure that consumers reap the full benefits of smart meter rollout.

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<sup>72</sup> "Guidelines on Cost Reflectivity and Undue Discrimination" (Ref: 102/09). (The Guidelines)

<sup>73</sup> <https://www.ofgem.gov.uk/electricity/wholesale-market/liquidity>

<sup>74</sup> <https://www.ofgem.gov.uk/gas/retail-market/market-review-and-reform/retail-market-review>

2.73. The implementation of our RMR reforms was staggered, starting from August 2013 until June 2014 (with all reforms now in place). We recognise that they will have a significant impact on the market. We will be closely monitoring their impact on consumer engagement, and assessing what impact this has on the broader market. In January 2014 we set out how we intend to monitor and evaluate the impact of these new rules on the domestic retail market<sup>75</sup>. We intend to conduct a full review by 2017, however, we will provide interim reports on the progress of the measures as part of our annual assessments from 2015 onwards.

## **Transparency**

2.74. In 2009, following the Probe, Ofgem introduced a licence condition requiring the six largest energy companies to publish an annual report setting out financial information relating, separately, to licensed supply and generation activities.

2.75. We also publish a Supply Market Indicator (SMI), which provides a forward-looking view of a representative supplier's costs and revenues.

2.76. As a result, the GB energy market is among the most transparent in Europe. Nonetheless, significant further steps are being taken to improve the robustness, usefulness and accessibility of these reports. For example, we have asked the companies to commission external auditors to scrutinise the Consolidated Segmental Statements (CSSs) and will require a full audit from the 2014 CSS onwards, and we have also asked the companies to provide more insight into trading activities and results. In addition, we will carry out in-depth review of the companies' transfer pricing policies.<sup>76</sup>

## **Third Party Intermediaries**

2.77. The operation of third party intermediaries (TPIs) is a key priority in Ofgem's policy development initiatives. There is a programme of work looking into TPIs in the domestic and non-domestic market, aimed at improving customer confidence in, and access to, TPIs.

2.78. Third Party Intermediaries (TPIs) include price comparison websites, energy brokers and energy efficiency advice providers who interact with energy consumers. TPIs can offer advice and products to assist with a range of functions including energy procurement, efficiency and management.

2.79. TPIs that operate within the energy market do so under a wide range of business models and serve a range of consumers from household consumers to large business consumers. TPIs are not subject to direct sectoral regulation in the same way as energy suppliers by Ofgem. They are subject to regulation under general consumer protection rules, and in some cases have signed up to voluntary agreements governing their business practices and interactions with consumers.<sup>77</sup>

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<sup>75</sup> Domestic Retail Market Review Evaluation – a proposed way forward”:

<https://www.ofgem.gov.uk/ofgem-publications/85836/retailmarketreviewmonitoringandevaluatingtheimpactofthenewrules.pdf>

<sup>76</sup> Actions to improve the transparency of energy company profits, 26 February 2014

<sup>77</sup> Ofgem oversees one of these, the Confidence Code, which is discussed in more detail under 'Domestic Market'.

2.80. Over time TPI services within Great Britain's gas and electricity retail markets have increased. Given market developments, including the Retail Market Review and smart metering we expect the TPI market to evolve and proliferate. We are mindful of the potential benefits and risks this poses, and are currently progressing a number of projects that consider improvements in TPIs' services that will enhance consumer experience of engaging with TPIs.

2.81. Our TPI Programme is considering the enduring long term regulatory framework for TPIs as well as bespoke regulatory measures to address specific segments of the energy retail markets covering household and business consumers.

#### *Domestic Market*

2.82. A key part of our domestic TPI work is the Confidence Code, a voluntary code of practice that governs independent energy price comparison sites. Ofgem assumed responsibility for the management of the Code from Consumer Focus in March 2013. The Confidence Code ensures that its members follow key principles for how they must operate their service. Using an accredited site means consumers can be confident that the information they receive is independent, transparent and accurate. We are currently in the process of reviewing the Code to ensure that the protections it offers consumers are robust and comprehensive, and in keeping with the spirit of our RMR remedies. We will be consulting on changes to the Code over the course of this summer, with a view to implementing changes thereafter.

2.83. We will also use our Code review consultation to seek stakeholder views on a set of broader issues relating to the role of TPIs in the domestic energy market. We also intend to conduct further research into consumers' experience engaging with different types of TPIs.

2.84. Within our TPI programme we are looking at developing an interim regulatory measure for collective switching, which is becoming an important part of energy markets. Collective switching involves consumers grouping together to secure a deal for their energy supply. This is typically developed by an organiser (eg a local authority) and run by an expert service provider, which negotiates with multiple suppliers.

2.85. In February this year, we published a consultation on proposals for interim regulatory measures to build consumer trust, promote transparency and create positive opportunities for consumers engaging in collective switching in the domestic market.<sup>78</sup>

#### *Non-Domestic Market*

2.86. TPIs play a very important role in non-domestic market. According to some estimates nearly 60 percent of the market uses TPIs to engage with the market. It is estimated that there are nearly a thousand plus operating under a variety of business models in the non-domestic market. These include but are not limited to brokers, aggregators, price comparison websites and consultants. TPIs are not subject to sector specific regulation and currently Ofgem does not licence them.

2.87. Since November 2013, we have been able to take direct action against 'rogue' brokers that mis-sell energy products or services to businesses. These powers stem from the Business Protection from Misleading Marketing Regulations 2008 (BPMMR) and

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<sup>78</sup> <https://www.ofgem.gov.uk/publications-and-updates/collective-switching>

enable us to accept undertakings from companies, or seek injunctions from the court, in order to secure compliance with the rules.

2.88. Given the important role that TPIs play in access to market and market engagement, we are developing an appropriate regulatory framework for TPIs. We recently consulted on proposals to put in place a code of practice for non-domestic TPIs, underpinned with licence obligations on suppliers to only work with TPIs that are signed up to this code of practice<sup>79 80</sup>.

### **Measures to improve engagement of vulnerable consumers**

2.89. We are working to ensure that vulnerable consumers are well-protected and get support to help them engage in the market, including developing the Priority Services Register regime and enabling the provision of more face-to-face advice.

2.90. As part of our RMR reform proposals, we developed the 'Market Cheapest Deal' concept which looks at how best to support engagement of the most vulnerable and sticky customers. The initial proposal involved suppliers communicating cheapest deal available in the market to consumers who may be least able or likely to engage. However, following further discussion with industry and consumer groups we have decided to refocus this work on facilitating the provision of face to face advice to these customers, recognising that they need additional support and confidence building to engage.

### **Smarter Markets Programme**

2.91. The Smarter Markets Programme<sup>81</sup> aims to proactively identify, and see implemented, market changes to enable the development of smarter energy markets, that are more efficient, dynamic and competitive, delivering better outcomes for consumers.

#### *Change of supplier process*

2.92. In June 2014, we published proposals to make the switching process more reliable and put next-day switching in place by the end of 2018 at the latest.<sup>82</sup> This will be made possible by replacement of the IT systems used in the switching process, which were originally developed in the 1990s. In the first instance, the time it takes to switch supplier will be reduced to three days (after the statutory two-week cooling-off period) by the end of 2014.

2.93. We are also reviewing if suppliers should continue to be able to block customer switches, in certain circumstances. We aim to complete this assessment by Q1 2016.

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<sup>79</sup> Ofgem, Proposals for regulating non-domestic Third Party Intermediaries (TPIs), February 2014, <https://www.ofgem.gov.uk/publications-and-updates/third-party-intermediaries-tpi-proposals-regulating-non-domestic-tpis>

<sup>80</sup> Ofgem, Draft Code of Practice for non-domestic TPIs, <https://www.ofgem.gov.uk/ofgem-publications/86079/nondomesticcodefinal.pdf>

<sup>81</sup> Promoting smarter energy markets: a work programme at: <http://www.ofgem.gov.uk/Markets/sm/strategy/Documents1/Promoting%20smarter%20energy%20markets%20-%20a%20work%20programme.pdf>

<sup>82</sup> <https://www.ofgem.gov.uk/publications-and-updates/moving-reliable-next-day-switching>

### *Electricity settlement*

2.94. The settlement process places incentives on suppliers to buy energy from generators to cover what their customers' consume in each half hour of the day. At present, half-hourly consumption for the majority of consumers is estimated. Ofgem is progressing a project to examine how consumers could be settled using their actual half-hourly consumption data from smart meters.

2.95. We believe that it is in consumers' interests to be settled on half-hourly data once this available through the installation of smart meters. Settling consumers using actual data will sharpen the incentives on suppliers to offer time of use tariffs to consumers by exposing them to the true costs of the timing of the energy consumption of their customers. We expect it will drive an increase in demand-side response helping to make a more dynamic and efficient market.

2.96. To this end, we are progressing a project to examine options for settling consumers using their actual half-hourly consumption data from smart meters. This would support competition encouraging innovation in products and services that support DSR, and by reducing risks arising from estimation for new entrants.

### *Demand-side response (DSR)*

2.97. We are taking forward work to enable the development of a market that supports the efficient, system-wide use of DSR<sup>83</sup>. Our priority in this area is a project to formalise how the different parties with interests in DSR, such as network, suppliers, the system operator and consumers, would interact.

### *Consumer empowerment and protection*

2.98. We are seeking to implement regulatory arrangements that protect and empower consumers so that they can participate effectively in smarter retail energy markets, recognising the opportunities and risks involved.

### **Small suppliers and new business models**

2.99. As mentioned above, we are already seeing the emergence of some alternative business models supported by improvements in information technology and the investment by consumers in small scale renewable generation. We are engaging with small suppliers and those with new business models so we can address their issues and help them engage in the regulatory process.

2.100. One of the ways in which we are supporting the development of alternative business models is by introducing, in 2009, an option informally known as 'Licence Lite'. This enables Ofgem to issue a direction relieving a new licensed supplier of the obligation to be a direct party to certain industry codes, provided that commercial arrangements are in place for another fully licensed supplier to discharge code compliance in these areas on their behalf.

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<sup>83</sup> Electricity demand-side response (DSR) refers to actions taken by consumers to change the amount of electricity they take off the grid at particular times in response to a signal. See also <https://www.ofgem.gov.uk/electricity/retail-market/market-review-and-reform/smarter-markets-programme/demand-side-response>

2.101. This option was designed to reduce financial and technical barriers for distributed energy generators seeking to enter the supply market, with the licence conditions selected accordingly. It is distinct from a White Label arrangement in that the 'Licence Lite' supplier, unlike a White Label, is for complying with all of the responsibilities and obligations set out in the supply licence, with the exception of compliance with the industry codes<sup>84</sup>.

2.102. There are currently no operational 'Licence Lite' suppliers, but the Greater London Authority is working towards an application. Their progress and other industry developments have led to expressions of interest from other parties, including both existing and prospective participants in the energy industry, but it is as yet unclear how far this model could go in supporting new entrants in the retail market.

2.103. We intend to consult on revisions to the 'Licence Lite' guidance later in 2014.

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<sup>84</sup> White labels are unlicensed companies that have a contractual agreement with a licensed supplier to sell gas and/or electricity to consumers using the white label's brand.

## Appendices - Index

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<b>Appendix</b>	<b>Name of Appendix</b>	<b>Page Number</b>
1	Energy market background	35
2	Statutory and regulatory framework	39
3	How Prices are set	43
4	Expected changes to the gas and electricity sectors	50
5	Domestic consumers	57
6	Non-domestic consumers	61
7	Bibliography	69

# Appendix 1 – Energy Sector Background

1.1. The purpose of this appendix is to provide further information on terms and policies discussed in the previous chapters. It is not intended to provide a comprehensive guide to the Energy Sector.

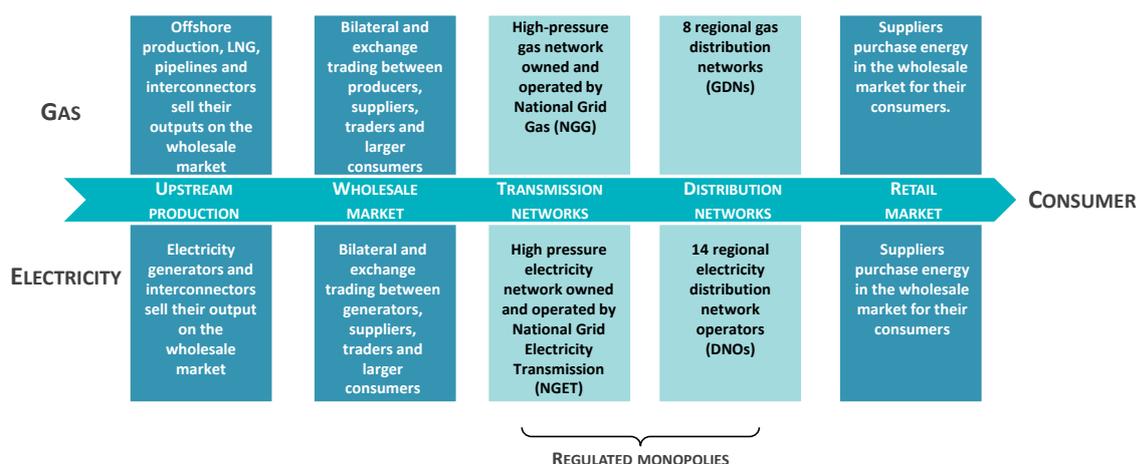
1.2. This section sets out:

- An overview of the energy supply chain
- Historical context
- Changes to market structure
- How prices are set in the wholesale market

## The energy supply chain

1.3. The retail market comprises gas and electricity suppliers who buy energy from the wholesale market (or directly from producers) and arrange for it to be delivered to the end consumer. They set the total prices that consumers pay for the energy they use. They bill consumers and manage all aspects of retail customer service.

Figure 1 - The main elements of the energy supply chain



1.4. Electricity is produced by generators who can use a range of energy sources from renewables such as wind power, through to fossil fuels and nuclear which all have different characteristics. Most generators sell most of their electricity to suppliers in the wholesale market, but they can receive revenue from a number of other sources such as the provision of technical services to the System Operator. Renewables generators above 50kW in the UK can also receive revenue through the Renewables Obligation (RO).<sup>85 86</sup> Electricity can also be imported or exported through interconnectors.

<sup>85</sup> For a full discussion of the UK generation market, see: Cornwall Energy, An introduction to the GB generation market, <http://www.cornwallenergy.com/cms/data/files/Downloads/An-introduction-to-the-GB-generation-market.pdf>

<sup>86</sup> Government’s Electricity Market Reform (EMR) will introduce a number of additional revenue streams through the Capacity Market and Feed in Tariff Contracts for Difference.

1.5. Gas comes from offshore production facilities on the UK Continental Shelf (UKCS) and Norway and is also delivered through interconnectors from the Netherlands and Belgium or liquefied natural gas (LNG) terminals. Gas can also be delivered into or from storage sites which are used to help manage winter peaks. Gas shippers are responsible for buying gas from producers, selling it to suppliers and arranging to have the gas transported to consumers. Gas suppliers supply gas to the end consumer. Often the shipping and supply function are combined.

1.6. Supply and demand for electricity must be matched, or balanced, at all times. National Grid Electricity Transmission plc as System Operator has overall responsibility for ensuring that electricity supply and demand match on a second-by-second basis. They have a range of balancing actions open to them including bringing on additional generation or, in extremis, curtailing demand. Similar arrangements apply in gas where National Grid Gas plc is the System Operator. It has responsibility for ensuring that gas supply matches gas demand on a daily basis.

1.7. Alongside the companies in the generation and supply markets, there are businesses responsible for transporting the gas and electricity from where it is produced or imported to where it is needed. These transmission and distribution network businesses are natural monopolies, and are regulated through price controls where Ofgem sets the revenue that they can recover from users. Alongside the two transmission system operators in gas and electricity, there are eight regional gas distribution networks (GDNs) and fourteen regional electricity distribution networks (DNOs).

## Historical context

### Electricity

1.8. Before privatisation, the Central Electricity Generating Board (CEGB) owned and operated the electricity transmission system and the generating stations in England and Wales. It was responsible for the bulk supply of electricity to the twelve area boards in England and Wales, and its duties included planning the provision of new generation and transmission capacity. In Scotland, there were two vertically integrated boards that exercised regional monopolies, but co-operated closely in the use of their generating plant to ensure that demand was met at least cost.

1.9. The Electricity Act 1989 laid the legislative foundations for the restructuring and privatisation of the electricity industry in GB. The act made provision for a change in ownership from the state to private investors. In 1990 the CEGB was split into three generating companies (National Power, Powergen and Nuclear Electric) and a transmission company (National Grid Company). The twelve area boards were replaced with twelve regional electricity companies (RECs).

1.10. In addition to the restructuring, OFFER (Office of Electricity Regulation) was established as the independent regulator and the Pool was set up as the wholesale market mechanism in England and Wales. All generators offered their output into the Pool and the National Grid Company used an algorithm at the day-ahead stage to dispatch plant based on the least-cost outcome for each day. There was a single electricity price for each half-hour (the 'System Marginal Price'), which all generators received and all suppliers paid. In addition to this, there were also capacity payments paid to generators for availability.

1.11. Following the Review of the Electricity Trading Arrangements, which led to concerns about competition and price-setting in the Pool,<sup>87</sup> the New Electricity Trading Arrangements (NETA) were introduced in 2001. The central theme underpinning NETA was that the trading arrangements for electricity should be more similar to other commodity markets. Participants would be more active in buying and selling electricity in the forward markets, and would be responsible for dispatching plant to meet contractual agreements. Market participants were not obliged to balance their contractual and physical positions but would be incentivised to do so with cost-reflective imbalance prices, or 'cash-out' prices. New governance arrangements were also introduced, replacing the Pooling and Settlement Agreement with the Balancing and Settlement Code, increasing the ability for industry to propose changes, and allowing a greater variety of participant types to be represented. The NETA design was extended to incorporate Scotland in 2005 and became known as the British Electricity Trading and Transmission Arrangements (BETTA).

## **Gas**

1.12. Before the gas sector was privatised, the British Gas Corporation had monopoly rights over the sale of gas to the twelve Area Boards. The Gas Act 1986 made provisions for privatising the British Gas Corporation, but unlike electricity did not make provisions for restructuring of the gas industry and British Gas was sold as a vertically integrated industry. OFGAS (Office of Gas Supply) was established as gas regulator.

1.13. As a result, the introduction of competition into the gas market was slower and more evolutionary. Following privatisation there were two Monopolies and Merger Commission Inquiries and an OFT inquiry.

1.14. The Gas Act 1995 amended the Gas Act 1986, making provision for the separate licensing of gas suppliers, gas shippers and gas transporters. Importantly this prohibited gas transporters holding gas shipping or supply licences thereby ensuring access to networks on a fair basis and further opening up the gas industry to competition. This led to the separation of British Gas (as transporter, storage operator and upstream exploration and production) and British Gas Trading (Supplier and Shipper).

### *Retail competition*

1.15. Retail competition was introduced in tranches: the largest non-domestic consumers first (in 1986 in gas and 1990 in electricity); then smaller non-domestic consumers (in 1992 in gas and 1992 in electricity), and then domestic consumers (between 1996 and 1998 for gas and electricity).

1.16. Before domestic markets were opened to competition, Ofgas set price controls that fixed the maximum price that the monopoly suppliers could charge domestic customers. These price controls remained in place when the markets were first liberalised. They were removed in stages between 2000 and 2002.

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<sup>87</sup> In particular, the existence of a single price may have allowed the generators at the margin, typically National Power and PowerGen, to have undue influence on Pool prices.

## Changes in market structure

1.17. At the start of 1998, when competition was introduced in the domestic electricity market, thirteen of the original fourteen monopoly electricity suppliers, and British Gas, remained. This fell to six energy suppliers through horizontal mergers in the subsequent five years. From 2004 onwards, retail market share of these six suppliers has remained relatively stable between 10 and 25 per cent each (see figures 3 and 4 in the State of the Market Assessment for market shares over time).

1.18. Since 2000, generation capacity ownership by these six suppliers has increased from around 36 per cent to around 70 per cent in 2013. This has mainly been driven by acquisitions. In particular, there was a spate of takeovers of independent generators following the collapse and insolvency of AES, Enron, Independent Energy and TXU Europe in 2001 and 2002 when substantial volumes of merchant generation capacity either exited the industry or were taken over by vertically integrated companies. In 2009, EDF also acquired British Energy.

1.19. Despite high levels of entry (see figure 38 in the State of the Market Assessment), new suppliers have collectively remained below one per cent market share for most of the past decade.

1.20. The recent growth of smaller suppliers is an encouraging development. Their combined market share now makes up more than six per cent of the market in domestic gas and electricity (that represents about a three per cent increase in gas and 3.8 per cent increase in electricity over a one year period).<sup>88</sup> However, no smaller supplier has gained more than a two per cent market share in the domestic market. Retail supply entry and the expansion of smaller suppliers have not significantly disrupted the market structure or conduct of incumbent retail suppliers. Even if current trends continue, this position is unlikely to change in the short to medium term.

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<sup>88</sup> Ofgem, Decision to make a market investigation reference in respect of the supply and acquisition of energy in Great Britain, pg. 10, <https://www.ofgem.gov.uk/ofgem-publications/88435/stateofthemarket-decisiondocumentinofgemtemplate.pdf>

# Appendix 2 - The statutory and regulatory framework

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## The role of Ofgem

1.21. Ofgem is the regulator of Great Britain's gas and electricity markets. Its powers, duties and objectives come from GB statutes and relevant EU legislation.

1.22. Ofgem was established in 2000 as a non-ministerial Department after the merger of the Office of Electricity Regulation (OFFER) and Office of Gas Supply (OFGAS). Ofgem operates under the direction and governance of the Gas and Electricity Markets Authority ('the Authority'). The Authority is responsible for the economic regulation of the electricity and gas industries in Great Britain.

1.23. Ofgem's principal objective is to protect the interests of existing and future energy consumers. These interests are taken as a whole and include the reduction of greenhouse gases, the security of the supply of gas and electricity to consumers, and Ofgem's fulfilment of the objectives for regulatory authorities as set out in the EU Third Package's Gas and Electricity Directives (these objectives include the promotion of competition, helping to ensure consumer protection and contributing to the protection of vulnerable consumers).

1.24. When exercising regulatory functions, Ofgem is generally required to act in the manner it considers will best further the principal objective, by promoting effective competition in the activities it regulates wherever appropriate. However, before performing regulatory functions with a view to promoting competition, Ofgem must always first consider the extent to which the interests of consumers would be protected by the promotion of competition and whether there are other ways which would better protect those interests. The explicit obligation on Ofgem to consider mechanisms other than promoting competition<sup>89</sup> was introduced by the **Energy Act 2010**. This was to recognise that:

- competitive solutions may take time to deliver; and that
- the market may create barriers for some groups of consumers, which means that competition is not the most effective means of protecting their interests.

## Ofgem's statutory duties and powers

1.25. Ofgem is responsible for meeting the statutory duties and exercising the powers conferred on the Authority through various pieces of legislation, including the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002, the Energy Acts of 2004, 2008, 2010 and 2013, and relevant European Union legislation.

1.26. The main statutory powers that Ofgem has to support its duties are to:

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<sup>89</sup> Other measures could include strengthened licence conditions and enforcement actions, or other means that would prevent certain types of market behaviour.

- issue, modify, enforce and revoke licences. All energy generation, transmission, distribution and supply companies in Great Britain are regulated through these licences<sup>90</sup>;
- set price controls over the prices charged by monopoly network operators;
- carry out investigations under the Competition Act 1998 into companies suspected of engaging in anti-competitive behaviour;
- take action following breaches of legislation in respect of the gas and electricity sectors in GB; and
- make market investigation references to the CMA pursuant to Part 4 of the Enterprise Act 2002.

1.27. The Authority also has powers under consumer protection legislation, namely under the Unfair Terms in Consumer Contract Regulations 1999 and those pieces of legislation for which the Authority has been designated as an enforcement authority under Part 8 of the Enterprise Act 2002.

1.28. In addition to the duties listed above, Ofgem also administers a number of environmental programmes on behalf of government.<sup>91</sup>

## Regulatory framework

1.29. This section provides an overview of the legal framework which governs the regulation of gas and electricity markets. There are various pieces of primary legislation which set out the duties and role of the Authority and the powers the Authority has at its disposal to carry out its functions.

1.30. **The Gas Act 1986 and the Electricity Act 1989** substantively set out the statutory framework for the regulation of gas and electricity activities undertaken in GB and the regulatory role of the Authority.

1.31. **The Utilities Act 2000** established a single Gas and Electricity Markets Authority, and made new consumer provisions, reformed gas and electricity regulation, set out wider social and environmental objectives, and established new regulatory institutions and procedures.

1.32. **The Energy Act 2004** introduced a special administration regime to ensure uninterrupted supply in the event of insolvency of a supplier, as well as an appeals mechanism to the Competition commission against Authority decisions on code modifications. **The Energy Act 2008** allowed for the modification of distribution and supply licences to facilitate the roll-out of smart meters, the **Energy Act 2010** modified the Authority's principal objective (as discussed above), and the **Energy Act 2011** included provisions related to security of energy supplies.

1.33. The **Energy Act 2013** provided the legal framework for Electricity Market Reform (EMR) which government intends to encourage low carbon generation and to ensure security of electricity supply.

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<sup>90</sup> This is not an exhaustive list of the activities requiring a licence. These are set out in the Gas Act 1986 and the Electricity Act 1989.

<sup>91</sup> This includes schemes such as the Renewable Heat Incentive (RHI), Energy Companies Obligation (ECO), Warm Home Discount, Renewables Obligation (RO), and Feed-in Tariffs (FIT).

## The European Context

1.34. Some regulations that apply to the electricity and gas markets apply at the level of the European Union. The 'Third Package', which came into effect in 2009, is aimed at promoting liberalised and competitive energy markets across Europe. To achieve this aim, the Third Package outlined:

- the independent regulatory role for National Regulatory Authorities (NRAs) <sup>92</sup>;
- the unbundling of Transmission System Operators (TSOs) from generation, production and supply interests; and
- a framework to support a single, European Energy Market through the development of European-wide Network Codes.

1.35. The Third Package is implemented in GB through the **Electricity and Gas (Internal Markets) Regulations 2011**, a piece of secondary legislation that makes amendments to electricity and gas legislation and licences.

1.36. As Ofgem is designated as the NRA for GB under the Third Package it is responsible for enforcement of the **Regulation on Wholesale Energy Market Integrity and Transparency** ("REMIT") in GB. The aim of REMIT is to prevent market manipulation and insider trading which distort wholesale energy prices. It is seen as a counterpart to legislation covering financial services more generally, from which wholesale energy products are excluded.

## Licences and codes

1.37. It is a requirement to hold a licence to engage in certain activities, including electricity generation, gas shipping and gas and electricity supply (but not energy trading). Licences contain a number of conditions whose exact nature and extent will vary between licences. Additionally, subject to certain exemptions, it is a criminal offence to carry on a licensable activity without a valid licence.

1.38. Sitting underneath the licences are a number of highly detailed industry codes that define the terms under which industry participants can access the electricity and gas networks. Market participants must sign up to these in order to operate in the market.

1.39. The industry codes are 'live' documents, meaning that they can be changed. Governance of industry codes is industry-led. Modifications can be proposed by code parties and in some cases other interested parties including Consumer Focus. Panels of nominated industry representatives discuss and develop proposed rule changes, which are then approved by Ofgem<sup>93</sup>.

1.40. In 2010, we introduced the 'Significant Code Review' (SCR) process to address our concerns that the code governance arrangements were hindering progress/preventing beneficial changes being delivered<sup>94</sup>. The aim was to enable Ofgem

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<sup>92</sup> NRAs are required to have regulatory independence and act independently of any market interests. They should not seek or take instructions from any organisation, whether a government or other public or private entity, when carrying out the regulatory tasks.

<sup>93</sup> Some changes – usually those which are unlikely to have a material impact – can be granted self-governance, and do not require Ofgem approval.

<sup>94</sup> See Code Governance Review – Final Proposals, March 2010, <https://www.ofgem.gov.uk/ofgem-publications/61245/cgrfinalproposals310310.pdf>

to lead on reviews of significant issues that might involve changes to multiple codes (and licences). SCRs could be raised to address a significant issue that bears on one or more industry codes, or in response to government-led policy initiatives or changes emanating from European legislation, or in response to code modifications proposed by industry.

### **Strategy and Policy statement**

1.41. DECC carried out a review of Ofgem in 2010 and concluded that the existing regulatory framework had provided good value for consumers and had attracted significant investment to the energy sector. It also found a need for more clarity about the respective roles of government and the independent regulator. In order to achieve this a 'Strategy and Policy statement' is being established. This document will set out the government's strategic priorities for the gas and electricity markets; describe the roles and responsibilities of government, Ofgem, and other relevant bodies; and contain a list of policy outcomes to which Ofgem can make an important contribution. Subject to Parliamentary approval, the Strategy and Policy statement will be published next year.

## Appendix 3 – How prices are set

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### How prices are set in the wholesale market

1.42. The retail market comprises gas and electricity suppliers who buy gas and electricity from the wholesale market (or directly from producers) and arrange for it to be delivered to the end consumer. Suppliers forecast how much energy their consumers will use for each half hour in electricity, and for each day in gas, and purchase this energy in the forward markets.

1.43. After suppliers contract in the forward markets to meet their consumers' demand, a number of things can happen that can cause an 'imbalance': consumers could consume more or less energy than their suppliers had forecast; there could be a shortfall in electricity generation or gas injections; or there could be problems with transporting the energy across the networks. Suppliers and generators are incentivised to minimise their imbalances through "cash-out" prices applied to differences between the amount bought or sold in the forward markets, and the amount produced or consumed in real-time. Cash-out prices are based on balancing actions taken by the System Operator to ensure the system is balanced close to and during real-time<sup>95</sup>. Similarly in the gas market 'gas shippers' are incentivised to minimise their imbalance with respect to the gas they put onto the system and take off the system.

1.44. Suppliers have a number of different ways that they can purchase energy. Most energy is bought 'over the counter' through bilateral contracts between two parties, eg a supplier and a generator, often conducted on broker platforms. The two parties will agree on a volume of energy, when it is to be delivered, and at what price.

1.45. Suppliers can also enter into more structured contracts, often on a long term basis. One form of such a contract in the electricity sector is a Power Purchase Agreement (PPA). A PPA may be struck between an independent generator and a supplier, who agrees to buy all of the generator's output.

1.46. Suppliers can also buy energy on exchanges. In electricity, there are two near-term exchanges, APX and N2EX. These exchanges allow market participants to post volumes and prices that they would be willing to buy or sell energy for, and other participants can accept these prices. Power exchanges also hold auctions for energy for delivery at a particular time. For example, a 'day-ahead' auction is held for energy to be delivered the following day. Auctions like this determine one price for energy bought and sold in it for particular times throughout the following day. In gas, suppliers can trade throughout the trading day on the On-the Day-Commodity Market (OCM), a platform run by ICE Endex. ICE also provides an exchange for gas and electricity futures products, while Nasdaq OMX offers electricity futures.

1.47. The price of electricity is broadly influenced by the generation mix required to meet demand in a particular half-hour. The mix of generation used will be determined by the 'merit order' – companies will generally bring generators online in price order, lowest first, until enough comes online to fulfil overall demand. Prices therefore tend to reflect the price of the last plant to be called before overall demand is met (or the 'marginal plant'). Recently this has tended to be gas-fired generating plant as the price of gas

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<sup>95</sup> The exception to this is the electricity cash-out price paid to, or by, electricity market participants' who are out of balance in the opposite direction as the overall system. This price is currently based on an index of market prices.

means electricity from this source has been more expensive than that generated from other fuels.

1.48. Similarly to electricity, the wholesale price of gas is broadly based on the costs of the different gas sources (eg UKCS, LNG, etc) used to meet demand on a particular day.

1.49. Suppliers buy forward contracts with a variety of durations. Typically suppliers might buy most of their energy over one to two years in advance. A supplier will continue to either buy or sell energy as time passes and it has more of an idea about its consumers' demand. This adjustment takes place up until one hour ahead of 'real time' (when the consumer will use the energy) in electricity; and throughout the day in gas.

1.50. There are a variety of bodies that publish information about trades in the wholesale gas and electricity markets<sup>96</sup>, such as Price Reporting Agencies (PRAs)<sup>97</sup>. PRAs provide price assessments which market participants who subscribe to their services can use as a reference for prevailing prices in the over the counter market.

## How prices are set in the retail market

1.51. Energy as a product for retail customers is a homogenous good to which differential pricing applies. Suppliers are responsible for choosing which products they offer in the retail market and setting the prices consumers pay for those products. In doing so, suppliers must meet the requirements of our RMR reforms<sup>98</sup> which limit the number of core tariffs a supplier can offer to four per fuel, per meter type, and licence conditions, in particular SLC 27 which requires suppliers to offer a wide choice of payment methods, and the difference in charges for those payment methods must be cost-reflective.

1.52. There are different products and prices for the domestic and non-domestic markets.

### Retail tariffs in the domestic market

1.53. This section describes tariffs in the domestic market. Prices for non-domestic consumers may also be affected by:

- **Consumption:** Customers with high consumption or multiple sites will typically be able to negotiate a lower unit price.
- **Credit rating:** Customers with a poor credit rating will tend to pay higher prices, or may need a security deposit for a proportion of the contract value.
- **Risk appetite:** Larger consumers can be offered a lower unit price if they accept the risk of variances in third party charges (i.e. distribution, transmission and environmental costs).

1.54. Further information on non-domestic prices can be found in Appendix 6.

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<sup>96</sup> Trades that take place over the counter and on exchanges.

<sup>97</sup> Examples of PRAs currently in the market include Argus, ICIS Heren, and Platts.

<sup>98</sup> Refer to Chapter 2 for further detail on the RMR reforms.

1.55. In the domestic market, prices differ according to, among other things:

- **The level of standing charge and unit rate:** the cost of the standing charge will vary between suppliers, and suppliers may choose to set the level of the standing charge at zero.
- **Payment method:** standard credit, in advance (pre-payment<sup>99</sup>), direct debit.
- **Type of meter:** different meter types have different tariffs available which are specific to that meter, for example 'time-of-use' pricing<sup>100</sup>
- **Generation source:** for example suppliers might offer tariffs for 'green' products.
- **Level of customer service:** suppliers may offer different levels of support to customers which in turn affects the price those consumers pay. For example, additional phone services to manage consumer queries quickly.
- **Type of contract:** some suppliers will offer cheaper tariffs for 'dual fuel' contracts where the customer chooses to have both its gas and electricity supplied by the same supplier.

1.56. The ability of consumers to access these different prices will also depend on their situation. For example, consumers wanting to pay for energy in advance will only be able to do so if they have a pre-payment meter.

1.57. The price a consumer pays for the energy they consume will also depend on whether the tariff is fixed or variable. Fixed tariffs offer a fixed price for the standing charge and unit rate for a defined period of time. The majority of tariffs currently available fix prices for between 1 and 3 years. Variable tariffs can change as the supplier chooses (although they have to give notice each time)<sup>101</sup>. Hedging should help a supplier protect its consumers from wholesale volatility, and domestic and SME customers are insulated from day-to-day price volatility.

### **Trends and breakdown of retail prices**

1.58. The Retail Prices Index (RPI) of gas and electricity prices have generally risen since 2003, with steeper price rises since 2005. There were price falls in 2009 and 2010, but these were smaller than subsequent price rises.

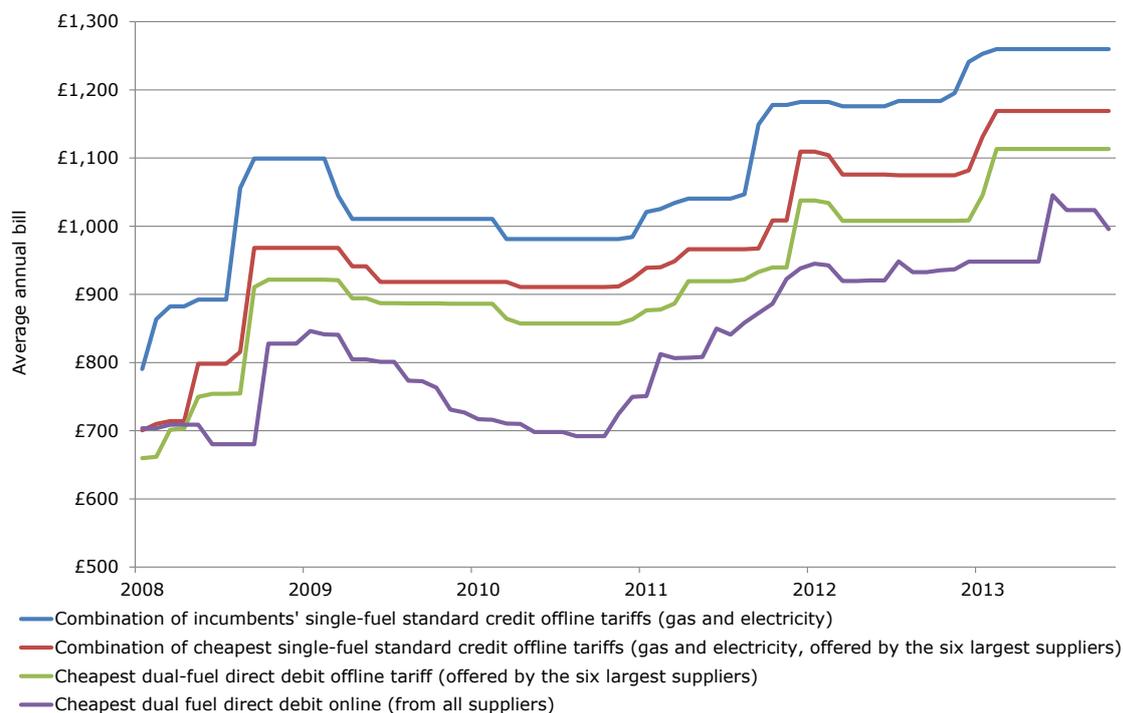
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<sup>99</sup> Issues relating to pre-payment meters are explained further in appendix 5.

<sup>100</sup> Time-of-use pricing is explained further in appendix 5.

<sup>101</sup> Some suppliers nonetheless make price commitments for their standard variable tariffs

**Figure 2 : Change in Annual Bill For Selected Tariffs<sup>102</sup>**



Source: Ofgem analysis using Energylinx Data

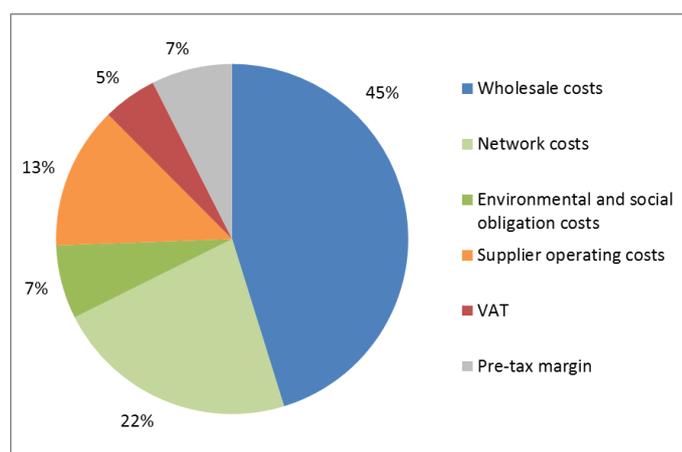
1.59. There are a number of factors that influence domestic gas and electricity prices. These include fluctuating wholesale gas and electricity prices, the cost of government and EU policies, the cost of investment in the networks needed to transport gas and electricity, and changes in other supplier costs and profit margins.

1.60. A breakdown of a Dual Fuel Bill is set out below. Note that the chart includes forward looking estimates up to May 2015. The proportions should therefore only be taken as illustrative.<sup>103</sup>

<sup>102</sup> Source: Ofgem analysis using Energylinx data

<sup>103</sup> Ofgem, Supply Market Indicator: Charts: outlook for costs that make up energy bills <https://www.ofgem.gov.uk/publications-and-updates/charts-outlook-costs-make-energy-bills>

**Figure 3: Breakdown of Dual Fuel Bill**



Source: Ofgem Supply Market Indicator: Charts: outlook for costs that make up energy bills

#### Wholesale costs

1.61. Wholesale costs are the biggest single component of consumer bills, making up, in our forward looking estimates, around 45 per cent of domestic consumer bills from June 2014 to May 2015.<sup>104</sup> Ofgem has estimated that over the last ten years, wholesale electricity costs have risen by around 140 per cent and gas costs by 240 per cent.<sup>105</sup>

1.62. Higher gas prices have been a key driver of increasing energy bills over the last ten years. Gas prices also have an impact on wholesale electricity prices given the importance of gas-fired generation in GB – gas has made up the largest share of electricity generation over the last decade. Recent higher gas prices have meant that more coal is used to generate power in the UK than gas, but since gas is the marginal generation source, changes in its price currently provide a good guide to changes in the wholesale cost of electricity.<sup>106</sup>

1.63. In the last ten years, Britain has become increasingly more reliant on imported gas, which has meant that gas prices have become increasingly influenced by global factors. These factors include changes to oil prices, as European gas prices are often linked to these prices.

<sup>104</sup> Understanding energy prices in Great Britain, <https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/electricity-and-gas-supply-market-indicators>

<sup>105</sup> Understand Energy Bills, <https://www.ofgem.gov.uk/publications-and-updates/understanding-energy-prices>

<sup>106</sup> Generators are brought online in price order, lowest first, until enough comes online to fulfil overall demand. Prices therefore tend to reflect the offers of the last plant to be called before overall demand is met (or marginal plant). Recently this has tended to be gas-fired generating plant.

### *Network costs*

1.64. Network costs are made up of the costs of building, maintaining and operating the transmission and distribution networks, which transport gas and electricity from source to end consumers. Generators and suppliers are charged for using these networks under a system of price controls regulated by Ofgem.

1.65. During the first 15 years after privatisation, cost efficiencies meant that charges paid by suppliers for the use of networks reduced by approximately 50 per cent. However, recently there has been a rise in network costs in order to build new networks to help connect low carbon energy, replace old gas mains, and renew ageing parts of the network.

### *Cost of environmental and social policies*

1.66. There are a number of policies set by government that aim to meet various environmental and social objectives which impact energy bills. These policies include:

- **Energy Companies Obligation (ECO):** ECO places obligations on the larger energy suppliers to deliver energy efficiency measures to domestic energy users. A supplier becomes obligated under ECO where, for the relevant year, it has at least 250,000 domestic customers and supplied more than 400 gigawatt hours of electricity, or more than 2,000 gigawatt hours of gas to domestic customers during that year.
- **Warm Home Discount (WHD):** This is a scheme which requires domestic electricity suppliers to provide support to fuel poor consumers. An electricity supplier is obligated when it has at least 250,000 domestic customers as measured on 31 December the preceding year (including any customers from connected gas suppliers). A Compulsory Scheme Electricity Supplier is obliged to provide Core Group rebates, as instructed by the Secretary of State, and has a minimum spend obligation to meet through the provision of Broader Group rebates, which is calculated on market share. The Secretary of State sets the annual spend for WHD each February.
- **Renewable Heat Incentive (RHI) Domestic and Non-Domestic:** These schemes are Government financial incentives designed to encourage a switch to, or the uptake of, renewable heating systems. These schemes are voluntary for participants and do not place any obligations on energy suppliers.
- **Renewables Obligation (RO):** A government support mechanism for promoting large scale renewable electricity projects in the UK. The scheme places an obligation on all licenced electricity suppliers in the UK to source an increasing proportion of the electricity they supply from renewable sources.
- **Feed-in Tariffs (FITs):** A government support mechanism designed to promote the uptake of a range of small-scale renewable and low-carbon electricity generation technologies. FITs requires certain suppliers to make tariff payments to householders, communities or businesses which have an eligible installation, for the electricity they generate and the electricity they export back to the grid. An electricity supplier will be obligated under FITs where it supplies electricity to at least 250,000 domestic customers in the relevant year. An electricity supplier can also volunteer to make FIT payments

- **EU emission trading system:** The EU ETS works on the 'cap and trade' principle. A 'cap', or limit, is set on the total amount of certain greenhouse gases that can be emitted by the factories, power plants and other installations in the system. Permits for emissions up to the level set by the cap are issued and then traded amongst those that want the right to emit. The cap is reduced over time so that total emissions fall.
- **Carbon price floor (CPF):** A tax on fossil fuels used to generate electricity. It changes the existing Climate Change Levy (CCL) regime, by applying carbon price support (CPS) rates of CCL to gas, solid fuels and liquefied petroleum gas (LPG) used in electricity generation.

1.67. In the future years EMR support cost will also be levied through energy bills (refer to Appendix 4 for further information on EMR).

1.68. The costs of these policies are borne indirectly by consumers. In December 2013, the government announced proposals to reduce the impact of energy and climate change policies on domestic energy bills, including by reducing the cost of the ECO and providing for a £12 electricity rebate for consumers.<sup>107</sup>

#### *How suppliers can influence costs*

1.69. There are a number of ways that suppliers can compete and reduce costs at different stages of the value chain.

1.70. Suppliers can reduce their wholesale costs by accurately forecasting their consumers' demand and actively engaging in the wholesale market to procure this energy at different stages in the forward markets. Imperfect demand forecasts can result in exposure to 'cash-out' prices, or volatile prices in the market at near timescales. The cost of some environmental schemes, such as the Carbon Price Floor (CPF), are included in the wholesale price of energy, so suppliers can avoid these costs by, for example, contracting with low-carbon generation. Costs will also depend on the efficiency of the suppliers hedging strategy. This will be influenced by when they purchase the energy and how much is purchased compared to the outturn price.

1.71. Suppliers can reduce their operating costs. This is an area where they typically have the greatest control.

1.72. Suppliers can control the costs of some government environmental and social schemes through how they choose to implement them. For example, suppliers can choose to implement different efficiency measures to meet their ECO obligations. Suppliers may also be able to gain a competitive advantage by delivering the schemes more efficiently than other competitors.

1.73. Network costs are regulated by Ofgem and so suppliers cannot directly influence them by competing with each other.

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<sup>107</sup> Further detail can be found at: HM Treasury, Autumn Statement, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/263942/35062\\_Autumn\\_Statement\\_2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/263942/35062_Autumn_Statement_2013.pdf)

# Appendix 4 – Expected Changes to the Gas and Electricity Sector

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## Changes to the retail market

1.74. Key changes expected to affect the retail market include smart meters and the retail market review reforms.

### Smart meters

1.75. One of the most significant changes to the retail market is the introduction of smart meters. Smart meters are the next generation of gas and electricity meters and are expected to lead to significant benefits for consumers and the energy retail markets more widely. Benefits are likely to include:

- Greater information about energy consumption, which should help consumers to manage their usage more effectively and make better choices about the products they buy. They will allow for greater scope for engagement by reducing the transaction costs involved in managing individual energy supply.
- Improved customer service for consumers, such as accurate billing, meaning consumers only pay for the energy they actually use; easier and quicker switching between different methods of payment (credit or prepayment) and a wider range of payment options, for example top-ups to prepayment meters over the internet.
- Reduced administrative costs for industry (and, ultimately, consumers). For example, suppliers will not need to send someone to manually read the customer's meter, as they will be able to access the data remotely.

1.76. The Department of Energy and Climate Change (DECC) is leading the implementation of smart metering and has placed new obligations on gas and electricity suppliers to rollout smart meters. Suppliers are required, by their supply licences, to use all reasonable steps to ensure that all their domestic and smaller non-domestic customers have smart meters (or in some cases Advanced Meters) by the end of 2020. The smart meter roll-out will affect every home and smaller business in GB, with the replacement of around 53 million gas and electricity meters in less than a decade.

1.77. The Data Communications Company (DCC) is a newly licenced body responsible for linking smart meters in homes and small businesses with the systems of energy suppliers, network operators and energy service companies<sup>108</sup>. The DCC will develop and deliver the data and communications service through external providers. We are responsible for regulating the DCC. We anticipate that having this central monopoly providing the data and communications services means that third parties have a single body to turn to if they want to get access to meter data. It should therefore help facilitate a market for new innovative services on the back of smart meters.

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<sup>108</sup> DECC granted the DCC licences (one in respect of gas, one in respect of electricity) to Smart DCC Ltd, a subsidiary of Capita plc with effect from 23 September 2013 (see .gov.uk website). When DECC granted the DCC licences, stage 1 of the Smart Energy Code (SEC) also came into force.

1.78. A new industry code – the Smart Energy Code (SEC) – sets out the terms for the provision of the DCC’s services and specifies other provisions to govern the end-to-end management of smart metering. Like other industry codes, we are responsible for approving any modifications to ensure consumers’ interests remain protected. Alongside the SEC, there is the Smart Metering Installation Code of Practice, published in April 2013, which sets out the rules and standards of conduct for suppliers installing smart meters.

## **Retail Market Review**

1.79. As outlined above in chapter 2, in 2011 we launched the Retail Market Review (RMR), to assess developments in the energy market since the Probe findings. Our review found the following in respect of consumer action and behaviour in the energy markets:

- A large number of tariffs, many of which had complex structures and discount arrangements. This made the prospect of engaging in the market unattractive for many consumers, and meant it was often difficult for consumers who did engage to choose the best deal for their circumstances.
- Gaps and lack of clarity in the information given by suppliers to consumers which meant they were not prompted to engage or given the full set of information they needed to assess options in the market.
- Lack of trust and poor supplier conduct which further reduced the confidence of some customers to engage in the market and contributed to the permanent disengagement of others.

1.80. To address these areas, we developed a series of RMR reforms for both the domestic and non-domestic markets. For domestic consumers, we introduced:

- legally binding Standards of Conduct (effective from 26 August 2013)
- rules to enhance consumer protections, for example, by banning automatic contract rollovers for domestic consumers (effective from 23 October 2013)
- new ways to make tariff choices simpler for consumers by limiting the number of tariff choices, and standardising tariff structure (effective from 31 December 2013)
- new rules about making supplier communication clearer for consumers (effective from 31 March 2014)
- additional rules to migrate customers from tariffs that are closed to new customers (dead tariffs) onto open tariffs, where this would be beneficial to the customer (effective from June 2014).

1.81. As noted in appendix 6, which covers non-domestic consumers, in relation to micro-business consumers RMR introduced the following reforms (repeated here for completeness):

- Enforceable standards of conduct requiring suppliers to treat their customers fairly (effective from 26 August 2013).
- Expanding the current definition of micro-businesses to extend protections to more small businesses (effective from 31 March 2014).
- Improved informational requirements such as contract end date on bills (effective from 31 March 2014).

1.82. These reforms are intended to make the market work better for consumers in the shorter term, until the competitive benefits of the evolution towards smarter markets take effect. If customers become increasingly engaged and proactive in the current retail market, it is likely they will be responsive to the innovative tariffs that will be made available by smart meters.

### **Third Party Intermediaries**

1.83. We are seeing an ever growing proliferation of different types of Third Party Intermediaries (TPIs) in the energy sector. This is being driven primarily by technological change, which is allowing new business models to emerge, for example integrated energy efficiency services companies, collective switching local councils looking to get involved in supply to local groups. As a result we are planning to do further work in this area.

### **European level developments**

1.84. The European Commission is increasingly focussing on the retail energy market. Pan-European high prices, high levels of consumer distrust, and retail prices that are unreflective of wholesale prices have led to the increased involvement in this area. This culminated in a public consultation on the retail energy market, which closed in April this year<sup>109</sup>. The outcome of the consultation is yet to be published.

## **Changes to the wholesale market**

1.85. The wholesale electricity sector needs to ensure security of electricity supply, while increasing the proportion of renewable generation and keeping carbon emissions below defined limits.<sup>110</sup> The government is introducing Electricity Market Reform, aimed at ensuring security of electricity supply while meeting these targets at an affordable level. There are four elements of the EMR programme, Contracts for Difference (CfDs), Capacity Mechanism (CM), Carbon Price Support and Emissions Performance Standard (EPS)<sup>111</sup>.

### **Security of supply in electricity**

1.86. We have an obligation to provide the Secretary of State with an annual report assessing the risks to the security of GB's electricity supply over the next five winters; this is the Capacity Assessment report<sup>112</sup>. Our 2014 analysis suggests that, without new measures that have been introduced, the risk of disconnections are expected to increase over the next two winters as older power stations close, before improving in the later years of our analysis.

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<sup>109</sup> European Commission, Single market for gas & electricity, Public Consultation, [http://ec.europa.eu/energy/gas\\_electricity/consultations/20140416\\_energy\\_retail\\_market\\_en.htm](http://ec.europa.eu/energy/gas_electricity/consultations/20140416_energy_retail_market_en.htm)

<sup>110</sup> The UK has signed up to legally binding targets of reducing emissions by 80% by 2050 from 1990 levels

<sup>111</sup> For more information on EMR see: Department of Energy and Climate Change, Maintaining UK energy security, Electricity Market, Reform, <https://www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform>

<sup>112</sup> Electricity Capacity Assessment Report 2014, <https://www.ofgem.gov.uk/ofgem-publications/88523/electricitycapacityassessment2014-fullreportfinalforpublication.pdf>

1.87. In the last year, Ofgem, National Grid and government have introduced two new measures; the new balancing services and the Capacity Market as part of EMR. As a result of these new measures the risk of disruption to customer supplies in upcoming winters has reduced compared to last year. The new balancing services will help National Grid to balance generation and demand and are intended to be used after it has exhausted options within the market but before it takes emergency actions. The first service, Demand Side Balancing Reserve (DSBR) is an opportunity for businesses which are willing to reduce electricity use during times of high demand, in exchange for a payment. The second service, Supplemental Balancing Reserve (SBR), allows National Grid to tender for new contracts with power stations so they can provide extra reserve power when needed.

1.88. DECC's Capacity Market is intended to encourage investment in capacity by providing new and existing power stations, electricity storage and capacity provided by voluntary demand reductions more stable revenues. This will improve the security of supply outlook and reduce the likelihood of electricity outages. The impact of the CM is that it is likely to dampen wholesale prices as it reduces generators reliance on the wholesale price for their revenue stream. This also means that wholesale prices will play a reduced role as a signal for new plant investment.

1.89. Ofgem is also making changes to the electricity cash-out price. It is vital that the electricity system provides adequate flexibility as set out in chapter 1. This is becoming harder as more intermittent generation comes onto the system and more thermal and controllable generation closes. Intermittent generation, such as wind generation, is not as predictable as conventional thermal generation. For example, an inaccurate wind forecast can lead to an unanticipated drop or surge in the amount of energy on the system. Either the market or, closer to real time, the System Operator, needs to react, using flexible generation sources or Demand Side Response (DSR) to match supply and demand at all times.

1.90. The proposals as part of the Electricity Balancing Significant Code Review (EBSCR) aim to improve the value of flexibility in the wholesale market by sharpening incentives on suppliers and generators to balance their positions in the market. The proposals also aim to improve the efficiency of balancing.<sup>113</sup>

### **Moving towards a lower carbon generation mix**

1.91. Various policies as part of EMR are designed to encourage renewable generation and limit carbon emissions. The first is an incentive mechanism called a Feed In Tariff with Contracts for Difference (FiT CfD), a financial support mechanism designed to lower the funding cost of low-carbon generation, by making revenue more certain. A CfD provides a guaranteed price for the electricity generated. This means that the revenue stream is significantly delinked from the wholesale price. Therefore changes in wholesale prices in the future are less likely to also have as substantial impact on consumer bills.

1.92. Others include the Emissions Performance Standards (EPS), which restricts the amount of carbon dioxide that new power stations can emit, and the Carbon Price Floor, which is designed to make low-carbon generation more competitive compared with plant with higher emissions.

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<sup>113</sup> Subject to consultation on the detailed provisions, changes are to be introduced ahead of winter 2015/16.

1.93. The Large Combustion Plant Directive (LCPD) is not part of EMR but may also restrict the operation of coal and oil plant. It caps the amount of sulphur dioxide, nitrogen oxide and dust that plant can emit. Those affected can either invest in technology to meet these limits or be restricted in the amount of hours they can run before closing by the end of 2015. The LCPD will be superseded by the Industrial Emissions Directive (2010) and will affect plant up to 2023.

1.94. These regulations have a significant impact on the existing coal fleet and future coal generation without carbon capture and storage (CCS).

## **Wholesale gas market**

1.95. The gas market is subject to much fewer interventions compared to the electricity market. Part of this is due to the fact that the decarbonisation agenda has not impacted as heavily on the industry. This is a key distinction between the outlook for the gas market and the electricity market going forward.

### **Gas security of supply**

1.96. In the gas sector as well, security of supply considerations play a critical role, and the market continues to evolve in this regard. Domestic production is declining and gas fired power generation is also set to rise increasing the importance of secure gas supplies.

1.97. The past decade has seen the market bring forward significant investment in infrastructure resulting in import capacity increasing over five times and more gas storage is under construction. This investment has resulted in an increasingly diverse range of supply sources, including imports from Norway, continental Europe and LNG. The GB market meets its needs in the most efficient way by ensuring the diverse sources compete on a level playing field with minimal intervention.

1.98. The subsidy regimes for investment in electricity have an impact on the gas industry. There have been calls for subsidisation of key gas infrastructure. For example in 2013 government considered intervening to subsidise additional storage. However it decided that the cost and unintended consequences did not justify the benefits.

1.99. The Gas Security of Supply Significant Code Review (SCR) was launched to consider measures to enhance security of gas supply. The proposed reforms will improve the incentives on shippers to avoid an emergency, encourage voluntary demand side response, and ensure that consumers are paid appropriately if their gas supply is interrupted in an emergency. Most of the changes are to be introduced ahead of winter 2015/16.

## **Changes affecting both gas and electricity markets**

### **European integration**

1.100. Greater physical connection and harmonisation of market rules with Europe will also impact on the GB wholesale market. GB is physically connected by interconnectors to neighbouring electricity markets in Ireland, the Netherlands and France. We are

expecting significant increases in electricity interconnector capacity going forward. We are currently consulting on the regulatory framework to bring forward this capacity.<sup>114</sup>

1.101. We are connected to the gas markets in Ireland, Belgium and the Netherlands by interconnectors. A small increase in interconnector capacity is currently planned.

1.102. A framework for a single European Energy Market is being developed as part of the Third Energy Package<sup>115</sup>. This involves the harmonisation of market rules, through the development of European-wide network. The network codes and guidelines aim to:

- Promote greater trade across Europe
- Make it easier for companies to enter the market
- Enhance cooperation and security of supply; and
- Facilitate the safe integration of more renewable generation into the energy mix.

1.103. The process to develop these instruments is set out in law and both enter into force following a vote by Member States (via the Comitology process). Once they enter into law both take the form of a European Regulation. The tables below provide an overview of the most relevant network codes.

<b>Code</b>	<b>Overview of Electricity Network Codes</b>
<b>CACM (Capacity Allocation and Congestion Management)</b>	CACM sets out the methods for allocating capacity in day-ahead and intra-day timescales and outlines the way in which capacity will be calculated across the different zones.
<b>Forward Capacity Allocation</b>	Forward markets have an important role in allowing Market Participants to secure capacity and hedge positions ahead of the day-ahead timeframe. The main goal of the Forward Capacity Allocation Network Code is to achieve a harmonised approach for cross zonal capacity allocation in the forward timeframe
<b>Balancing</b>	In an integrated cross-border balancing market, TSOs balance the system in a coordinated way in order to use the most efficient balancing resources, taking into account operational security limits both within and across synchronous areas. The main goal of this code is to achieve a harmonised and coordinated set of procurement, capacity reservation and settlement rules.

<b>Code</b>	<b>Overview of Gas Network Codes</b>
<b>CMP (Congestion Management Procedures)</b>	CMP sets out rules to create an efficient use of booked capacity by bringing unused capacity back to the market.
<b>CAM (Capacity Allocation Management)</b>	This network code sets out a standardised process for Capacity Allocation Management on interconnectors, predominantly through auctions of standard products

<sup>114</sup> The regulation of future electricity interconnection: Proposal to roll out a cap and floor regime to near-term projects, <https://www.ofgem.gov.uk/publications-and-updates/regulation-future-electricity-interconnection-proposal-roll-out-cap-and-floor-regime-near-term-projects>

<sup>115</sup> The Third Package is a package of EU legislation which came into force on 3 September 2009. One of its key aims was to further liberalise European energy markets.

<b>Balancing</b>	Balancing rules, including national requirements on imbalance charges and settlement processes and rules for operational balancing between transmission system operators' networks
<b>Inter-operability</b>	Sets out technical requirements to ensure neighbouring transmission systems can interact effectively, for example on whether gas is odourised within transmission networks
<b>Tariffs</b>	The Network Code on rules regarding harmonised tariff structures for gas (TAR NC) will establish the rules for how prices are set for accessing the gas transmission network (NTS), and how the owners of those networks recover their allowed revenues.

1.104. These reforms will further encourage more effective cross border competition and ensure gas and electricity flow to the markets where it is most valued.

### **New financial regulations**

1.105. There are three new financial regulations detailed below that are being adopted in Europe that will apply to GB. The first piece of financial regulation is the Regulation on Energy Market Integrity and Transparency (REMIT), which is designed to remove the potential for market manipulation and the potential for abuse.

1.106. The second piece of financial regulation is the European Market Infrastructure Regulation (EMIR), which obliges central clearing for certain classes of over-the-counter (OTC) derivatives. Given that OTC trading is central to the GB wholesale electricity market, this financial regulation has the potential to impact on the capital requirements of traders, trading strategies and liquidity in the market.

1.107. The third piece of financial regulation is the Markets in Financial Instrument Directive and Regulation (MiFID II and MiFIR respectively). This legislation establishes a harmonised regulatory framework for the provision of investment services in financial instruments, which will apply to energy markets and hence those partaking in energy trading.

## Appendix 5 – Domestic Consumers

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1.108. Domestic consumers can be thought about and separated according to several observable characteristics which determine how they engage with the market, for example how they choose a supplier, pay the supplier and are metered. This appendix describes key consumer groups, but is not intended to be comprehensive.

1.109. Non-domestic consumers are explained in Appendix 6.

### **Online and off line customers**

1.110. Online customers are those customers who manage their accounts over the internet<sup>116</sup>. Customers can now manage a wide range of activities online, such as receiving statements of account, inputting meter readings and opening or closing accounts. Our research suggests that online tariffs are now reported to be used by 31 per cent of gas customers and 29 per cent of electricity customers (both up four points in a year)<sup>117</sup>.

1.111. In addition to managing their accounts online, domestic consumers can also use the internet to research available tariffs and compare across suppliers. Our consumer research shows that online price comparison websites are the main information source for either tariff or method of payment switching, and are also slightly ahead as the preferred method of actually making the switch (with phoning the supplier as a strong second)<sup>118</sup>.

1.112. Our analysis in the State of the Market Assessment shows that online customers are most proactive - they are less affected by incumbency and more likely to switch suppliers.

### **Method of Payment (direct debit, standard credit, or pre-payment)**

1.113. Energy companies offer domestic consumers a number of different payment methods, including:

- *Direct Debit* – where a fixed or variable amount is taken from a consumer’s bank account each month, quarter or year. The amount is based on readings provided by the consumer or by the energy company. The majority of consumers pay by direct debit.
- *Standard credit* – where the consumer receives a bill for their energy use over a number of months, and pays their bill by cash or cheque after energy has been

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<sup>116</sup> In our Retail Market Review, we identified online account management as ‘any arrangement whereby a Domestic Customer does not receive a paper version of a Bill or statement of account and would need to access the internet and use a computer or communication device’.

<sup>117</sup> Consumer Engagement with the Energy Market Tracking Survey 2014, <https://www.ofgem.gov.uk/ofgempublications/88375/customerengagementwiththeenergymarket-trackingsurvey2014finalpublished2662014.pdf>

<sup>118</sup> Consumer Engagement with the Energy Market Tracking Survey 2014, <https://www.ofgem.gov.uk/ofgempublications/88375/customerengagementwiththeenergymarket-trackingsurvey2014finalpublished2662014.pdf>

consumed. The amount is based on either an estimate by the energy company, or a meter reading. Around 30 per cent of consumers pay by standard credit.<sup>119</sup>

- *Pre-payment tariffs* – a ‘pay-as-you-go’ type arrangement where consumers pay for credit to their account in advance of using energy. Usually a pre-payment tariff is only available where the customer has a pre-payment meter, however some suppliers offer some pre-payment options to their customers and this may change with the introduction of smart meters. Around 15 per cent of domestic consumers pay by pre-payment meter.

1.114. Depending on their circumstances and preferences, different consumers will use different payment methods.

1.115. The costs of supplying pre-payment customers are generally higher than for direct debit and standard credit customers. This is in part due to the need to install a pre-payment meter at the customer premises, which is more expensive to buy and maintain than a credit meter.

1.116. Pre-payment also relies on a bespoke payment infrastructure (Pre-payment Meter Infrastructure Provision is a system for reconciling back to the relevant energy supplier the advance payments made by pre-payment customers at outlets, such as corner shops or post offices). Moreover, issues specific to pre-payment customers, such as problems in topping up the meter, mean they are more likely to call their supplier resulting in higher costs to serve.

1.117. The costs of supplying standard credit customers are also higher than for direct debit customers. The data submitted by suppliers indicates this is primarily driven by bad debt costs, including debt management costs and recovery of debts, provision for bad debts and bad debt write-offs, where appropriate.

### **Meter types (PPM, DTS, Economy 7, smart)**

1.118. Pre-payment meters (PPM) are meters that require payment for energy to be made in advance of use or they will prevent the supply of gas or electricity. This is in contrast to other tariff or meter types where payment is made after the energy has been consumed. A pre-payment meter customer pays for energy by inserting electronic token, keys or cards into the meter. Pre-payment meter customers have access only to tariffs that are available for this meter type. At the end of March 2013, the number of PPM customer accounts had increased to around 4.3 million electricity accounts and 3.2 million gas accounts. This represents a 4 per cent increase in electricity PPMs and a 6 per cent increase in gas PPMs in Q2 2013 compared to Q2 2012.<sup>120</sup>

1.119. In addition, there are also around 1.8 million meters that have a teleswitch (ie their load switching time can be remotely controlled through instructions sent by suppliers/DNOs. Suppliers can send switching instructions in one of the following ways: a) Static- the switching schedule is rarely if ever changed, so the heating load is switched on/off at the same time every day; b) Semi-static- the schedule is changed a

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<sup>119</sup> Department of Energy and Climate Change, Quarterly Energy Prices, March 2014, <https://www.gov.uk/government/publications/quarterly-energy-prices-march-2014>

<sup>120</sup> Ofgem, Domestic Suppliers’ Quarterly Social Obligations Data – Quarters 1 and 2 2013: <https://www.ofgem.gov.uk/ofgem-publications/87984/domestic-suppliers-social-obligations-report-quarters-1-january-to-march-and-2-april-to-june-2013.pdf>

few times a year, for example with the GMT/BST clock change; and c) Dynamic- the schedule may vary from day to day, following the suppliers' instructions, most often to take into account prevailing or forecast weather conditions. Nowadays, the great majority of teleswitched meters are programmed following a static or semi-static regime, meaning that they are working in practice as if they were meters with fixed switching times (such as Economy 7 or Economy 10 meters).

1.120. There are around 550,000 dynamic teleswitched (DTS) customers, which is about 30 per cent of all teleswitched meters in GB. DTS customers reside primarily in North and South Scotland and East Midlands. These tariffs are designed to benefit customers with electric heating, typically with no access to mains gas, by providing them with cheaper electricity rates for heating than alternative tariffs. Ofgem's 2013 report on DTS shows that due to the technical complexities, there are fewer supply choices for those customers.<sup>121</sup> The incumbents command more than 90 per cent market share in North and South Scotland. Despite these issues, the report found that DTS tariffs in general compared favourably with the other tariffs considered in the analysis.<sup>122</sup>

1.121. Smart metering would replace those meter types and improve the customer experience, for example, by providing more accurate billing; easier and quicker switching between different methods of payment (credit or pre-payment) and a wider range of payment options (for example top-ups to pre-payment meters over the internet). Providing consumers with more information about their energy consumption should also enable them to manage their usage more effectively. A small number of domestic consumers have smart meters now,<sup>123</sup> but this number will grow strongly to meet the roll-out target of approximately 50 million domestic smart meters by the end of 2020. Further information on smart meters and our smart meter programme is in appendix 2.

## **Vulnerable consumers**

1.122. As explained in appendix 2, our principal objective is to protect the interests of current and future consumers. In meeting this principal objective Ofgem has a particular responsibility towards vulnerable consumers, which include, but are not limited to, those who are disabled or chronically sick, of pensionable age, on low incomes or residing in rural areas.<sup>124</sup> Our Consumer Vulnerability Strategy published in 2013,<sup>125</sup> set out our approach to identifying and tackling consumer vulnerability, and acts as a guide for our current and future work programme as well as a guide to our expectations on supply and retail companies. This will be updated in the Autumn.

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<sup>121</sup> Ofgem, The state of the market for customers with dynamically- teleswitched meters, July 2013, <https://www.ofgem.gov.uk/ofgem-publications/82288/state-market-customers-dynamically-teleswitched-meters.pdf>

<sup>122</sup> Other tariffs considered include standard Economy 7, Economy 10, dual fuel and electricity single rate tariffs

<sup>123</sup> According to DECC data, a total of 394,523 smart meters have been installed to date in domestic properties

<sup>124</sup> Ofgem recognises that other circumstances may leave customers' vulnerable in the energy market for example low levels of literacy and numeracy or a poor command of English may make it difficult for customers to engage with suppliers; customers without a bank account are very restricted in their payment method and unable to access many of the more competitive tariffs; customers without easy internet access are less able to use switching sites or sign up to an online tariff; customers may live in poor housing that is hard to heat; or they may be restricted by their landlord from switching supplier.

<sup>125</sup> Consumer Vulnerability Strategy <https://www.ofgem.gov.uk/ofgem-publications/75550/consumer-vulnerability-strategy.pdf>.

1.123. As outlined in our State of the Market Assessment, our research <sup>126</sup> has shown that consumers in vulnerable situations are disproportionately represented in the group of consumers disengaged in the market. Further, consumers in vulnerable situations are likely to encounter additional and greater barriers to engagement where they lack the knowledge, skills, resources, experience or circumstances required to protect or represent their interests in the energy market.<sup>127</sup> For example, these customers may not have access to the internet, which in turn limits their ability to access better tariffs, information about the energy market, or switching sites.<sup>128</sup>

1.124. Consumers in vulnerable situations may simply not share in the benefits of greater competition.<sup>129</sup> Our Consumer Vulnerability Strategy identified that 'consumers in vulnerable situations may be served less well by markets because, for example, they may be more expensive to serve, they have less market access, they are in debt, and they cannot afford the higher risk that often accompanies better value'.<sup>130</sup>

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<sup>126</sup> FDS International, Vulnerable customers research report, March 2011,

<https://www.ofgem.gov.uk/ofgem-publications/39714/ofgemvulnerablecustomersresearchfinal.pdf>

<sup>127</sup> Assessment doc, page 38.

<sup>128</sup> Assessment doc, page 38.

<sup>129</sup> Office of Fair Trading, Prioritisation Principles October 2008

<sup>130</sup> Consumer Vulnerability Strategy, July 2013, page 18

## Appendix 6 - Non-domestic consumers

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1.125. The non-domestic market has a diverse consumer base ranging from customers with annual energy spend similar to domestic customers to very large commercial and industrial customers. Unlike the domestic market, the majority of contracts in the non-domestic market are negotiated and have fixed terms. Certain features of the non-domestic market, such as, negotiated contracts, limited price transparency and diverse consumer base may result in ineffective competition for sub groups that share similar traits with domestic consumers. Such consumers have annual energy spend similar to domestic consumers, are time poor and struggle to engage. This group of smaller non-domestic customers are generally classed under the micro-businesses definition. Stakeholders such as the Federation of Small Businesses have raised concerns on whether competition is working effectively for the very smallest micro-businesses.

### Overview

1.126. Historically, the non-domestic market has been more competitive than the domestic market. Our recent consumer research shows high levels of satisfaction amongst non-domestic consumers in general and 14 per cent reported switching in the previous year. Currently, suppliers in the non-domestic market operate under fewer regulatory requirements as compared to the domestic market. This reflects the fact that many businesses (depending on size) will be better placed than domestic consumers to engage in the energy market.

1.127. The non-domestic supply market is typically segmented into small to medium sized businesses (SME) and large industrial and commercial (I&C) users. Smaller businesses generally have fixed-term, fixed price contracts and have standard terms and conditions. A sub set of the smaller businesses are micro-businesses. Micro-businesses are defined in the supply licence. Larger industrial consumers will have more complex requirements such as multiple sites or half- hourly electricity metering and more flexible, bespoke contracts. There is no consistent definition of these consumers and suppliers use their own segmentation, typically based on annual consumption, metering and the number of sites.

1.128. Our supply licence includes certain specific requirements that apply only to micro-business consumers. This reflects the fact that the smallest non-domestic customers may need some targeted additional protections, as they are less able than larger customers to engage effectively in the market.

1.129. Since 31 March 2014, a micro-business is defined as any non-domestic consumer with:

- annual electricity consumption of not more than 100,000 kWh or;
- annual gas consumption of not more than 293,000 kWh or;
- fewer than 10 full time employees and an annual turnover or annual balance sheet total not exceeding €2 million.

1.130. This definition is relatively wide. It includes consumers spending up to c.£10,000 on electricity or gas each year. A study undertaken by the Federation of Small Businesses in May 2014 suggested more than half of their members spent less than

£3,000 on energy each year and more than a third spend less than £2,000<sup>131</sup>. Moreover, in practice, suppliers apply the micro-business rules to customers larger than this definition and in some cases, all of their customers.

1.131. Cornwall Energy<sup>132</sup> estimated there were 1.98m SME<sup>133</sup> and 0.76m I&C electricity contracts in October 2013. For gas, there were 0.65m SME gas contracts and 0.23m I&C contracts. Micro-businesses are likely to account for at least 90 per cent of SME contracts.

## Key market players

1.132. There are more than 30 active suppliers for electricity and gas supply in the non-domestic market. These range from incumbent domestic suppliers, independent suppliers and large multinationals, often under common ownership with electricity generation or gas production companies.

### Electricity

1.133. The large six domestic suppliers retain a majority of the electricity supply market for businesses, with a 91 per cent market share for sites and 78 per cent for volume (see table 1 below) Some of the key non-domestic only suppliers include Opus Energy, Haven Power and Smartest Energy and large multi-nationals such as Gazprom, Total Gas and Power and GDF Suez. These large energy multi-nationals have tended to enter the market for larger industrial consumers initially and gradually expanded into supply to smaller business. Other independent suppliers such as Opus Energy have focussed on small businesses.

**Table 1: Market share of non-domestic electricity suppliers in November 2013, volume and sites**

	Sites	Volume
British Gas	22.6%	9.2%
E.ON	22.4%	17.0%
EDF Energy	14.5%	19.3%
Gazprom	0.2%	0.8%
GDF Suez	0.1%	6.8%

<sup>131</sup> FSB 'Voice of Small Business' Survey Panel - April/May 2014 Energy Survey.

<http://www.fsb.org.uk/policy/assets/fsb-2014-energy-survey-for-web.pdf>

<sup>132</sup> <http://www.energy-uk.org.uk/publication/finish/5-research-and-reports/1099-cornwall-energy-competition-in-british-business-energy-supply-markets-report-april-2014.html>

<sup>133</sup> Cornwall Energy define an SME as non half-hourly metered electricity contracts for privately-owned companies with up to 10 meters; and gas contracts for privately-owned companies of up to 10 meters where the typical meter consumes less than 732MWh (25,000 therms) a year. All other contracts, including public sector, are defined as industrial and commercial (I&C).

Good Energy	0.1%	0.1%
Haven Power	1.8%	5.0%
Opus Energy	5.8%	1.9%
RWE npower	9.1%	14.5%
ScottishPower	8.0%	5.9%
Smartest Energy	0.1%	2.5%
SSE	14.6%	12.2%
Total Gas and Power	0.1%	2.0%
Others	0.7%	2.3%

Source: Datamonitor

## Gas

1.134. The gas supply market is markedly different to electricity. The large six domestic suppliers supply a minority of gas volume (20 per cent), and only British Gas and E.on have a market share above 5 per cent of total volume (see table 2 below). These two suppliers do still have a large market share for gas sites (59 per cent between them) as they focus on SMEs. Key non-domestic only suppliers include Corona Energy, Gazprom, DONG energy and Total Gas and Power (the largest supplier by volume).

**Table 2: Market share of non-domestic gas suppliers in November 2013, volume and sites**

	Sites	Volume
British Gas	33.7%	7.9%
Corona Energy	11.8%	10.9%
EDF Energy	0.3%	0.0%
E.ON	25.2%	7.6%
ENI	0.1%	8.5%
Gazprom	6.9%	14.8%
GdF Suez	1.4%	5.9%
Opus Energy	3.3%	0.3%
RWE npower	0.8%	2.0%

ScottishPower	1.2%	0.5%
DONG Energy	1.9%	10.6%
SSE	6.4%	1.7%
Statoil UK	0.0%	8.0%
Total Gas and Power	6.8%	18.1%
Wingas	0.0%	2.3%
Others	0.1%	0.5%

Source: Datamonitor

## Market features

1.135. In the non-domestic market suppliers generally do not offer standard 'off the shelf' tariffs in the same way as they do in the domestic market. Whilst larger non-domestic consumers are more market savvy and can navigate the market easily, the very small non-domestic consumers may find it difficult to negotiate contracts. Non-domestic consumers are by their nature heterogeneous and suppliers need to take account of credit and demand risks when agreeing contracts. In part, this has led to a prevalence of fixed-term contracts.

1.136. In our latest consumer survey, 83 per cent of non-domestic consumers said that they currently had a fixed term contract with their supplier. By negotiating fixed term contracts with their customers, suppliers gain more certainty over future demand. This helps them to hedge underlying price risks and offer better prices to consumers. This is a particularly important feature for smaller, non-incumbent suppliers.

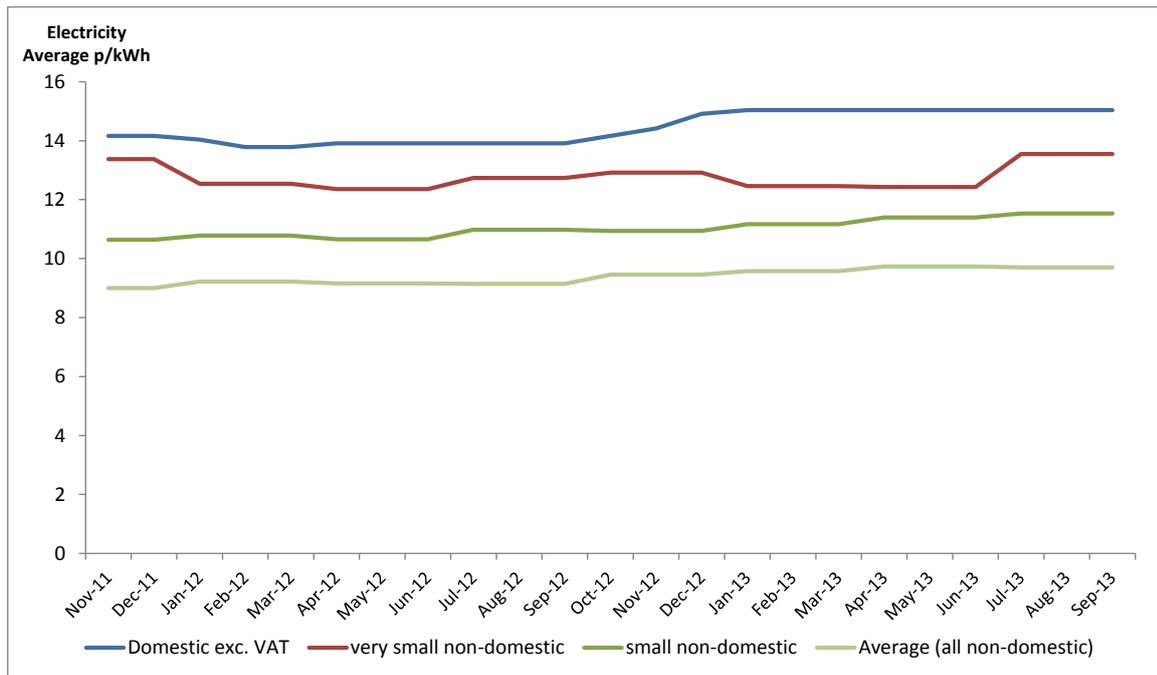
1.137. Third party-intermediaries (TPIs) such as brokers are also widely used and they can play an important role helping businesses negotiate their energy contracts and achieve a competitive deal. Some industry estimates put TPIs having around 60 per cent market penetration. Our last survey showed that 11 per cent of micro-businesses used a broker when they chose their current contract. Cornwall Energy estimate<sup>134</sup> for larger I&C consumers, TPIs are used in around three quarters of all contracts.

## Retail prices

1.138. Due to the negotiated nature of prices for fixed term contracts, there are very few published prices available. DECC publish a quarterly survey of the average prices paid by different sizes of business consumers, which indicates prices are lower, on average, than domestic consumers. Negotiated prices can be for new customers (acquisition) or existing customers (retention). For scenarios where a customer isn't on a negotiated contract, prices tend to be higher since the customer is on 'out of contract' or 'deemed rates'.

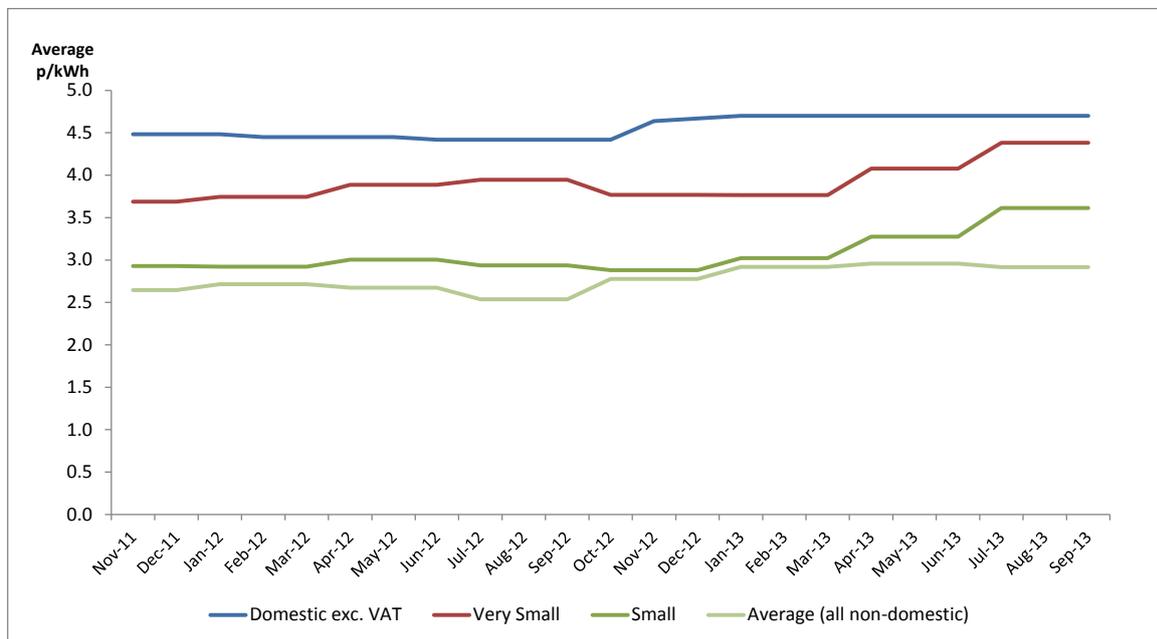
<sup>134</sup> Cornwall Energy, Energy brokerage in the business and industrial supply markets, April 2013

**Figure 4: Average non-domestic and domestic electricity prices**



Source: DECC Quarterly energy prices (non-domestic), Ofgem SMI (domestic)

**Figure 5: Average non-domestic and domestic gas prices**



Source: DECC Quarterly energy prices (non-domestic), Ofgem SMI (domestic)

## Consumer Research: an insight into customer satisfaction

1.139. In December 2013 we published a quantitative survey<sup>135</sup> of business consumers, across all sizes.

- Non-domestic consumers' satisfaction with their current supply arrangements and suppliers was generally high, with the majority indicating that they were satisfied with the specific aspects measured on billing (76 per cent – 79 per cent), contracts (75 per cent – 85 per cent) and the supplier's service and information provision (60 per cent – 79 per cent)
- Around one in seven (14 per cent) had switched suppliers in the last year, rising to two in five (40 per cent) over the last five years. Reasons for switching tended to be price-driven rather than relating to dissatisfaction with the previous service.
- However, there was comparatively lower satisfaction with suppliers' responses to queries, with 49 per cent – 56 per cent of those who had contacted their supplier with a query being satisfied with aspects of the supplier's response.
- Satisfaction with the value for money offered by the supplier was also relatively lower than other aspects (60 per cent).
- Despite generally high levels of satisfaction with energy suppliers, there was a low level of reported customer advocacy (measured by asking respondents if they would recommend their supplier to a friend or colleague).
- Micro-businesses showed comparatively lower engagement or satisfaction compared to other business sizes. For example, they were less satisfied with billing accuracy, as well as with the value for money provided by their supplier. They were also less positive about broker activity.

## Our initiatives

1.140. Our work has focussed on putting in place a proportionate set of measures to encourage engagement and help protect micro- businesses.

1.141. A recent report by the Centre for Competition Policy, commissioned by the Federation of Small Businesses (FSB) acknowledges our wide range of work and notes that we have put in place more protections for micro-businesses than other sector regulators.<sup>136</sup>

1.142. As part of the RMR we developed the following package of reforms for micro-business consumers:

- Enforceable standards of conduct requiring suppliers to treat their customers fairly (effective from 26 August 2013).

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<sup>135</sup> Quantitative Research into Non-domestic Consumer Engagement in the Energy Market, Element Energy and the Research Perspective, December 2013. <https://www.ofgem.gov.uk/publications-and-updates/quantitative-research-non-domestic-consumer-engagement-energy-market>

<sup>136</sup> Centre for Competition Policy, 'Small Business as Consumers: Are they sufficiently well protected? – A report for The Federation of Small businesses' [http://www.fsb.org.uk/policy/assets/fsb%20project\\_small\\_businesses\\_as-consumers.pdf](http://www.fsb.org.uk/policy/assets/fsb%20project_small_businesses_as-consumers.pdf)

- Expanding the current definition of micro-businesses to extend protections to more small businesses. (effective from 31 March 2014).
- Improved informational requirements such as contract end date on bills (effective from 31 March 2014).

1.143. Whilst the RMR is our biggest package of remedies for retail markets in recent years, we have also undertaken significant work outside of the RMR. Some of our key ongoing work/projects include:

- *Review of automatic rollover contracts* - This review examines whether suppliers should be able to automatically extend a micro-business contract for a further 12 month period term contract if they do not agree a new contract. Our existing protections limit any rollover to 12 months and our proposals aim to simplify the termination process and improve the information suppliers provide to customers at renewal. The six large domestic suppliers have decided to end auto-rollovers for their small business customers.
- *Review of back-billing practices* - This project is seeking to secure suppliers' agreement to a 12 month limit to micro-business back bills and to request data from suppliers to monitor this. We published suppliers' back-billing data in December 2013.

1.144. We are also continuing with a series of broader initiatives to improve outcomes for all non-domestic consumers:

- *Developing a code of practice for third party intermediaries (TPIs)* - We have recently consulted on introducing a code of practice for TPIs underpinned by a licence condition on suppliers to only work with TPIs signed up to the code. This work is designed to complement the powers to enforce the Business Protection from Misleading Marketing Regulations 2008 (BPMMRs), which we successfully sought from government last year, against TPIs who mis-sell energy contracts.
- *Debt and disconnection review of practices* - This project looked into improving suppliers' debt and disconnection practices. We have provided guidance on best practices to industry for both smart and non-smart meters.

### **Key area of focus**

1.145. Based on our research, complaints data received by Ofgem and views from consumer representative groups, a key question is whether competition is working effectively for the very smallest non-domestic consumers.

1.146. The current micro-business definition was extended to allow more small businesses to benefit from existing protections. However, arguably this definition captures a sub set of consumers with annual spend similar to domestic consumers and may require more protections than other small businesses. Nearly a quarter (22 per cent) of all businesses in our survey said they spent less than £1000 (including VAT) on electricity.

1.147. There is a growing concern from groups such as the FSB and Citizens Advice that competition in the market may not be working effectively for these very smallest micro-

businesses. They advocate a view that micro-businesses exhibit many of the same characteristics as domestic customers and, based on calls from their membership, would like to see a similar regulatory approach adopted as in the domestic market.

1.148. The bespoke nature of contracts in the market including lack of published prices and associated opportunity and transaction costs may be resulting in poor outcomes for these consumers. For businesses with few resources and limited knowledge of the energy market, this could be difficult and time-consuming, particularly if energy is a low priority. As a result, they could be on more expensive rolled over or variable contracts and may struggle to engage with the market. The FSB's recent member survey panel<sup>137</sup> indicated the majority of their members (70 per cent) agreed with the statement "I find it difficult to compare the tariffs of different energy suppliers". Eight out of ten members who responded also said that the published tariffs would have a positive impact on their business.

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<sup>137</sup> FSB 'Voice of Small Business' Survey Panel - April/May 2014 Energy Survey at <http://www.fsb.org.uk/policy/assets/fsb-2014-energy-survey-for-web.pdf>

# Appendix 7 - Bibliography

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This section sets out a bibliography of related documents, arranged according to the following themes:

1. Market investigation reference documents
2. Domestic consumers
3. Non-domestic consumers
4. Prices and profits
5. Electricity Wholesale
6. Gas Wholesale
7. Smart Meters
8. Government policies
9. European policies and new financial regulations
10. Licences and codes

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<sup>139</sup> The Confidence Code sets out the minimum requirements that a provider of an internet domestic gas and electricity price comparison service (service provider) must meet in order to be, and remain, accredited by Ofgem.

<sup>140</sup> The process and policy measures for prepayment meter customers with a debt to switch suppliers

<sup>141</sup> 1.1. Ofgem collects and monitors a range of social obligations data from domestic suppliers on their performance in managing consumer debt, disconnection and the use of Prepayment Meters (PPM). We report on the information provided by suppliers publically twice a year

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<sup>145</sup> Open and non-discriminatory access to the networks by those who do not own the physical network infrastructure, known as third party access (TPA) is key. Exemptions can be sought for gas storage, LNG facilities and gas and electricity interconnectors. We consider each exemption on a case by case basis.

<sup>146</sup> Ofgem SCR to reform cash-out arrangements in an emergency improving gas markets incentives to ensure security of supplies.

<sup>147</sup> Following a review the Energy Bill introduced the Strategy and Policy Statement (SPS), to improve alignment between the Government's strategic energy objectives and Ofgem's regulation of electricity and gas markets while respecting Ofgem's independence in making regulatory decisions.

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<sup>148</sup> EMIR imposes requirements on all types and sizes of entities that enter into any form of derivative contract, including those not involved in financial services

<sup>149</sup> REMIT is designed to remove the potential for market manipulation and the potential for abuse.

## **10. Licences and Code**

Links to current consolidated licence conditions

### **Electricity**

[Electricity Distribution Standard Licence Conditions](#)

[Electricity Generation Standard Licence Conditions](#)

[Electricity Interconnector Standard Licence Conditions](#)

[Electricity Supply Standard Licence Conditions](#)

[Electricity Transmission Standard Licence Conditions](#)

### **Gas**

[Gas Interconnector Standard Licence Conditions](#)

[Gas Shipper Standard Licence Conditions](#)

[Gas Supplier Standard Licence Conditions](#)

[Gas Transporter Standard Licence Conditions](#)

### **Special conditions**

[National Grid Gas Plc - National Transmission System Gas Transporter Licence Part C - Special Conditions](#)

[National Grid Electricity Transmission Plc - Special Conditions](#)

### **Standard Special conditions (Gas)**

[Standard Special conditions – Part A](#)

[Standard Special conditions – Part B](#)

[Standard Special conditions – Part D](#)

### **Smart Meter Communication Licence**

[Smart Meter Communication Licence](#)

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<https://www.ofgem.gov.uk/ofgem-publications/61245/cgrfinalproposals310310.pdf>

<b>Electricity Industry Codes</b>		
<b>Code</b>	<b>Description</b>	<b>Website</b>
Balancing and Settlement Code (BSC)	The BSC defines the rules and governance for the balancing mechanism and imbalance settlement processes	<a href="http://www.elexon.co.uk/">http://www.elexon.co.uk/</a>
Connection Use of System Code (CUSC)	The CUSC is the contractual framework for connection to, and use of, the National Electricity Transmission System (NETS).	<a href="http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Connection-and-Use-of-System-Code/">http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Connection-and-Use-of-System-Code/</a>
Distribution Use of System Agreement (DCUSA)	DCUSA is a contractual framework between the licensed electricity distributors, suppliers and generators of Great Britain. It is concerned with the use of the electricity distribution systems to transport electricity to or from connections to them.	<a href="http://www.dcusa.co.uk">www.dcusa.co.uk</a>
Master Registration Agreement (MRA)	The MRA is an Agreement that sets out terms for the provision of Metering Point Administration Services (MPAS Registrations), and procedures in relation to the Change of Supplier to any premise/metering point.	<a href="http://www.mrasco.com">www.mrasco.com</a>
Grid Code	The Grid Code specifies technical requirements for connection to, and use of, the National Electricity Transmission System (NETS). Compliance with the Grid Code is a requirement under the Connection and Use of System Code (CUSC).	<a href="http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-Code/">http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-Code/</a>
Distribution Code	Licensed distribution businesses, or distribution network operators (DNOs), are obliged under Condition 21 of their licenses' to maintain a Distribution Code detailing the technical parameters and considerations relating to connection to, and use of, their systems.	<a href="http://www.dcode.org.uk">www.dcode.org.uk</a>
System	The System Operator-Transmission	<a href="http://www2.nationalgrid.com/">http://www2.nationalgrid.com/</a>

Operator - Transmission Operator Code (STC)	Owner Code (STC) defines the relationship between the Transmission System Owners and National Grid as the National Electricity Transmission System Operator (NETSO).	<a href="http://UK/Industry-information/Electricity-codes/System-Operator-Transmission-Owner-Code/">UK/Industry-information/Electricity-codes/System-Operator-Transmission-Owner-Code/</a>
<b>Gas Industry Codes</b>		
<b>Code</b>	<b>Description</b>	<b>Website</b>
Uniform Network Code (UNC)	The UNC consists of a legal and contractual framework to supply and transport gas. It governs processes, such as the balancing of the gas system, network planning, and the allocation of network capacity.	<a href="http://www.gasgovernance.co.uk">www.gasgovernance.co.uk</a>
Independent Gas Transporter UNC (iGT UNC)	The iGT UNC was implemented to streamline and harmonise the network code arrangements of the iGTs as much as possible.	<a href="http://www.igt-unc.co.uk">www.igt-unc.co.uk</a>
Supply Point Administration Agreement (SPAA)	The Supply Point Administration Agreement (SPAA) sets out the inter-operational arrangements between gas suppliers and transporters in the UK retail market.	<a href="http://www.spaa.co.uk">www.spaa.co.uk</a>
<b>Gas and Electricity Industry Code</b>		
Smart Energy Code (SEC)	The Smart Energy Code (SEC) came into force on 23 September 2013, when the Data Communication Company's (DCC) licence was granted. The SEC is a multiparty contract which sets out the terms for the provision of the DCC's services and specifies other provisions to govern the end-to-end management of smart metering in gas and electricity.	<a href="http://www.smartenergycodecompany.co.uk">www.smartenergycodecompany.co.uk</a>