ofgem Making a positive difference for energy consumers

Great Britain and Northern Ireland Regulatory Authorities Reports 2018

Regulatory Authorities Report pursuant to section 5ZA of the Utilities Act 2000 and section 6A of the Energy (Northern Ireland) Order 2003

Ofgem 2018 National Report to the European Commission

Overview

The Great Britain (GB) report covers:

- Developments in the GB energy markets in the calendar year 2017 and the first six months of 2018. In some cases, data is only available for a subset of this period (i.e. the 2017 calendar year only). Where this is the case, it is clearly stated.
- The regulation and performance of the GB electricity and gas markets in reference to network regulation, promoting competition, and security of supply.
- Our compliance with the Electricity and Gas Directives on consumer protection and dispute settlement. Since GB energy markets have been fully liberalised and the regulatory structures in place for a number of years, this report is intended as an updated version of the submissions made since 2007.

Finally, for further information on Ofgem's wider activities, please consult our Annual Report. The 2017-18 Ofgem Annual Report is available at the link below.[1]

Legal Basis

All National Regulatory Authorities (**NRAs**) are obliged to report annually to the European Commission, in accordance with Directives 2009/72/EC (**Electricity Directive**) and 2009/73/EC (**Gas Directive**). The structure of the report is agreed at the Council of European Energy Regulators (**CEER**).

Ofgem is the GB Office of Gas and Electricity Markets. It is governed by the Gas and Electricity Markets Authority (the **Authority**). The following terms: 'the Authority', 'Ofgem', 'us' and 'we' are used interchangeably in this document. The Northern Ireland National Report, from the Northern Ireland Utility Regulator, is in the second section of this UK Report.

As the NRA for GB, Ofgem's above annual reporting requirement is specified in section 5ZA of the Utilities Act 2000. The Utility Regulator's equivalent requirement is specified in section 6A of the Energy (Northern Ireland) Order 2003.

Contacts

Anna Ozog
Analyst, Wholesale Markets,
Systems & Networks
10 South Colonnade, Canary Wharf
E14 4PU London
anna.ozog@ofgem.gov.uk

Natasha Smith
Head of European Markets,
Systems & Networks
10 South Colonnade, Canary Wharf
E14 4PU London
natasha.zoe.smith@ofgem.gov.uk

[1] https://www.ofgem.gov.uk/about-us/corporate-policy-planning-and-reporting/annual-report-and-accounts

Contents

1. Chair's foreword

The foreword for the 2018 National Report will be my last one before I retire in September, and I would like to emphasise what an exciting time it has been for me to serve as Ofgem's Chairman. My term has coincided with a period of rapid change, not only in the retail energy market, but also in how we generate, transport and consume energy. It has been a privilege to chair Ofgem during such a challenging and important time.

The past year in particular has been a period dictated by uncertainty, including the ongoing negotiations on the future relationship between the United Kingdom and the European Union. While, at present, it is still impossible to predict the final outcome of those discussions, it is important to stress Ofgem's ongoing commitment to working with our fellow regulators in Europe.

Throughout the period until the UK leaves the EU, and beyond, we will continue to act in the spirit of cooperation that we have always tried to bring to our engagement with our European counterparts. We continue to believe that an integrated and liberalised European energy market provides benefits for consumers.

A large amount of our work is influenced by developments in Europe, and over the course of the year, Ofgem has worked towards the timely and full implementation of the European Network Codes and Guidelines. We have continued to work closely with industry to deliver a set of methodologies for the implementation of guidelines on Capacity Allocation and Congestion Management, Forward Capacity Allocation, and the Connection Codes.

During the reporting period, we decided in principle to grant a cap and floor regime to three new interconnectors between the UK and Germany, Norway and France respectively. These collectively represent 4.2GW of new potential capacity and will significantly benefit consumers.

We have recently set out proposals to take forward reforms to support the millions of new electric vehicles forecast on Britain's roads in the coming decades, while keeping costs down for their users and for all energy consumers. A more flexible use of the energy system will allow more electric vehicles to be charged from the existing grid and reduce the need for expensive new power stations and extra grid capacity to be built.

We have also been working in partnership with the retail energy market participants to deliver improvements to the switching process. These would allow our domestic consumers to switch supplier by the end of the next working day. Ofgem is continuing to develop the detailed design, delivery, and commercial and governance arrangements.

Finally, I would like to thank my colleagues in Ofgem for their dedication and hard work. The professionalism and commitment they provide to ensure that the energy system works for all consumers, has been really impressive. I am confident that I am leaving the organisation in good shape and that my successor will enjoy working in this challenging and dynamic environment.

David Gray

2. Main developments in gas and electricity markets 2018

Chapter Summary

This chapter shows some of the most notable work that we have done since the last Regulatory Authorities Report was published in August 2017. Further information about our activities is in our Annual Report and Accounts 2017-18. [2]

We have grouped the main developments into four areas:

- *Investment*
- *Wholesale Markets*
- *Retail Markets*
- *Compliance and Enforcement*

2.1. Investment

2.1.1 Interconnectors

Interconnectors are the physical links that allow the transfer of gas and electricity across national borders.

We assess and regulate new electricity interconnectors through our cap and floor regime[1]. During the reporting period, we made our decision on our Final Project Assessments (FPAs) of the NSL and IFA2 interconnectors, setting provisional cap and floor levels. The two projects are currently under construction and should become operational in 2020 and 2021 respectively.

During the reporting period, we also concluded the Initial Project Assessment stage of our second cap and floor application window. We decided to grant a cap and floor regime in principle to three new interconnectors – NeuConnect (to Germany), NorthConnect (to Norway) and GridLink (to France). These projects collectively represent 4.2GW of potential new capacity and are now under development. The FPA stage for these projects is expected to start by 2021.

The exemption route for new interconnector investment remains available. In the 2017-18 reporting year, we agreed with CRE to refer the Aquind exemption request to ACER because we would be unable to reach a joint agreement on the decision within the legislative six-month timeframe. ACER's decision was published in June 2018.

---

[2] https://www.ofgem.gov.uk/about-us/corporate-policy-planning-and-reporting/annual-report-and-accounts
[1] For more information on cap and floor, see:
https://www.ofgem.gov.uk/system/files/docs/2016/05/cap_and_floor_brochure.pdf

2.1.2 Offshore transmission owners and tenders

Offshore transmission is needed to connect offshore wind generation. From 2017 to date we have continued to manage the offshore transmission competitive tender process to grant licences to operate new offshore transmission assets. An independent evaluation of the first three tender rounds confirmed cost savings to consumers of between £0.7m and £1.1m.

Tender round four began in April 2016 and the fifth in October 2016 - with both rounds combined representing over £2bn of transmission investment and connecting over 2.3GW of offshore wind generating capacity - the biggest tender round to date. We chose the most competitive bids from companies to own and operate the links to offshore sites for over 20 years.

In July 2017, we appointed the Preferred Bidder (tender round four) to own and run the £230m transmission link for the Burbo Bank Extension offshore windfarm in the Bay of Liverpool, UK. In November 2017, we appointed the Preferred Bidder (tender round five) to own and run the £377m transmission link for the Dudgeon offshore windfarm near Norfolk, UK.

2.2. Wholesale Markets

2.2.1 Creating a more independent, future-proofed system operator

National Grid Electricity Transmission plc (**NGET**) is the Electricity System Operator (**ESO**) for Great Britain’s electricity transmission network. It has a major role in balancing the electricity system, but this role has expanded into other areas over the years. The ESO is now more active in transmission network development and the capacity market, and is expected to take on new functions as competition for onshore transmission assets is introduced.

We regulate the ESO to make sure it aligns with consumers’ interests. We sometimes incentivise it to innovate and improve its performance. However, we believe it needs to evolve to ensure it can respond to and facilitate the energy system’s transformation over the next decades. The transformation is highlighting the need for a more coordinated, tailored approach to planning and operating the transmission and distribution systems.

We recently made changes to the ESO’s incentive regime, changing it from a mechanistic ex ante scheme to an evaluative ex post scheme from April 2018. The new arrangements aim to encourage the ESO to identify more proactively how it can maximise consumer benefits across the full range of its activities. The scheme now relies on the assessment of an independent panel of experts to assess the ESO’s performance prior to Ofgem making a decision on whether any incentive payments or penalties should be paid.

We have also taken steps to put in place more separation between National Grid plc's ESO and electricity Transmission Owner (**TO**) network functions, in order to assure the market and Ofgem that the ESO acts in consumers' interests.

Last year we consulted on the roles the ESO should perform, the governance changes to ensure it acts independently and on how the ESO regulatory framework can be designed so it delivers the best possible outcomes for consumers. We expect legal separation to be in place by April 2019 and consider that the ESO can begin the transition to its new, more independent role immediately following that separation.

2.2.2 Security of supply

Security of supply, in both electricity and gas, is a priority for both Ofgem and government. During the reporting period, work in this area included:

- Managing changes to the Capacity Market Rules to ensure consumers are protected and objectives delivered.
- Delivering our mandatory Electricity Market Reform (**EMR**) roles: dealing with disputes on Contracts for Difference (**CoD**) and the capacity market; publishing reports on NGET's delivery of its EMR delivery body role and the operation of the capacity market; receiving and logging price maker memorandums.
- Overseeing the behaviour of participants in the capacity market and referring to enforcement, and taking part in BEIS's operational and policy boards.

2.2.3 European Network Codes

European Network Codes and Guidelines are a suite of binding EU rules that promote competition, efficient use of transmission capacity, integration of energy markets and the harmonisation of rules for the operation of transmission and distribution networks. Our work to implement them involves multiple changes to GB industry arrangements, licences and legislation.

We have seen three new European Network Codes and Guidelines entering into force last year. In particular, the System Operator Guideline came into force in September 2017, followed by the Electricity Balancing Guideline and the Emergency and Restoration Network Code in December 2017.

Ofgem influenced the content of these documents while they were being developed. This involved discussions with the Agency for the Cooperation of European Regulators (hereafter **ACER** or the **Agency**), the European Network of Transmission System Operators for Electricity (**ENTSO-E**), fellow regulators and transmission system operators (**TSOs**) who develop these rules, and supporting the government's Department for Business, Energy and Industrial Strategy (**BEIS**) during negotiations.

2.2.4 Wider European work

Since the referendum decision to leave the European Union (**EU**), Ofgem has continued working very closely with government to provide impartial, expert advice on energy issues by liaising with colleagues in BEIS and the Department for Exiting the European

Union, as well as seeking to ensure we understand the views of industry and maintain working relationships with our neighbouring regulators.

It is impossible to predict the outcome of negotiations, however Ofgem is committed to a close and collaborative working relationship with our fellow regulators in Europe. Throughout the period until the UK leaves the EU, and beyond, we will continue to act in the spirit of cooperation that we have always tried to bring to our engagement with our European counterparts. While there will undoubtedly be challenges ahead, we are proud of the role that GB has played in shaping the Internal Energy Market and we continue to believe that an integrated and liberalised European energy market is firmly in the best interests of Great Britain and European energy consumers.

We have continued to plan for the process of implementing the necessary regulatory changes to ensure that the new relationship with the EU is as smooth as possible.

2.3. Retail Markets

2.3.1 Price protection for vulnerable consumers

From 1 April 2017, the amount suppliers can charge a domestic prepayment customer is subject to a price cap[3] or safeguard tariff, intended to protect consumers by reducing their bills. The price cap places a restriction on the amount suppliers can charge their prepayment customers. It is a transitional measure running until December 2020, when the roll-out of smart meters is expected to be completed. We calculated that the immediate impact of the cap in April 2017 was to reduce the average market price for a dual fuel prepayment customer with typical consumption by around £60[4].

On 2 February 2018, we decided that it is necessary, on a temporary basis, to widen the scope of the PPM safeguard tariff to include a further one million customers in receipt of the Warm Home Discount (**WHD**) who are more likely than average to be vulnerable. Our evidence gathered over the summer of 2017 suggested that regulating the charges that a supplier can charge these consumers will better protect their interests in the short term. The safeguard tariff for WHD customers is set at the same level as the existing protection for prepayment customers.

Like the PPM price cap, the WHD safeguard tariff protects consumers by reducing their bills. The saving delivered will vary over time, because the level of the safeguard tariff moves with cost indices, and suppliers' prices will also change over time. Based on the current level of the safeguard tariff, we estimate that a customer would save around £66 per year on average.

[3] Following a two-year investigation, the Competition and Market Authority (**CMA**) found that prepayment meter (**PPM**) consumers face higher actual and perceived barriers to information and access to switching. As a result, they often face higher annual bills than customers in other market segments. The CMA recommended a cap on prices as a temporary measure until 31 December 2020, to coincide with completion of the smart meter rollout.

[4] https://www.ofgem.gov.uk/system/files/docs/2017/10/financial_protections_for_vulnerable_consumers_-_technical_document.pdf

To ensure the measure is proportionate and in line with EU legislation, the WHD safeguard tariff is a temporary measure that will end in December 2019 if it has not already been replaced by other price protection[5].

2.3.2 Switching programme

Ofgem is leading a major programme to improve consumers' experience of switching by designing and implementing a new switching process that is reliable, fast and cost-effective. The aim is to facilitate greater engagement in the retail energy market by increasing consumers' confidence in their ability to switch supplier with ease. In addition, the programme aims to foster innovation and encourage new entrants by revamping the existing arrangements and decreasing the three-week switching process. Increased switching will exert additional competitive pressure on suppliers, causing them to consider the prices they charge and the services they provide for fear of losing market share.

Over the past year, Ofgem has been working in partnership with retail energy market participants to assess proposals. In September 2017, Ofgem published a draft impact assessment of a range of reform packages and consulted on its preferred option. In February 2018, Ofgem published its decision to implement reliable and fast switching using a new, centralised gas and electricity switching service.

2.3.3 Electricity settlement

The settlement process places incentives on suppliers to match the electricity they buy in the wholesale market with their customers' demand in each half hour of the day.

Currently the majority of consumers in GB are settled 'non-half-hourly' using estimates of when electricity is consumed based on a profile of the average consumer, because most sites do not have meters that can record consumption in each half-hour period.

To secure the benefits of the smart meter roll-out, half-hourly settlement is required. We have already put in place changes to facilitate elective take-up of half-hourly settlement by suppliers including first-movers and innovative market participants. We also moved forward with our project, including consultation on our plans for proposed reforms[6].

In July 2017, we launched our Significant Code Review[7], which sets out our revised timetable following our November 2016 consultation, for reform of market-wide half-hourly settlement (previously mandatory half-hourly settlement). The decision on

[5] Ofgem is exploring introducing a wider vulnerable safeguard tariff and there is also a parallel government initiative for a temporary price cap for customers on Standard Variable Tariffs or Default Tariffs.
[6] https://www.ofgem.gov.uk/publications-and-updates/consultation-mandatory-half-hourly-settlement-aims-and-timetable-reform
[7] https://www.ofgem.gov.uk/publications-and-updates/electricity-settlement-reform-significant-code-review-launch-statement-revised-timetable-and-request-applications-membership-target-operating-model-design-working-group

whether all suppliers across the market should be required to settle half-hourly will be made in the second half of 2019 and is subject to cost-benefit analysis.

2.3.4 Future retail regulation

We have committed over time to rely more on general principles rather than detailed prescriptive rules about how companies should run their businesses.

In 2017, we continued moving towards regulating the retail energy market through enforceable principles, and making less use of detailed prescriptive rules. This provides licence conditions that allow for changes and innovation in a rapidly changing industry, while making sure that consumers are protected.

We worked closely with stakeholders on how to make the transition a success. We held workshops and events, and published papers to take stakeholders with us as we progressed our thinking.

We began streamlining the supply licence of gas and electricity by removing a large amount of the prescription, which should allow suppliers to innovate more in their tariff offerings and some aspects of the supplier-customer communication (e.g. bills, contracts etc.). We issued a statutory consultation and made the decision on how to enable consumers to make informed choices[8], and another on ensuring the Standards of Conduct (**SoC**) achieve policy objectives, including consulting on a new principle to better protect vulnerable consumers[9].

We challenged suppliers to change how they operate, and to focus more on delivering good consumer outcomes. We worked to resolve a number of compliance issues through this engagement, to make sure consumers are protected and suppliers put things right quickly.

2.4. Compliance and Enforcement

In 2017-18 we completed four investigations and concluded alternative enforcement action, resulting in £27.75m returned in compensation to consumers, or in redress. We also concluded 87 compliance cases that did not result in enforcement action, outcomes of which range from changes to suppliers' contractual terms to compensation payments.

Our compliance cases included action on SSE in relation to the discontinuation of a white label tariff and the possible detriment to consumers resulting from this. This affected around 36,000 customers, and SSE paid around £190,000 in redress and reimbursed customers a total amount of around £812,000. We also took action against Utilita for overcharging customers on multi-tiered tariffs as a result of a systems failure that prevented adjustment of usage thresholds in line with the PPM price cap. Utilita reimbursed around 348,000 customers for a total amount of around £3.54 million.

[8] https://www.ofgem.gov.uk/publications-and-updates/statutory-consultation-enabling-consumers-make-informed-choices
[9] https://www.ofgem.gov.uk/about-us/how-we-work/working-consumers/protecting-and-empowering-consumers-vulnerable-situations

Our compliance and enforcement approach goes beyond simply penalising companies financially. We secured changes to behaviours and processes, using our bespoke and more general statutory powers. For example, following our engagement with Co-operative Energy, the supplier agreed to pay £1.8m to consumers because customer complaints reported to us and Citizens Advice (a registered charity that provides free and independent advice to consumers) increased steeply following its IT billing system migration. Since then, the supplier has worked well with us to restore customer service levels, and has assured us it can now meet its obligations.

3. The electricity market

Chapter Summary

This chapter details developments in GB's electricity sector during 2017 and the first half of 2018. This is broken down into sections covering network regulation, promoting competition, and security of supply in the wholesale and retail electricity markets.

3.1. Network Regulation

3.1.1 Unbundling[10]

Transmission system operators
Under Article 10 of the Electricity Directive, we have an obligation to ensure that any undertaking that owns a transmission system is certified as ownership unbundled before it is approved and designated as a TSO.

At the request of the European Commission, the Electricity Act was amended in April 2017 by the Electricity and Gas (Internal Markets) Regulations 2017. The effect of the amendment is that, in determining whether a person meets the ownership unbundling requirement, the Authority must take into account producers or suppliers owned, controlled by or connected with that person wherever they are located, instead of only taking into account such producers or suppliers in a European Economic Area (EEA) state. These amendments applied to new certification applications from April 2017 and transitional arrangements are in place for certified TSOs.

In 2018, we published two final certification decisions, one to certify a new Offshore Transmission Operator (OFTO) and one to certify a new electricity interconnector; (pursuant to section 10D of the Electricity Act and Article 3(2) of Regulation (EC) No. 714/2009).

Under Article 10 of the Electricity Directive, we have an obligation to monitor the continuing compliance of certified TSOs with the requirements of Article 9. Under Article 11, the Authority also has an obligation to notify the European Commission

[10] Articles 9, 10, 11 and 26 of the Electricity Directive and Article 3 of the Electricity Regulation 714/2009 (**Electricity Regulation**) outline our obligations in certification of TSOs as being ownership unbundled. In this section we refer to the Electricity and Gas (Internal Markets) Regulations 2011 and the Gas and Electricity (Ownership Unbundling) Regulations 2014 as 'the GB Regulations'. The GB Regulations implement the Third Package into GB domestic legislation, including the ownership unbundling requirements for TSOs and the requirements for Distribution System Operators (**DSOs**). The GB Regulations have amended the Electricity Act 1989 (**Electricity Act**) to include the requirement for the holders of electricity interconnector and electricity transmission licences to be certified as independent under one of the grounds for certification in the Electricity Act.
The GB Regulations have designated the Authority as the NRA for GB and have given it the responsibility for administering the certification process in GB.

when a person from a third country acquires control of a TSO. In 2017, we made one such notification and reviewed the certification of that TSO (pursuant to section 10L of the Electricity Act); we published our decision to continue the TSO's certification in February 2018.

We continue to monitor the certification status of the certified TSOs in GB, including through the review of annual declarations submitted by the relevant entities.

Distribution system operators
Under Article 26 of the Electricity Directive, we have an obligation to ensure that where the DSO is part of a vertically integrated undertaking , it should be independent at least in its legal form, organisation and decision-making from other activities not relating to distribution.

During the reporting period, we reviewed the information submitted to us by DSOs relating to business independence, financial reporting and output performance. In that context, we were satisfied that the Electricity Directive requirements relating to unbundling were correctly interpreted.

3.1.2 Technical Functioning

Security and reliability standards, quality of service and supply

Transmission
Under Article 37(1)(h) of the Electricity Directive, NRAs must monitor compliance with, and review past performance of, network security and reliability rules as well as a set of approved standards and requirements for quality of service and supply. The National Electricity Transmission System Security and Quality of Supply Standard (**NETS SQSS**) is a technical standard that licensees are required to comply with.

NETS SQSS contains coordinated criteria and methodologies that transmission licensees and the System Operator (**SO**) are required to use by their respective licences, when planning and operating transmission systems. Ofgem must approve any change to the NETS SQSS. In 2017, we approved one change in relation to an electrical phenomenon (sub-synchronous oscillations).

NGET is the designated electricity SO responsible for day-to-day system operation, including balancing supply and demand and constraint management. In order to do this, NGET buys and sells electricity and procures associated services. The costs NGET incur are recovered from users of the system via Balancing Services Use of System (**BSUoS**) charges.

NGET, in its role as SO and as required by its licence, submits to Ofgem a report on an annual basis called National Electricity Transmission System Performance Report. This document[11] provides an overview of system security and quality of service and supply.

[11] https://www.nationalgrid.com/sites/default/files/documents/National%20Electricity%20Transmission%20System%20Performance%20Report%202016-2017.pdf

System reliability
The onshore TOs are incentivised to maintain a reliable and secure system. For the incentive mechanism, network reliability is measured by the total volume of Energy Not Supplied (**ENS**) to customers due to loss of supply events. Each TO has an annual target ENS volume and is either rewarded or penalised each year according to its level of performance against its target. We annually review each TOs performance compared to its target. All three TOs have significantly outperformed their targets in year four (2016-17) of the RIIO-T1 price control. Having performed very well against their respective ENS targets since 2013, we estimate that TOs will meet their targets, which will directly affect the funding at the start of the next price control, RIIO-T2, in 2021.

Key investments in system reliability
TOs are carrying out a number of activities during the RIIO-ET1 period, which target the maintenance and improvements of the security and resilience of the network. The key investments include the replacement for 2017-2018. SO currently anticipates incurring costs of c. £35 million across RIIO-ET1.

Offshore Transmission Owners' system availability incentive targets are set out in each individual Offshore Transmission Owners licence. The mechanism incentivises the OFTOs to maintain system availability and therefore export capacity available to offshore generators. OFTOs receive financial rewards or incur penalties for performance above or below this target.

Distribution
In GB, licensed electricity Distribution Network Operators (**DNOs**) are required to design their networks to meet the requirements of the Engineering Recommendation standard P2/6. This standard sets out system planning and network capacity requirements and details the minimum standards for the security of supply. In the event that a licensee cannot comply with standard licence condition 24 of the electricity distribution licence (Distribution System planning standard and quality of performance reporting), it can apply to Ofgem for a derogation. In 2017-2018, Ofgem did not grant any derogations. Ofgem has extended the derogation where Group Demand is less than 60MW until 31 March 2019[12].

The electricity distribution price control, RIIO-ED1, began in April 2015 and will run until 2023. The revenues that the 14 DNOs are allowed to recover for this period are linked to the delivery of outputs that provide for long-term reliability, minimise the number and duration of interruptions, and to ensure adaptation to climate change requirements.

The Electricity (Standards of Performance) Regulations 2015 are a legal framework of specific minimum levels of service customers should expect from their DNO. If a company fails to meet a standard of performance, it must make a payment to the customer affected. The standards cover areas such as restoring supply during an unplanned interruption, connections, and voltage quality.

We also have other financial incentives to encourage improvements in performance. The Interruptions Incentive Scheme incentivises DNOs to reduce the frequency and

[12] https://www.ofgem.gov.uk/publications-and-updates/decision-and-direction-extension-engineering-recommendation-p26-derogation-where-group-demand-60mw

duration of power cuts experienced by their customers. Both the number of customer interruptions and the duration of interruptions have fallen by 11% on average since the start of RIIO-ED1.

Innovation

Innovation will be essential for DNOs and TOs to deliver security and reliability of supply at an efficient cost, while dealing with uncertainty. In the RIIO1 price control, we established the Network Innovation stimulus, to help network companies understand what they need to do to provide security of supply at value for money as GB moves to a low carbon economy. The stimulus has a number of different components, including the Network Innovation Competition (**NIC**), to the value of c. £70m, 260 small projects under the Network Innovation Allowance (**NIA**), and the Innovation Roll-out Mechanism (**IRM**).

The Stimulus includes two annual NICs to the value of circa £34m and one for electricity transmission companies and one for gas network companies. The Electricity NIC is an annual opportunity for electricity network companies to compete for funding for the development and demonstration of new technologies, operating and commercial arrangements. Funding will be provided for the best innovation projects, which help all network operators understand what they need to do to provide environmental benefits, reduce costs, and maintain security as Great Britain moves to a low carbon economy. Up to £70m per annum is available through the Electricity NIC.

In 2017, we received seven submissions for the 2017 Electricity NIC seeking a total of £66.2m. In November 2017, Ofgem decided to fund five of these projects. The successful projects received a total of £42.4 million. The 2018 NIC is underway with six submissions that have passed the Initial Screening Process.

The NIA is designed to fund smaller scale research, development and demonstration projects. The NIA provides each licensee with an allowance to spend on innovation projects in line with the NIA Governance Document. In 2016-2017, TOs claimed a total of £8.4m under NIA.

The IRM is designed to facilitate the roll-out of proven innovations, which will provide long-term value for money to consumers, in advance of the next price control period. To qualify, roll-outs must deliver carbon and/or environmental benefits and must not provide a commercial return for the licensee within the price control to the value of circa £8m. In addition, the cost efficiencies delivered from rolling out smart grid solutions and wider network innovation from Low Carbon Network Fund trials were reflected in reduced revenues for DNOs in the RIIO-ED1 period.

For electricity distribution, there are two application windows for the IRM, the first one in May 2017, and the second one in May 2019. In 2017, we received one application from UK Power Networks and three applications from Scottish Power Energy Networks in the first RIIO-ED1 IRM window, with a total value of £79 million (2012/13 prices). Ultimately, Ofgem decided to award £8.01 million IRM funding to SP Energy Networks for its Dumfries and Galloway Active Network Management scheme[13].

[13] https://www.ofgem.gov.uk/publications-and-updates/decision-2017-electricity-distribution-innovation-roll-out-mechanism

For electricity transmission, there were two application windows for the IRM, the first one in May 2015, and the second in May 2018. Ofgem did not receive any IRM applications in 2018.

Monitoring time taken to connect and repair

Under Article 37(1)(m) of the Electricity Directive, regulators are required to monitor the time taken by transmission and distribution system operators (**DSOs**) to make connections and repairs. Here we report on how we monitored this requirement during 2017.

Transmission

NGET is the SO for the electricity transmission network in GB.[14] As such, it is responsible for the day-to-day operation of the system in Scotland, Wales, England and offshore. In addition to its system operator role, NGET is also the owner of the TO in England and Wales. The system in Scotland is owned by Scottish Power Transmission ltd (**SPT**) and Scottish Hydro Electric Transmission plc (**SHE-T**), and the offshore network is owned by a variety of OFTOs.

All customers wishing to directly connect to the National Electricity Transmission System (**NETS**) will require a contract with National Grid TO. The process of connecting to the NETS is summarised below:

- Applications for connection to the transmission network in Scotland and offshore, at voltages of 132kV and above, are made directly to NGET[15].
- Once the application fee has been received, the project can be 'clock started', meaning NGET must offer terms for a connection within three months.
- NGET, in turn, makes an application to the relevant Scottish network company asking it to specify the most economic and efficient design and provide costs for the completion of necessary work.
- NGET utilises the information received from the Scottish network company and produces an offer. The offer includes a contract and details of any onshore construction works needed as a result of the connection.
- Upon receipt of the connection offer, the user has three months to accept or decline the connection offer. Once the offer is signed, the user becomes a contracted customer.

For offshore generators and interconnectors, the connection point is sometimes less obvious because of its distance from the onshore transmission system. NGET carry out

[14] We propose to legally separate the National Grid SO and TO functions by 1 April 2019 (the start of the financial year). Further details can be found on our website: https://www.ofgem.gov.uk/publications-and-updates/future-arrangements-electricity-system-operator-its-role-and-structure

[15] In England and Wales, if the connection voltage is 132kV or less then this is normally owned by the DSO. Whereas in Scotland and offshore, the level of 132kV already qualifies as transmission voltage.

a process called 'CION' (Connection and Infrastructure Options Note) to identify the connection point with the lowest cost[16].

Each network company is required to deliver timely and effective connections to the network through their licences[17]. SPT and SHE-T both face a timely connections financial incentive under the RIIO price control framework, by which their annual revenues are reduced if they fail to offer terms for connection to its transmission network within the specified period. NGET[18] has no direct financial incentive on timeliness of connection offers but needs to comply with its licence condition obligations (financial penalty may be levied through general enforcement).

We receive biannual 'Timely Connections' reports from the onshore TOs. These reports provide us with information on the factors affecting the connection dates offered to generators. This enables us to assess whether any changes to the existing framework are needed. A non-confidential version of the report is available on NGET's website[19].

For the latest period April-September 2017, 90% of offers in England and Wales met the customer's requested connection date, albeit some were provided with access restrictions, which facilitated an earlier date than would have otherwise been provided. The equivalent percentage for Scotland was 80%. The scale of the transmission reinforcements required in these regions still presents a challenge in gaining planning consent and obtaining system access to complete transmission upgrade works. Many generation connections also remain in a 'scoping' phase without planning consent and therefore there is significant uncertainty as to which generation is going to connect and in what timescales.

To date, all OFTOs own and operate the offshore transmission systems, which are built by offshore generators to connect their generating stations to the NETS (the generator build model). As such, there have been no problems under the offshore transmission regime with the time taken to connect during this reporting year. OFTOs' licences require them to report, every quarter, offshore transmission system performance and where that performance has fallen below the target of 98% availability, the OFTO is penalised up to 10% of its yearly revenue and up to 50% over five years. Where the OFTO is able to demonstrate that performance has fallen as a result of an 'Exceptional Event'[20], this period will not count against their availability target. When reviewing Exceptional Event claims, we look at whether the OFTO has followed good industry practice to restore the outage promptly. We can impose a financial penalty on any

[16] Please see the CION Process Guidance Note: http://www2.nationalgrid.com/uk/services/electricityconnections/policies-and-guidance
[17] Data for this reporting year not yet available.
[18] Licence timescales also apply to offshore transmission owners under the OFTO build model.
[19] https://www.nationalgrid.com/uk/electricity/connections/after-you-have-connected
[20] 'Exceptional Event' is defined as "an event or circumstance that is beyond the reasonable control of the licensee and which results in or causes a Transmission Service Reduction and includes (without limitation) an act of God, an act of the public enemy, war declared or undeclared, threat of war, terrorist act, blockade, revolution, riot, insurrection, civil commotion, public demonstration, sabotage, act of vandalism, fire (not related to weather), governmental restraint, Act of Parliament, any other legislation, byelaw, or directive (not being any order, regulation or direction under section 32, 33, 34 and 35 of the Act) or decision of a Court of Competent Authority or the European Commission or any other body having jurisdiction over the activities of the licensee provided that lack of funds shall not be interpreted as a cause beyond the reasonable control of the licensee. For the avoidance of doubt, weather conditions which are reasonably expected to occur at the location of the event or circumstance are not considered to be beyond the reasonable control of the licensee" in the Generic Offshore Transmission Owner (OFTO) licence.

OFTO that has failed to meet its system availability incentive target. In 2017, system availability on the offshore transmission system was above 99%.

Distribution

For distribution network reporting we consider two elements: 'time to quote' and 'time to connect'. DNOs are incentivised to connect customers in a timely and efficient manner through the Time to Connect incentive, which sets both targets for these two elements. Time to quote is the difference, in working days, between the date the customer applies for a new connection and the date a quotation is issued to the customer. Time to connect is the difference between the date on which the customer accepts the quote and the final connection date (when the connection has been installed, commissioned and left safe).

Historically, we have monitored the time taken by DNOs to provide connection offers and (since 2010) complete the connection. We have also established guaranteed standards for connections that provide compensation payments to customers if the DNO fails to deliver specified connection services within minimum timescales. These standards cover the provision of quotations, scheduling agreed dates for works with customers and completing works on the dates agreed with customers. Failure to meet these standards on 90% of occasions in each quarter constitutes a breach of the licence. In 2016-17, all DNOs performed well under the Connections Guaranteed Standards of Performance. All DNOs met or exceeded Ofgem's annual report target and received a green RAG status.

As part of RIIO-ED1, we have a 'time to connect' incentive, which rewards DNOs if they are able to issue quotes and complete connections (for smaller connection projects) quicker than the target timescales. The companies have also set their own targets for the time taken to connect which they report on annually. All DNOs met their 'time to quote' targets but just over half of all DNOs failed to meet the targets on 'time to connect' new customers to the network.

We also monitor the time taken to repair faults through the Interruptions Incentive Scheme. The time taken to repair has been incentivised as part of the 'customer minutes lost' element of the Scheme. As noted above, the length of time customers are off supply has fallen by 11% since the start of RIIO-ED1.

Prevention of cross-subsidies

Under Article 37(1)(f) of the Electricity Directive, each NRA is required to ensure that there are no cross-subsidies between transmission, distribution and supply activities.

In GB, licensed electricity distribution, gas distribution and transmission network operators (including offshore licensees) are subject to licence conditions prohibiting regulated businesses from giving cross-subsidies to, or receiving cross-subsidies from, related undertakings.

Electricity and gas transmission and distribution licences include a requirement for independent auditors to carry out a range of procedures, agreed with the Authority, to provide assurance that obligations to avoid discrimination and cross-subsidies are being respected. We review the auditors' reports and may raise supplementary questions, as appropriate.

The unbundling requirements as described in Section 3.1.1 also provide for greater structural separation of transmission interests from generation, production and supply interests in order to prevent cross-subsidies.

One area that we will continue to monitor is the interpretation and application of requirements for financial transactions to be completed at arm’s length and on normal commercial terms. This is especially relevant for the terms of loans made to or by the licensee. Other key risk areas that we take into account are:

- the basis of recharging for services provided at a group level;
- the justification for any management fees charged to the licensee by related parties; and
- the interest rates charged on intra-group loans affecting the licensee.

A requirement to have at least two sufficiently independent directors has been in effect since April 2014.

3.1.3 Network tariffs for connection and access

Under Article 37(1)(a), (3)(c), (d), (6)(a), (8), (10), (12), of the Electricity Directive, NRAs are required to fix or approve transmission or distribution tariffs or their methodologies. In this section we report on our activities related to the regulation of tariffs and network charges (for transmission and distribution) during the reporting period.

Transmission
In GB users of the electricity transmission system are subject to three types of transmission charges: Connection charges, Transmission Network Use of System (**TNUoS**) charges and BSUoS charges. For all three charges, the methodologies must be approved by Ofgem, but we do not set or approve the level of individual charges.

Connection charges
For the purpose of the GB domestic regime, connection charges relate to the provision and maintenance of connection assets that are solely required to connect a particular user (i.e. a generator) to the main transmission system. The cost of these assets are recovered directly from the user via connection charges that are imposed by NGET under its connection charging methodology. The connection charging methodology is applied by NGET in its role as SO and is approved by Ofgem.

Transmission Network Use of System charges
TNUoS charges relate to the cost of installation and maintenance of the GB electricity transmission system. The costs are recovered by NGET under its TNUoS charging methodology. The TNUoS charging methodology is applied by NGET in its role as SO and is approved by Ofgem. TNUoS charges are recovered from all users of the GB electricity transmission system (excluding interconnectors). Portions of these charges vary by location, reflecting the costs that users impose on the transmission system. TNUoS charges broadly combine three components: local charges (generators only), wider locational charges and residual charges (generation and demand).

Balancing Services Use of System Charges
NGET recovers the costs of balancing the system through BSUoS charges, derived from the BSUoS charging methodology that is set out in Section 14 of the Connection and Use of System Code (**CUSC**) and approved by Ofgem.

Code modifications
In June 2017, we approved a code modification proposal (CMP264/265 WACM4), which had the effect of changing the transmission charging arrangements for smaller embedded generators[21]. This changed the TNUoS charging methodology to recover residual charges over gross demand, for the purposes of charging suppliers for their customers' share of the TNUoS demand residual. The change also introduced an 'embedded export tariff' for the average exports made by smaller embedded generators during the triad period[22]. This will be phased in over a three-year period, starting from April 2018. This decision to approve the modification proposal was judicially reviewed but confirmed in June 2018.

On 15 September 2017, we approved a code modification proposal (CMP268) to recognise the different costs that different types of generators impose on the transmission network. The modification changed how charges were calculated for different types of generators, so that lower load factor conventional generators in areas with significant amounts of low-carbon generation do not face high charges that do not reflect the costs they impose on the system.

In November 2017, we approved a code modification proposal (CMP282) to alter the calculation of charges for demand users in areas with very low demand and a high proportion of power exported from the distribution system to the transmission system (exporting Grid Supply Points). The modification resolves a defect in the charging methodology that was resulting in distorted tariffs for some users in these areas.

In November 2017, we published our decision to reject code modification proposal CMP261. The modification sought to remedy an alleged breach of the €0-€2.5/MWh permitted range of GB generator transmission charges, as set out in Commission Regulation (EU) 838/2010, in charging year 2015/16.

We rejected the modification on the basis that there had not been a breach of the permitted range. The code modification proposal meant that Ofgem was required to consider which assets, as set out in the GB domestic charging regime, fell within the 'Connection Exclusion'[23] as set out in Part B of the Annex to Regulation(EU) 838/2010. We concluded that a subset of local TNUoS charges, which pay for assets built between the generator and the pre-existing transmission system to accommodate a new connection, fall within the Connection Exclusion. This meant excluding at the very least all offshore transmission links (offshore generation-only spurs or "GOS") and some onshore local charges from the calculation.

---

[21] Smaller embedded generation is generation <100MW, located on the distribution system.
[22] The triad period refers to the three half-hour settlement periods with highest system demand between November and February, separated by at least 10 clear days.
[23] The value of the annual average transmission charges excludes certain charges, including "charges […] for physical assets required to connect to the system or the upgrade of the connection" (in this document we refer to this exclusion as "the Connection Exclusion").

The decision was appealed to the CMA in December 2017. The CMA dismissed the appeal and confirmed our decision on 26 February 2018. Our decision on CMP261 and the CMA appeal have not altered the transmission charging methodology.

Reviews of Use of System Charges

In the UK, use of system charges include 'forward-looking' charges, which are designed to incentivise the efficient use of the network, and 'residual' charges, which are top-up charges set to ensure that total allowed revenues are recovered.

In November 2017, we launched our Electricity Network Access project.[24] The project is reviewing the current electricity network access arrangements and our approach to setting 'forward-looking' charges. This includes both connection charges and elements of use of system charges. The project aims to ensure electricity networks are used efficiently and flexibly, so that we can each have the access we need and consumers benefit from new technologies and services, while avoiding unnecessary costs on energy bills in general. We set up two industry task forces to help assess the potential options for this change. We issued a consultation in July 2018[25] on the scope of our proposed review, including a comprehensive review of distribution use of system (DUoS) charges, and a focused review of transmission charging, as well as the distribution connection boundary.

We launched the Targeted Charging Review Significant Code Review (TCR SCR) last August, with the objectives of:

1. considering reform of how electricity network residual charges are set, for both transmission and distribution, taking into account distortions, practicality and fairness
2. keeping under review those remaining 'embedded benefits' that may be distorting investment or dispatch decisions

Under the current system, we believe:

- Some users may make decisions based (in part) on residual charges, and pay lower charges as a result, although their actions have not reduced the total level of costs which need to be recovered.
- The increase in availability and affordability of smaller scale generation means that some consumers can more easily reduce their net demand.
- The current way that residual charges are set creates some incentives that could lead to a more expensive system overall.
- Current residual charges fall increasingly on groups of customers who are less able to take action.

[24] Reform of electricity network access and forward-looking charges: a working paper, 6 November 2017; https://www.ofgem.gov.uk/publications-and-updates/reform-electricity-network-access-and-forward-looking-charges-working-paper

[25] Getting more out of our electricity networks by reforming access and forward-looking charging arrangements, 23 July 2018; https://www.ofgem.gov.uk/publications-and-updates/getting-more-out-our-electricity-networks-through-reforming-access-and-forward-looking-charging-arrangement

We also indicated that, if BSUoS remains a cost-recovery charge, it would make sense to consider aligning charging for BSUoS with any reformed residual charging arrangements developed as part of this SCR.

The TCR has continued to advance, with further stakeholder workshops being undertaken in 2017 and 2018, commissioning a quantitative modelling exercise, as well as seeking further views at our newly set up Charging Futures Forum. A provisional decision is planned for autumn 2018.

Distribution

The electricity distribution licence requires DNOs to have in force at all times a Use of System Charging Methodology, and a Connection Charging Methodology (collectively known as 'the Charging Methodologies'). Both must be approved by Ofgem.

DNOs have developed common approaches to connections charging and distribution use of system (**DUoS**) charging. These common approaches include:

- the Common Distribution Charging Methodology for all customers connected at the lower voltages;
- the Extra High Voltage Distribution Charging Methodology for all demand and generation customers at the higher voltages; and
- the Common Connections Charging Methodology, incorporated into all DNO connection methodologies.

Each DNO's connection charging methodology incorporates a company-specific section as well as the common methodology. The licence requires DNOs to comply with their charging methodologies and to publish Charging Statements prepared in accordance with those methodologies – except where explicit consent is given by Ofgem.

Section 23 of the Electricity Act enables us to determine certain disputes, including those where a DNO has applied charges in line with their Charging Methodologies.

Stakeholders can provide input to proposed changes to the methodologies or tariffs. This is done either through participation in industry working groups, or through the public consultation process. We take into consideration any input received from stakeholders when reaching a decision on methodologies or tariffs. Appeals can be made either to CMA or via judicial review.

Stakeholders have the right to apply for a judicial review of any such decision. There has not been any application for judicial review of any decision regarding the methodologies or tariffs during the reporting period.

As part of the electricity distribution price control RIIO-ED1, we also introduced a specific incentive for large connection customers, the 'Incentive on Connections Engagement'. This aims to drive DNOs to understand and meet the needs of major connection customers (larger metered demand, unmetered demand, distributed generation). If a DNO fails to do this, then it could incur a penalty. As part of the Incentive on Connections Engagement, DNOs must submit two reports to Ofgem, one at the start of the regulatory year (i.e. the financial year) outlining their commitments to improve services and another at the end of the year reporting back against the commitments made. Throughout the year, we consult with stakeholders to understand their views on the DNOs' work plans and target outputs. The DNOs reported on 2016-

17 performance in May 2017. We engaged with stakeholders to formally review DNO performance and ultimately decided not to issue any penalties in 2017[26].

As with transmission charges above, we are currently reviewing the approach to setting DUoS charges. In November 2017, we launched our Electricity Network Access project that is reviewing the 'forward looking' element of use of system charges. 'Forward looking' charges are designed to incentivise the efficient use of the network. Under the Electricity Network Access project, we anticipate consulting on our Initial Proposals for Reform, if needed, in Summer 2018.

The residual charge element of DUoS charges is designed to top-up the charges set to ensure that total allowed revenues are recovered. As with transmission charges, we are currently reviewing the approach to recovering residual charges as part of the TCR.

3.1.4 Cross-border issues

To achieve a fully integrated European energy market, it is vital that NRAs coordinate effectively on cross-border issues. In this section, we provide an update on our interconnector activities (including allocation of capacity and congestion management), our investment plans with regards to the Ten Year Network Development Plan (**TYNDP**) and our cooperation with other NRAs during 2017/18.

European Network Codes
Please see Main Developments part of the report on Wholesale Markets **(section 2.2)**

Access rules for interconnection
The GB electricity market is interconnected to the Netherlands (BritNed), France (IFA), Northern Ireland (Moyle) and the Republic of Ireland (EWIC).

The Third Package introduced new responsibilities for NRAs regarding the rules for granting access to cross-border electricity infrastructure, which in GB are reflected in the standard licence conditions of the electricity interconnector licence[27]. These responsibilities can be summarised as follows:

- licensees are required to submit any new or amended charging methodologies and access rules to Ofgem for approval;
- both Ofgem and the interconnector licensee must ensure that charging methodologies and access rules, and any modifications to these, are: objective, transparent, non-discriminatory and compliant with the Electricity Regulation and any relevant legally binding decision of the European Commission or ACER;
- interconnector licensees are required to review their access rules at least once each year and consult on any modifications that may be necessary to ensure that the access rules better achieve the relevant objectives. Where

[26] https://www.ofgem.gov.uk/publications-and-updates/outcome-our-assessment-under-2017-riio-ed1-incentive-connection-engagement
[27] See standard license conditions 10, 11 and 11A: https://epr.ofgem.gov.uk//Content/Documents/Electricity_Interconnector_Standard%20Licence%20Conditions%20Consolidated%20-%20Current%20Version.pdf.

modifications are proposed, interconnector licensees must provide Ofgem with a report that sets out how any proposed modifications better achieve the relevant objectives. The report must present details of any responses to the consultation and of any changes to the proposed modifications as a result of those. In 2017, the four operational GB interconnectors submitted proposed modified access rules. We approved each of these on the basis that they better achieve the relevant objectives[28]; and

- Ofgem has the power to request licensees to review and amend their access rules and charging methodology.

In 2017, Ofgem continued to monitor interconnector statistics, including information on auctions, capacity, nominations and flows.

Existing interconnection

*Interconnexion France-Angleterre (**IFA**)*

The England-France Interconnector is jointly operated by National Grid Interconnectors Limited and the French TSO, Réseau de Transport d'Électricité. IFA is a high voltage direct current line with a capacity of 2000MW.

Capacity is allocated explicitly in the long term, using a single coordinated capacity platform. 'Netting'[29] and 'use-it-or-sell-it' are applied to ensure that the maximum possible capacity is made available to market participants in all timeframes. Day-ahead capacity is allocated via implicit auctions following the implementation of market coupling. Explicit auctions are used for intraday trading.

BritNed

The 1000MW BritNed high voltage direct current interconnector, between GB and the Netherlands, began operating in 2011. BritNed allocates capacity on its cable through a blend of implicit and explicit auctions. It holds annual, quarterly, monthly, and multi-day explicit auctions, an implicit day-ahead auction, and explicit intraday auctions.

BritNed has a 25-year exemption from rules relating to the use of interconnector revenues and charging methodologies, and certain conditions are not in operation in its licence[30]. However, it must still comply with the interconnector licence condition relating to access rules, introduced as a result of the Third Package[31].

---

[28] IFA: https://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-and-charging-methodology-ifa-interconnector;
BritNed: https://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-britned-interconnector;
Moyle:https://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-and-charging-methodology-moyle-interconnector;
EWIC: https://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-and-charging-methodology-east-west-ewic-interconnector

[29] Netting means that any capacity sold in one direction is netted off against capacity sold in the other direction.

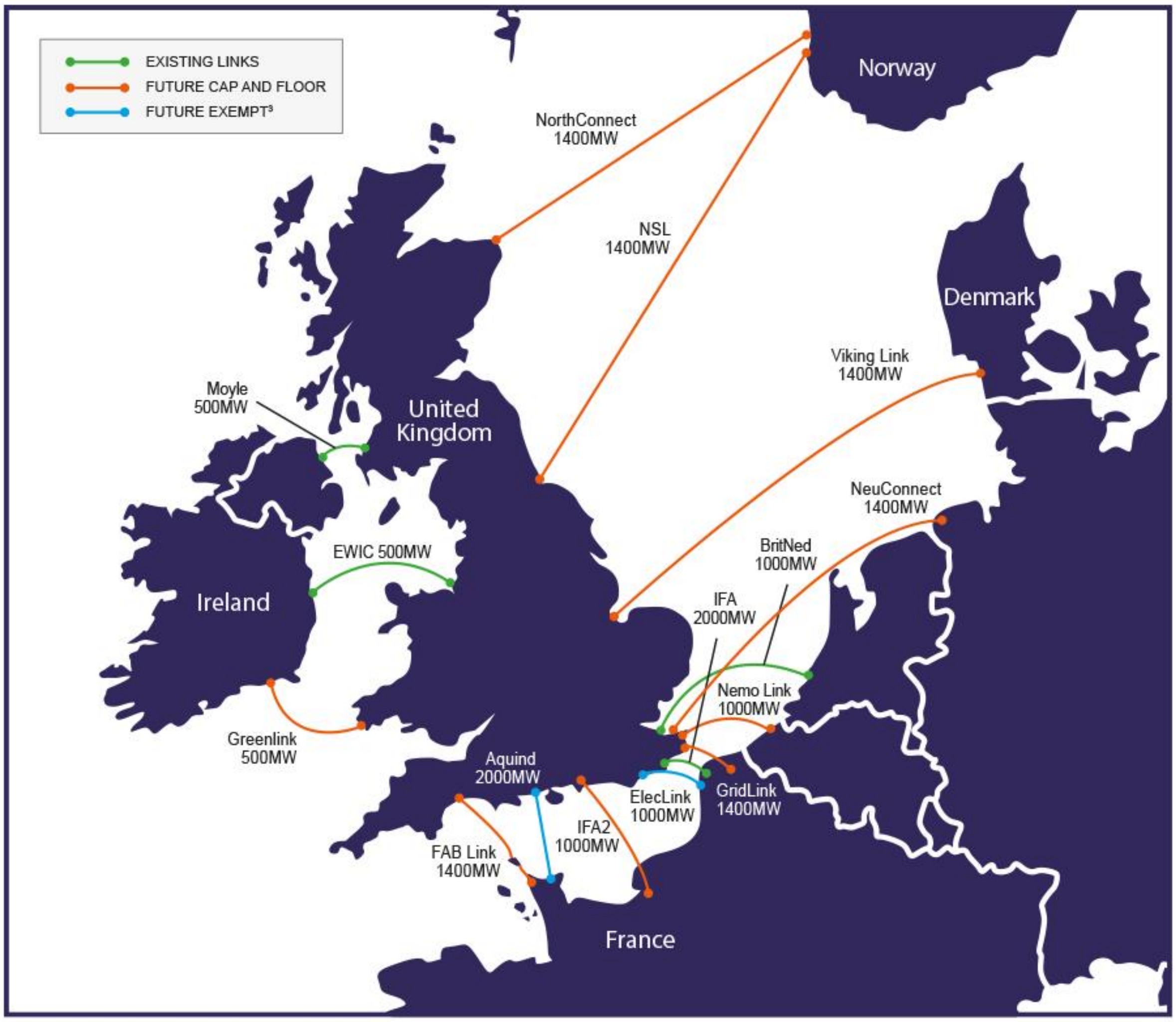
[30] Standard license conditions 9 and 10 of the electricity interconnector license.

[31] Standard license condition 11A of the electricity interconnector license.

Moyle
The Moyle interconnector, which links Scotland to Northern Ireland, offers capacity to the market through explicit long term, daily and intraday auctions. It offers a range of long term products from one month to one year. To maximise the availability of capacity, the 'use-it-or-sell-it' rule applies to all long term capacity.

*EirGrid East-West Interconnector (**EWIC**)*
EWIC became operational in November 2012. It has a technical capacity of 500MW between Wales and Ireland and uses the same capacity allocation platform as Moyle. It offers capacity through explicit long term (monthly and annual), daily and intraday auctions and applies the 'use-it-or-sell-it' rule to long term capacity.

Figure 1: Existing and future electricity interconnectors



Note: for illustrative purposes only.
Merchant 'exempt' is the alternative route for delivering interconnector investment in GB. Projects are developed without consumer underwriting and request exemptions from certain aspects of EU legislation.

New interconnection

Nemo Link

Nemo Link will be a 1000MW electricity interconnector to Belgium and is the first interconnector project to be regulated under our cap and floor regime[32]. We published our final decision to award the cap and floor regime to Nemo Link in December 2014[33]. Nemo Link is currently under construction and is expected to enter commercial operation in early 2019.

In February 2018, Nemo Link was certified as a TSO in accordance with the Electricity Directive[34] on the basis that all of the five tests set out in section 10F of the Electricity Act have been met.

ElecLink

ElecLink, a planned 1000MW interconnector project between GB and France, has a partial exemption from use of revenues, third party access and unbundling rules under Article 17 of Electricity Regulation[35]. ElecLink is currently under construction, and is expected to enter commercial operation in 2020.

NSL

NSL (formerly NSN) is a planned interconnector to Norway. At just over 700km, it will be the longest subsea interconnector in the world. Currently under construction, it is expected to start operating in late 2021 and will have a capacity of 1400MW.

We approved the needs case for the NSL project in 2015[36]. In July 2017, we made our decision on NSL's Final Project Assessment, setting the provisional cap and floor levels at £89.85m and £50.90m. We will confirm the final cap and floor levels for the project prior to operation at our post-construction review stage[37].

In 2017/18 we also updated NSL's interconnector licence to give effect to the cap and floor regime decisions that apply to NSL.

IFA2

Interconnexion France-Angleterre 2 (**IFA2**) is a planned interconnector to France, with capacity of 1000MW. In April 2017, contracts were awarded to build the interconnector and construction is now underway, with an anticipated operation date in late 2020. We have recently published our decision on IFA2's Final Project Assessment, setting the provisional cap and floor levels at £50.7m and £27.6m (in 2016/17 prices).

---

[32] The cap and floor regime is the regulated route for new interconnector investment in GB.
[33] Our 2014 decision: https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/final_cap_and_floor_regime_design_for_nemo_master_-_for_publication_1.pdf
[34] https://www.ofgem.gov.uk/publications-and-updates/certification-under-ownership-unbundling-requirements-third-package-decision-gas-and-electricity-markets-authority-nemo-link-limited
[35] https://www.ofgem.gov.uk/publications-and-updates/final-decision-eleclink-limited%E2%80%99s-request-exemption-under-article-17-regulation-ec-7142009-great-britain-france-electricity-interconnector
[36] Our 2015 decision: https://www.ofgem.gov.uk/publications-and-updates/decision-initial-project-assessment-nsn-interconnector-norway
[37] https://www.ofgem.gov.uk/publications-and-updates/decision-final-project-assessment-nsl-interconnector-norway

Ofgem's cap and floor regime
In 2015, we granted a cap and floor regime to five interconnector projects as part of the first application window of cap and floor projects[38]. These projects will connect GB with France (FAB Link - 1400MW and IFA2 - 1000MW), Denmark (Viking Link - 1400MW), Norway (NSL – 1400MW) and the Republic of Ireland (Greenlink – 500MW). Two of the five projects are now under construction (see above), and the others continue to make good progress towards operation.

Following work throughout 2017, we concluded our second cap and floor application window in January 2018. We granted a cap and floor regime in principle to three new interconnector projects. These projects propose to connect GB with Norway (NorthConnect – 1400MW), France (GridLink – 1400MW) and Germany (NeuConnect – 1400MW). These projects are now under development and we expect our Final Project Assessment stage for these three projects to start by January 2021.

The GB transmission system currently has 4GW of electricity interconnection. The projects that are currently under construction (mentioned above) are set to increase GB interconnector capacity to 8.4GW. If all other future projects illustrated in Figure 1 are realised, GB interconnector capacity could increase up to 17.9GW.

Aquind
Aquind is a proposed 2000MW high voltage direct current interconnector to France. The developer applied for an exemption in summer 2017. We agreed with *Commission* de *Régulation de l'Énergie*, the French energy regulator, to refer the Aquind exemption request to ACER because we would be unable to reach a joint agreement on the decision within the legislative six-month timeframe. This is in line with Article 17(5) of Electricity Regulation. In June 2018 ACER decided not to grant the exemption.

Table 1 below provides an overview of the current development status of new GB interconnector projects.

Table 1: New interconnector project progress

Project	Regulatory approval stage		Construction	Estimated operational date
Cap and floor regime (10.9GW)				
	IPA	**FPA**		
Nemo Link	Pilot project – approval in December 2014.		✓	2019
NSL	✓	✓	✓	2021
FAB Link	✓			2022
IFA2	✓	✓	✓	2020

[38] Under the cap and floor approach, if interconnector developers' revenues exceed the cap then revenue above the cap is returned to consumers. Conversely, if their revenues fall below the floor then consumers top up developers' revenues to the level of the floor. Prior to Window 1, Nemo Link was the pilot project under the cap and floor regime.

Viking Link	✓			2022
Greenlink	✓			2022
GridLink	✓			2022/3
NeuConnect	✓			2022/3
NorthConnect	✓			2022/3
Exemption projects (3GW)				
ElecLink	Exemption granted in September 2014.		✓	2020
Aquind	Exemption request referred to ACER in December 2017; ACER decided not to grant an exemption in June 2018.			2022

Other significant developments

*Network Options Assessment (**NOA**) for interconnectors*
In 2017, National Grid as the GB SO published its third iteration of the NOA for interconnectors, which aims to signal where further GB interconnection may be beneficial (beyond those projects already approved). A draft methodology for the NOA for interconnectors 2018/19 is currently under development. A decision on the new methodology is expected in summer 2018.

Overcoming operability challenges
In our January 2018 decision[39] on the cap and floor projects applying under the second application window, we acknowledged that the changing energy landscape presents a number of system operability challenges for the SO and noted that the GB SO has a number of initiatives currently either underway or under consideration to help meet these operability challenges. We will continue to monitor developments in this area as new projects mature.

3.1.5 Compliance

Ensuring that NRAs and market participants comply with mandatory obligations is essential for a well-functioning energy market. Below, we report on our powers to secure compliance with the Electricity Regulation and decisions of the Agency and the European Commission, as well as the investigations that have concluded during 2017/18 relating to existing legislation.

Ensuring compliance with binding decisions of the Agency and the European Commission, and with the Guidelines
Under the Third Package, NRAs are required to comply with and implement binding decisions of ACER and of the European Commission. The amended Electricity Act provides the Authority with the powers to carry out these functions.

[39] https://www.ofgem.gov.uk/publications-and-updates/decision-initial-project-assessment-gridlink-neuconnect-and-northconnect-interconnectors

On 17 November 2016, ACER made a binding decision concerning the determination of capacity coordination regions[40].

Consistent with this decision, GB is part of two such regions: Ireland and United Kingdom (IUK) and Channel.

Compliance of transmission and distribution companies, system owners and electricity undertakings with relevant EU legislation, including cross-border issues

Ofgem has powers to investigate compliance of distribution companies, onshore and offshore transmission companies, system owners and electricity undertakings with relevant EU legislation. We have powers to impose penalties if a breach is found. As a condition of certification, TSOs must notify the Authority if they know (or reasonably should know) of any events or circumstances which have occurred, or are likely to occur, that may affect their eligibility for certification or their compliance with the legislative framework. They must provide an annual declaration (approved by a resolution of the TSOs board of directors) on this. The Authority also has powers to require that information is provided by a TSO for monitoring the TSOs certification.

Ofgem, in close cooperation with other relevant NRAs, ensures TSOs are complying with European Network Codes and Guidelines by monitoring GB TSO compliance with their licence conditions, business rules, standard transportation agreements and all other relevant operational rules and agreements.

Investigations concluded and notable compliance action

*Standards of Conduct (**SoC**) and Billing*

British Gas agreed to pay £9.5m, in payments to directly affected microbusiness and non-domestic customers, and to the Money Advice Trust, as a result of issues including failure to provide customers with quarterly bills and failure to provide information on the end date of the customers' fixed term contract on their bill. We closed this case in June 2017, by which time British Gas had already agreed to settle the investigation.

Licence conditions in force at the time required suppliers to take all reasonable steps to achieve the SoC**.** Our findings included that British Gas customers experienced a drop in customer service following the implementation of a new billing system; that customers did not always have their complaints open and closed properly and that British Gas did not act promptly to put things right.

The redress payments to the Money Advice Trust's Business Debtline will be used to provide debt advice services to business customers experiencing difficulties in paying their energy bills.

Switching to prepayment meters

In July 2016 we opened an investigation in response to concerns that SSE may not have been treating customers fairly when switching them to PPMs. The investigation

[40] http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2006-2016%20on%20CCR.pdf

found evidence that SSE did not routinely offer customers all possible options, fully assess a customer's ability to pay when agreeing debt repayment plans, nor provide customers with clear written details about certain disadvantages of PPMs.

On considering the findings, we decided that this investigation was suitable for alternative action under Ofgem's Enforcement Guidelines[41]. This enables Ofgem to agree action on the part of a supplier to implement improvement actions to address any ongoing concerns. This was considered appropriate due to the short-lived nature of the conduct and the relatively limited degree of financial harm that was caused to SSE customers.

SSE engaged proactively with Ofgem to resolve the concerns that had been identified and agree to implement measures, which include: retraining staff; enhanced monitoring of calls held with customers in payment difficulty; refunding and compensating customers who had paid more having had a PPM installed and offering customers, where appropriate, to have a credit meter installed at zero cost. In October 2017 we reviewed SSE's implementation of these measures, and were satisfied that SSE had taken appropriate remedial action to address potential non-complaint activity and that affected customers had been appropriately compensated.

Standards of Conduct and Marketing
In January 2018 we found that E (Gas and Electricity) (**E**) failed to take all reasonable steps to ensure that information, provided by E or its representatives, was not misleading and was fair in terms of content and how it was presented. E also failed to take all reasonable steps to ensure that representatives who visited a customer's premises could be readily identified as a representative of the licensee and that they were fit and proper persons to visit and enter the customer's premises.

E agreed to pay £260,000 (less £1 financial penalty) in voluntary redress. The redress was paid to Ofgem's Voluntary Redress Fund (administered by the Energy Saving Trust) and the money will be used to benefit energy customers.

Guaranteed Standards
Suppliers and their agents must meet minimum standards, including when they visit customers on their premises. If they do not meet these standards, they must pay customers compensation. In July 2017, British Gas paid £1.1m to some of its customers after its third party agents missed appointments with customers or did not keep them on time, and then did not compensate its customers as required by Ofgem.

Ofgem worked with British Gas to make improvements and took action to change its customer service processes to ensure that in the future if appointments are missed or delayed customers receive the compensation they are entitled to. British Gas has compensated affected customers in full and in addition paid an extra amount. Due to these actions, Ofgem agreed to the redress package and not to take formal enforcement action.

Prepayment Meters – the Prepay price cap

[41] https://www.ofgem.gov.uk/publications-and-updates/enforcement-guidelines

The Prepayment Charge Restriction requires licensees to ensure that the charges for the supply of electricity and gas to domestic customers do not exceed an amount that is set for a six-month charging period. To be compliant, Utilita had to reduce its usage thresholds on 1 April 2017, but due to an error, the thresholds were not changed. This resulted in customers paying more than they should have.

Utilita self-reported this issue and took swift action to correct the wrong usage thresholds and to refund and compensate affected customers. Throughout the investigation period, Utilita worked closely with Ofgem. We have reviewed and are satisfied that Utilita has taken appropriate remedial action to address potential non-compliant activity and that affected customers have been appropriately refunded and compensated.

Ongoing investigations

Customer Service
In March 2018, we issued a provisional order banning Iresa from taking on new customers, increasing existing customers' direct debits, and asking them for one-off-payments, for up to three months until it resolves customer service issues. A provisional order may be used, if considered necessary, to require a regulated person to do or not do something to prevent loss or damage that might arise before a final order can be made.

We have ordered Iresa to:

- extend call centre hours, bring down average call waiting times to below five minutes and respond to customers who request a call back by the end of the next working day;
- respond to customer emails within five working days;
- clear a backlog of customer emails;
- log and record all expressions of customer dissatisfaction; and
- act to identify and manage all of its vulnerable customers, including offering to put them on a Priority Services Register (**PSR**).

If Iresa fails to take these steps, within the next three months, we could take further action which includes, ultimately, revoking the supplier's licence. A wider investigation into Iresa's compliance is ongoing.

The following enforcement investigations were also ongoing as of March 2018:

- Investigation into Npower's compliance with its obligations under standard licence condition 12 of the electricity supply licences in relation to advanced electricity meters.
- Investigation into whether Extra Energy has complied with its obligations under the gas and electricity supply licences (standard licence conditions 7B, 14, 21B, 25C, 27 and 31A) and with the Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008 in relation to billing, customer service and complaints handling.

- Investigation into whether Economy Energy has complied with the relevant conditions set out under the gas and electricity supply licences in relation to its sales and marketing obligations.
- Investigation into whether there has been an infringement of Chapter I of the Competition Act 1998 in relation to possible anticompetitive agreements and concerted practices.
- Investigation into whether British Gas has complied with its obligations under standard licence conditions 24 and 25C of the gas and electricity supply licences in relation to termination of domestic supply contracts.
- Investigation into whether SSE has complied with its obligations under standard licence conditions 31A and 25C of the gas and electricity supply licences in relation to provision of information on Annual Statements to domestic customers.
- Investigation into whether Ovo has complied with its obligations under standard licence conditions 25C (SLC 0 from 10 October 2017) [42] and 31A of the gas and electricity supply licences in respect of information on bills, statements of account and Annual Statements.
- As detailed above, the investigation into whether Iresa has complied with its obligations under standard licence conditions 14, 23, 25C (SLC 0 from 10 October 2017) and 27 of the gas and electricity supply licences and the Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008.
- Investigation into whether there has been an infringement of Chapter II of the Competition Act 1998 and/or Article 102 of the Treaty on the Functioning of the European Union, concerning potential abuse of a dominant position by a company providing services to the energy industry.

REMIT - section 3.2.1.1 of this report provides information on our work in this area in respect of monitoring, investigation and improving compliance.

The fact that the investigations have been launched does not imply that any company has breached its obligations.

3.2. Promoting Competition

3.2.1 Wholesale markets

The following section is an overview of our monitoring under Article 37(1)(i), (j), (k), (l), (u) and Article 40(3) of the Electricity Directive, and the main developments in the wholesale electricity market in GB during 2017. Details are summarised below:

[42] Standard licence Condition 25C was in force until October 2017 and has now been replaced by Standard licence Conditions 0 and 0A which came into force on 10 October 2017.

- Monthly averaged over-the-counter[43] (**OTC**) day-ahead baseload and peakload electricity prices for 2017 were up on 2016.
- Price increases over the past year were driven by higher gas and coal costs.
- Annual churn rates for total traded electricity volumes decreased in 2017.
- The total traded volume of wholesale electricity decreased in 2017 by 23% to 1,104 TWh. This was driven by decreases in OTC and exchange trading.
- Net imports along GB's interconnectors decreased by around 12% between 2016 and 2017 to 15.6 TWh.
- EDF again contributed the largest proportion of power generation in GB. RWE, Drax and SSE all produced more than 5% of total GB generation.

Policy developments in several areas of GB's wholesale electricity market have continued throughout 2017. Some notable policy areas of our work include:

- Maintaining a set of wholesale market indicators on our website[44].
- Consulting on and subsequently introducing the Transmission Constraint Licence Condition as a permanent, standard licence condition of the generation licence. It prohibits generators from obtaining an excessive benefit for electricity generation when there are transmission constraints.
- Delivering changes to the CM rules to improve the prequalification process and ensure it is robust.
- Developing and implementing European Network Codes and Guidelines.

3.2.1.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

Prices

Wholesale prices are compiled, and made available to market participants by a number of independent pricing agencies, energy market brokers, and exchanges.

Argus Media, ICIS Energy and Platts provide pricing based on reported Over the Counter (**OTC**) trades, which are made available to the market via subscription services. Data providers produce pricing data for a wide variety of peak and baseload contracts up to several years ahead of delivery. Real-time energy broker pricing based on OTC trades is also available via financial data providers.

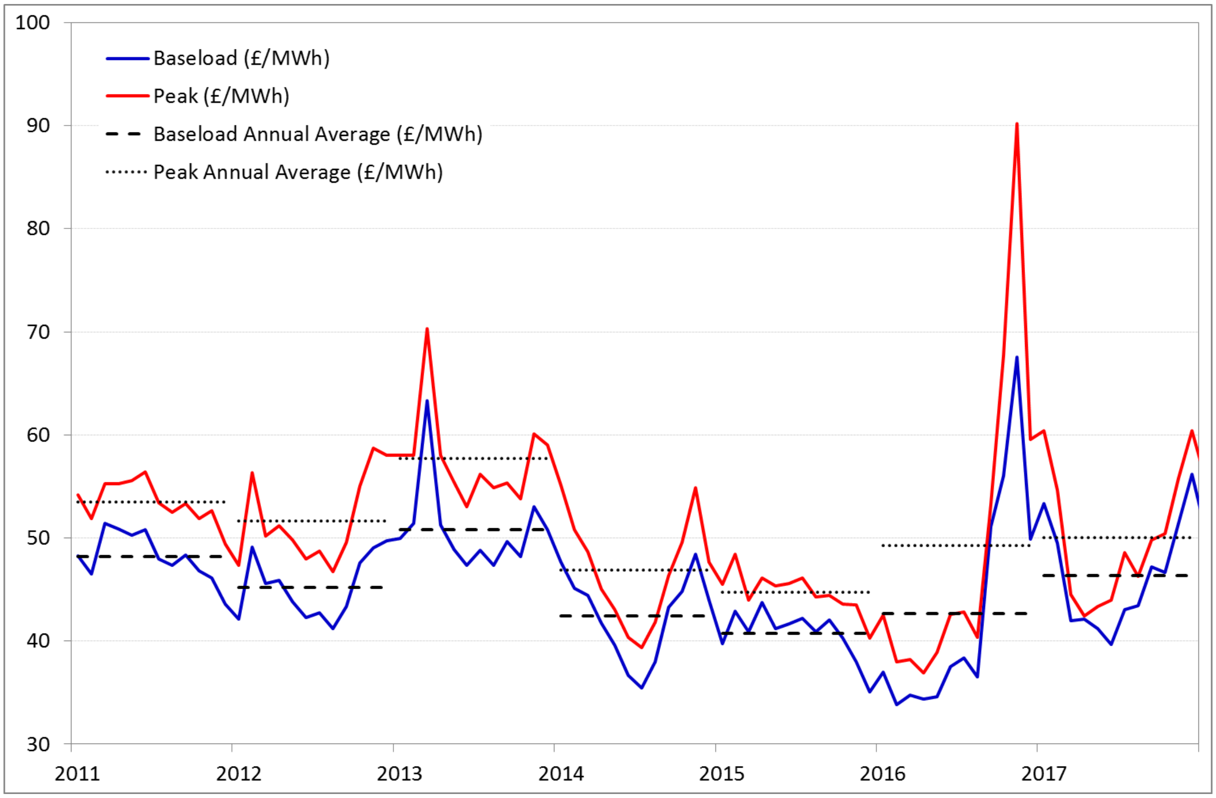
In addition to a wide range of OTC pricing data, the three power exchanges in the GB electricity market[45] all provide pricing data to the market. Cash-out prices from the

[43] Over The Counter - bilateral trading between two market participants or where an intermediary (the broker) brings together a buyer and seller.
[44] https://www.ofgem.gov.uk/data-portal/wholesale-market-indicators
[45] Epex Spot, N2EX (a Nord pool Spot and Nasdaq OMX commodities joint venture) and the Intercontinental Exchange (ICE).

balancing market are also provided to the market via the Balancing Mechanism Reporting Service site[46].

Figure 2, shows monthly averaged OTC day-ahead baseload and peak electricity prices in GB since the beginning of 2011. Baseload and peak prices have been on a broadly upward trend since July 2017, following higher gas and coal costs - the main fuels used in power generation.

Figure 2: GB monthly and annual averaged day-ahead baseload and peakload power prices



Source: ICIS Energy

Liquidity

On 31 March 2014, new regulatory requirements to promote liquidity in the wholesale electricity market came into effect[47]. We introduced these reforms, known as 'Secure and Promote' (**S&P**) because we were concerned that low liquidity was a barrier to effective competition. S&P was introduced as a special licence condition, in the generation licences of the largest six vertically integrated companies and the two largest independent generators. The requirements aim to help independent suppliers access the wholesale market and ensure that it provides the products and price signals that all companies need to compete effectively.

---

[46] Balancing mechanism reporting service: https://www.bmreports.com/bmrs/?q=help/about-us. Section 4.2 has more details on gas prices.
[47] https://www.ofgem.gov.uk/publications-and-updates/wholesale-power-market-liquidity-decision-letter

The regulations include reforms to meet three objectives:

1) **A market making obligation** that obliges firms to post prices at which they would be prepared to buy and sell electricity. It creates more transparency in the wholesale market as participants can see prices for delivery of electricity up to two years out. This is important for building trust and confidence.
2) **Supplier Market Access rules** to improve access to the wholesale market for small suppliers. These rules ensure that the largest eight generators cannot treat requests to trade by independents as a low priority. The rules also set deadlines for them to respond to these requests.
3) **A reporting requirement** of day-ahead trading of the six largest vertically integrated companies and the two largest independent generators.

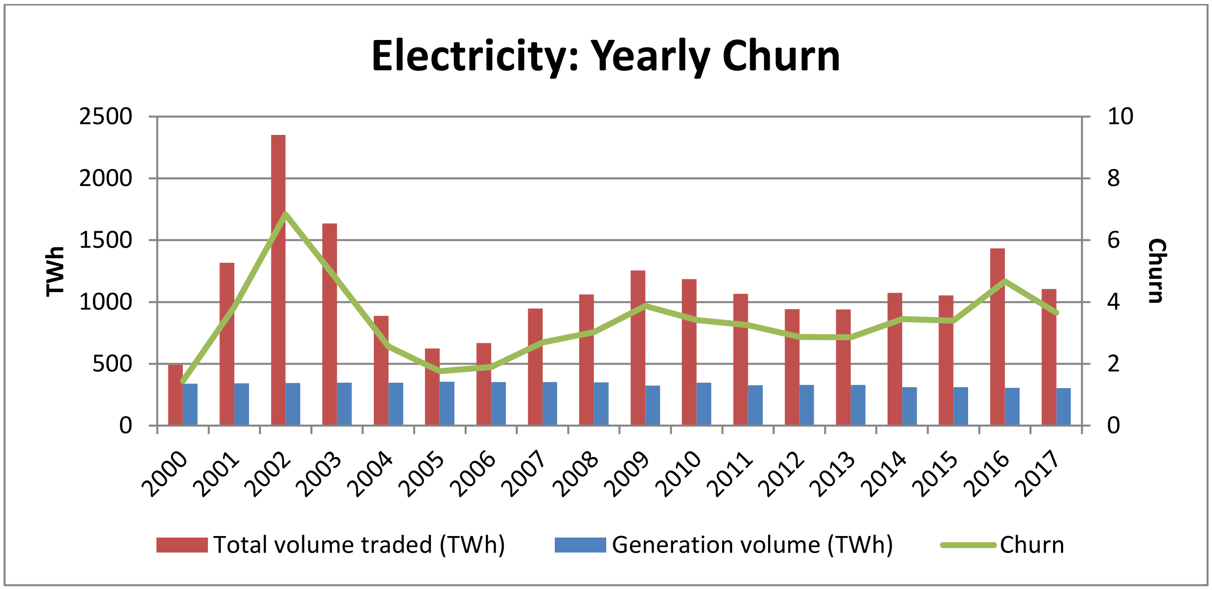
We have been monitoring the effects of the reforms to assess their impact and to make sure the obligated parties comply with them.

At the time of introducing the S&P, we committed to review the policy after no less than three years. We published our "S&P review: Consultation" in July 2017[48], which closed in September 2017. The consultation initially outlined our assessment of how we think the policy has been working. Data suggests that some measures of liquidity have improved since the introduction of the procedures:

- **Reference prices**: The policy has led to improved reference prices through the mandated bid-offer spreads on market making products, but this is not reflected in non-mandated products.
- **Volumes**: Greater traded volumes of forward products, suggesting some improvement in the availability of products which support hedging.
- **Trading throughout the day**: A further concentration of traded volumes within the market making windows. Evidence suggests near-term markets have not been negatively affected.

[48] Secure and Promote review: Consultation' in July 2017. https://www.ofgem.gov.uk/system/files/docs/2017/07/liquidity_consultation_july_2017_final_0.pdf

Figure 3: GB total traded volume, generated volume and churn ratios from 2000 to 2017



Source: ICIS Energy, Epex Spot, ICE, N2EX, DECC DUKES.

We also consulted stakeholders for their views and for supporting evidence on:

- Impact of the licence condition to date, including costs and benefits.
- If there is insufficient evidence to establish definitive conclusions on the effectiveness of the policy.
- Whether the policy could be refined to better facilitate the original objectives.

We found[49] general agreement amongst stakeholders that liquidity has either improved or remained constant since the introduction of the policy.

In December 2017, we published a consultation on proposed changes to the licence condition[50]. It focused on smaller adjustments to the S&P licence condition, with the view of reducing the cost for the licensees whilst maintaining the core of the policy. We proposed a market making window 'soft landing' to allow a 'warming up' period at the start of each window. We also consulted on a reduction in the fast market rule threshold to allow spreads to widen in response to a 1% fast market. Finally, we highlighted our intentions to carry out further work on the S&P licence condition review in the medium to longer term, including a review of the criteria for obligated parties to make them clearer. This review is ongoing.

---

[49] Responses to the consultation are available on our website.
https://www.ofgem.gov.uk/system/files/docs/2017/11/all_responses.zip
[50] Secure and Promote Review: Consultation on changes to the special licence condition.
https://www.ofgem.gov.uk/system/files/docs/2017/12/december_2017_consultation_final.pdf

Transparency

REMIT

The EU Regulation 1227/2011 on Wholesale Energy Market Integrity and Transparency (**REMIT**) prohibits insider trading and market manipulation, bringing regulation of the wholesale power and gas markets in line with equivalent financial markets[51]. Since 2013, Ofgem has been monitoring and investigating potential breaches of REMIT[52]. Our REMIT work supports effective competition and promotes trust and confidence in the wholesale markets.

We have continued to monitor the wholesale market for suspected breaches of REMIT and conducted all stages of REMIT investigations from identification of issues through to formal investigation. In addition, we have engaged with a number of companies in order to improve compliance processes. We have registered over 1200 market participants and continued to support those who still needed to register.

We have been actively providing guidance on REMIT issues through our open letters, and have been working closely with ACER, other NRAs and financial regulators, such as the Financial Conduct Authority, to develop the REMIT framework. This cooperation helps us deal effectively with potential instances of market abuse that have an impact on wholesale energy markets in more than one EU country or where there may be crossovers with financial markets.

In November 2017, we published the first summary of our REMIT activities[53]. We are looking to provide greater transparency of our REMIT activities, therefore we will report every year on our activities under REMIT, including high level overviews of our case activity and discussions of behaviour considered under REMIT.

The Transparency Regulation

EU Regulation 543/2013 on submission and publication of data in electricity markets (the **Transparency Regulation**) is a tool for making sure that the data needed for participants to take efficient production, consumption and trading decisions is made available promptly. Primary data owners must publish data about the generation, transportation and consumption of electricity on a central European platform. Throughout the reporting period, Ofgem has monitored the compliance of the responsible GB parties and contributed to the ACER opinion on ENTSO-E's review of the Manual of Procedures for the Transparency Platform, which was completed in January 2017. Ofgem will continue to monitor compliance with the data publication requirements of the Transparency Regulation.

Market opening and competition

Ofgem will publish its State of the Market report later this year. This follows our first annual State of the Market report in 2014 and subsequent conclusion of the CMA investigation in 2016.

---

[51] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011R1227&from=EN

[52] In 2013 the Electricity and Gas (Market Integrity and Transparency) (Enforcement etc) Regulations 2013 took effect. These gave Ofgem the ability to monitor, investigate and enforce against breaches of REMIT.

[53] https://www.ofgem.gov.uk/publications-and-updates/remit-market-briefing

Wholesale market trading
A total of 1,104TWh of wholesale electricity was traded in GB during 2017. This is a significant decrease (23%) on total traded volume in 2016.

OTC trading
Total OTC trading in 2017 decreased by 322TWh year-on-year to 916TWh. The proportion of the total electricity volumes OTC traded was broadly stable year-on-year. Around 83% of all power traded in GB was OTC traded, down slightly from 86% in 2016.

Exchange trading
Volumes traded on the exchanges decreased in 2017 to 188TWh, from 194TWh in 2016. Volumes on the Epex Spot intraday market increased slightly at 15.2TWh (from 13.5TWh in 2016)[54].

The N2EX exchange, which mainly sees day-ahead and future trading, saw slight increases in traded volumes. Volumes in its day-ahead auction rose to 114TWh, up from 112TWh in 2016. The Epex Spot day-ahead auction saw an increase in activity, with traded volumes at 50TWh in 2017, from 4 TWh in 2016[55].

UK power futures exchange traded contracts are also available on the Intercontinental Exchange (**ICE**). Traded volumes on the ICE more than halved in 2017 to 7.9TWh, from 24.7TWh in 2016.

Market integration
For background information on GB interconnection, interconnection policy and market coupling please see **section 3.1.4** of this report.

The GB market is broadly integrated with neighbouring markets. Prices for trades along these are established using market-based methods. In 2017, the interconnectors suffered reduced availability: the Moyle interconnector operated at half capacity (250MW) between February 2017 – September 2017 and the French interconnector operated at reduced capacity at intervals up to September 2017 (500MW–1.5GW).

IFA (2GW) and BritNed (1GW) participate in the NWE Day Ahead market coupling pilot project that was launched in February 2014. Market coupling should make sure power is produced where it is most efficient, and transported to areas of consumption where it is most valued. This should lower prices for consumers and support secure and sustainable supply.

Net imports of power along GB's four interconnectors decreased in 2017 to 15.6TWh (from 17.8TWh in 2016[56]). Gross flows (both imports and exports) increased from 22.7TWh in 2016 to 23.0TWh in 2017. Imports accounted for 68% of the gross flows in 2017.

Exports from GB to France were around 2.2TWh in 2017, meaning 82% of the flows along IFA in 2017 were imports. BritNed similarly imported into GB for a majority of

[54] Includes both Epex Spot Continuo available from: https://www.epexspot.com/
[55] Includes both Epex Spot Continuo available from: https://www.epexspot.com/
[56] Historical figures have been revised because National Grid have revised its reporting data.

settlement periods in 2017. Moyle imported to GB from the Irish Single Energy Market 55% of the time in 2017. East-West imported to GB from the Irish Single Energy Market 71% of the time in 2017.

Market concentration
Figure 4, shows that four generation companies had market shares exceeding 5%. The largest three companies generated almost half of the electricity supplied to the GB market in 2017[57].

Metered generation and interconnector volumes in 2017 indicate that EDF again contributed the largest proportion of power supply in GB (24%). EDF is the majority owner of most of GB's nuclear fleet, which operates as baseload generation capacity. Drax, RWE, and SSE all produced more than 5% of total GB generation. The market share of generators outside of the largest eight rose from around 23% to 29% in 2017.

Figure 4: Wholesale electricity market share in GB, 2017 metered volume

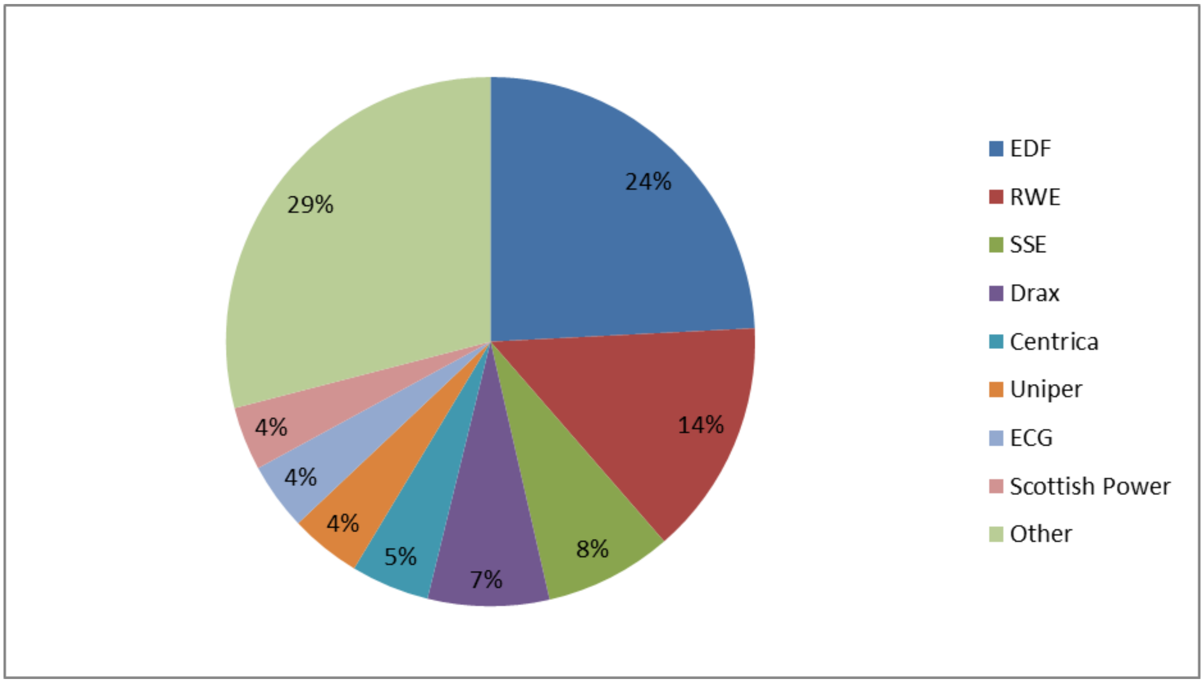


Table 1 provides the Herfindahl-Hirschman Index[58] (**HHI**) analysis based on the same data as the market shares.

The HHI is an indicator for the level of competition in a specific market. Although HHIs do not provide conclusive evidence on the level of competition, they point to whether there are potential risks to the market not delivering competitive outcomes.

[57] Based on metered generation volume and interconnector imports. Generation shares are based on proprietary data. Station demand has been excluded.
[58] HHI is commonly used to assess market concentration, ranging from 10,000 for a monopoly to just above zero for perfect competition. The CMA in the UK categorise a market as 'concentrated' if its HHI exceeds 1,000 and 'highly concentrated' if its HHI exceeds 1,800.

The largest individual HHI by capacity is EDF (HHI of 585), which is higher than 2016. The total HHI fell to 1,034 in 2017.

Table 1: HHI based on 2017 metered volumes

Company	HHI
EDF	585
RWE	208
SSE	61
Drax	55
Centrica	23
Uniper	17
ECG	15
Scottish Power	10
Other	**61**

Market power concerns in the electricity wholesale sector
The Transmission Constraint Licence Condition (**TCLC**) was introduced in 2012 to limit behaviour by electricity generators during periods when there is insufficient capacity to transmit electricity from where it is generated to where the demand is. In such circumstances, known as transmission constraints, the SO will need to ensure that the level of electricity supplied equals the level of electricity demanded, by either paying generators to increase their generation, or accepting a payment from (or sometimes pay) generators to reduce their generation. These actions can significantly increase the costs of balancing the electricity system during periods of transmission constraint. TCLC was therefore introduced to prohibit electricity generators from obtaining an excessive benefit from electricity generation in relation to periods of transmission constraints.

The original TCLC was a temporary licence condition that expired in July 2017. Following industry consultation, Ofgem decided to extend part of TCLC as a permanent standard licence condition, which came into force the day after the original one expired[59].

Throughout 2017, we continued to monitor the bids and offers submitted in the balancing mechanism and generators' compliance with TCLC.

3.2.2 Retail markets

Ofgem's assessment of and engagement with the retail energy market often takes a holistic approach and may not always distinguish between the electricity and gas sectors – rather, the market is considered as a whole. This is, for example, reflected below in the section on the state of competition and in **section 5**, which looks at consumer protection and dispute settlement. Where Ofgem does assess the electricity and gas retail sectors separately, we have grouped the information accordingly, i.e. this section primarily covers the electricity market while the **section 4.2.2** considers

[59] https://www.ofgem.gov.uk/publications-and-updates/final-decision-guidance-transmission-constraint-licence-condition

the gas market. Nevertheless, some sources of evidence, such as consumer surveys on switching trends, cover the behaviour in relation to both markets.

State of competition and main changes on previous year

Our State of the Energy Market Report 2017[60], which provides a comprehensive annual assessment of the state of energy markets in GB, found that competition continues to benefit consumers who are able and willing to shop around, meaning they can usually secure a good deal.

However, the report also found that competition is not working well for consumers who are less active. More than half of consumers (58%) have never switched supplier or have switched only once. 60% of all consumers are on a default variable tariff, which can be around £300 more expensive each year than the cheapest fixed-term deals. Despite losing consumers to competitors since 2012, the six largest suppliers have maintained a combined profit margin of between 3.9% and 4.5%. Price differences between variable tariffs and fixed tariffs have widened over this period, suggesting suppliers can offer low-price fixed tariffs to attract active consumers and cover direct costs, but rely on the higher prices charged to less active consumers to cover operating costs and maintain profits.

Retail markets typically work well for larger businesses, but small and microbusinesses pay much more on average. Larger business consumers can often negotiate good deals with suppliers, but smaller ones tend to pay more for their energy, and switch infrequently. Average business electricity prices are around 50% higher for very small firms than for large or very large firms, while non-domestic gas prices can be twice as high (some of this is driven by cost differences). More than a quarter of businesses (27%) believe it is too complex or time-consuming to find a new tariff or supplier.

A key change in the domestic retail market over the previous year has been the continuing high levels of new entry and growth of independent suppliers[61]. As of December 2017, there were 69 suppliers offering electricity and/or gas to household consumers, 17 more than a year earlier. Since 2012, new suppliers have intensified competition, shrinking the six largest energy suppliers' share of the household market from nearly all consumers to 79% of electricity customers and 78% gas customers in December 2017.

On the demand side, switching and engagement are increasing. The annual household switching rates in 2017 increased to 18.2% in electricity and to 18.6% in gas, the highest since 2011.

The CMA remedies[62], intended to improve competition and outcomes for consumers, are being implemented and are starting to show results. Following the implementation of a price cap on PPM tariffs in April 2017, prices immediately fell by around £60 for a typical dual fuel PPM consumer, though some of the cheapest tariffs are no longer available. Based on the current level of the safeguard tariff, we estimate that a customer would save around £66 per year on average. We are also trialling measures

[60] https://www.ofgem.gov.uk/system/files/docs/2017/10/state_of_the_market_report_2017_web_1.pdf

[61] Suppliers which have entered the market since market liberalisation.

[62] https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf

to improve consumer engagement, for instance by communicating cheaper offers to disengaged customers.

3.2.2.1 Monitoring the level of prices and the effectiveness of market opening and competition

In this section, we report on the results of our monitoring activities during 2017 with regard to the supply side of the market (i.e. market structure and prices), the demand side (i.e. consumer switching and consumer experience), contractual practices and capability of data exchange processes.

The health of our retail market is crucial for delivering benefits to consumers. We monitor how well competition is working in the interests of consumers, and how far it supports consumer outcomes such as lower bills, better quality of service, benefits for society as a whole and reduced environmental damage.

Ofgem monitors the effectiveness of competition in retail markets, in particular through regularly collecting market participants' data. We publish our analysis on our website[63], in market monitoring reports[64] and commission consumer research to inform our view of market engagement and the quality of service consumers receive.

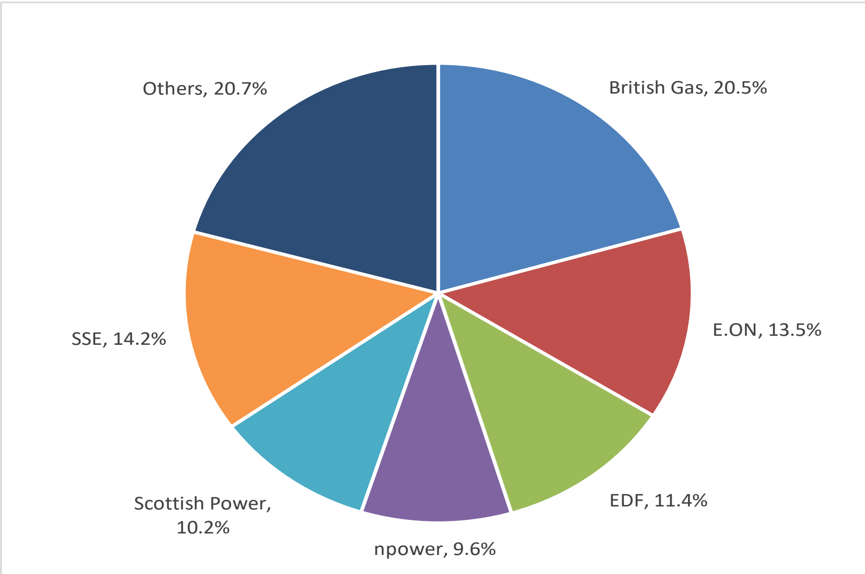
Market structure

Domestic market share
In December 2017, there were 28.2m domestic electricity consumers in GB. As Figure 5 shows, the largest six suppliers (British Gas, E.ON, EDF, npower, ScottishPower and SSE) supplied 79% of them[65].

In 2017, 16 new electricity suppliers became active in the domestic segment, resulting in 56 active smaller suppliers in the electricity market. The combined market share of these smaller suppliers has increased to around 21% - a five-percentage point increase relative to December 2016. More stable conditions in wholesale markets and the exemption from some environmental charges for smaller suppliers are among the drivers for the growth. The new entrants are competing on price, quality of service and simplicity (e.g. offering only one or two tariffs), but some are also using product differentiation strategies to enter into 'niche' markets (e.g. local tariffs, renewable energy or smart technology).

[63] https://www.ofgem.gov.uk/data-portal/retail-market-indicators
[64] https://www.ofgem.gov.uk/system/files/docs/2017/10/state_of_the_market_report_2017_web_1.pdf
[65] The figures relating to the national market shares do not reveal regional characteristics of the electricity market, which are a legacy of the regional monopolies that existed in the electricity sector prior to market liberalisation. The former electricity incumbents retain, on average, a market share of 30% in their home regions.

Figure 5: GB Domestic electricity suppliers' market share, December 2017



Source: Ofgem analysis of DNO data

Non-domestic market shares

We also regularly monitor non-domestic suppliers' market shares-[66]. The six largest suppliers in the domestic market are less present in the non-domestic market, which has seen many independent suppliers enter since 2008. In addition to the former incumbent suppliers, there are 57 independent non-domestic suppliers, 11 of which entered the market in 2017.

In the segment of non-domestic sites with non-half hourly meters, which mostly correspond to small businesses, the aggregate market share of the largest six suppliers was 80%, down from 82% in 2016. In the segment of the larger non-domestic sites, those with half-hourly meters, the joint market share of the largest six suppliers was 71%, down from 74% in 2016.

Table 2: Market shares in non-domestic electricity market, December 2017

Supplier	Non-domestic sites	
	Non-half hourly	**Half-hourly**
SSE	17.0%	12.1%
British Gas	14.9%	3.4%
E.ON	13.8%	11.4%
npower	12.5%	17.1%
EDF	11.5%	16.1%
Opus	10.8%	1.9%

[66] The data presented in this report are based on number of supply points. However, it should be noted that market shares by volume may show a different story as some suppliers may have a low number of supply points which have however very high volumes of energy supplied.

Scottish Power	7.0%	6.1%
Total Gas and Power	2.8%	7.1%
Haven Power	1.5%	7.0%
Others	8.2%	17.8%

Source: Ofgem analysis of DNO data

Herfindahl–Hirschman Indices

As mentioned above, the HHI is often used to gauge market concentration. Though HHI is not conclusive evidence of the level of competition, it suggests whether there are potential risks of the market not delivering competitive outcomes. The relevant HHIs for electricity markets in December 2017 were as follows (with 2016 figures in brackets):

- domestic: 1,157 (1,321*)*;
- non-domestic, non-half hourly metered sites: 1,170 (1,228); and
- non-domestic, half hourly metered sites: 1,023 (1,100).

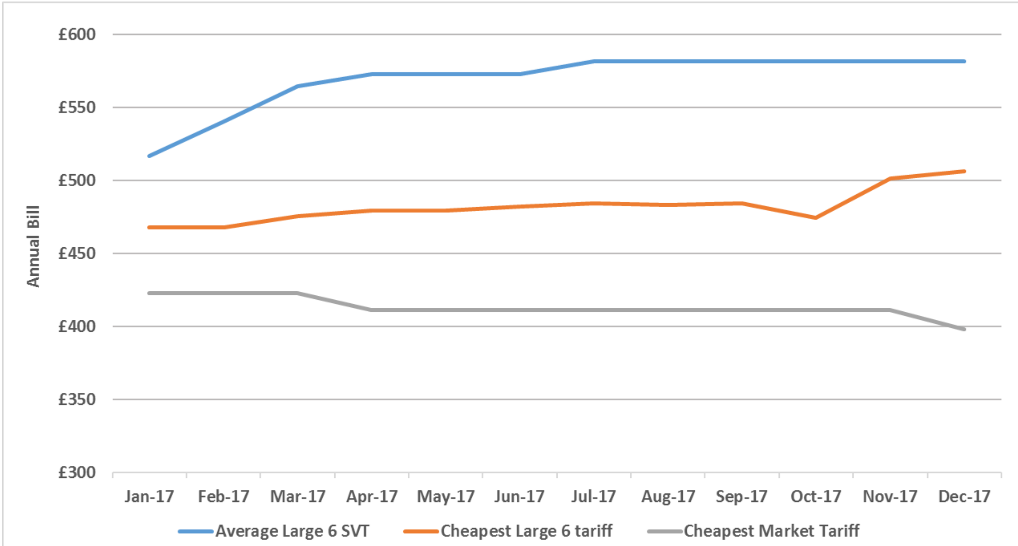
All three electricity markets are judged to be concentrated according to the threshold HHI levels (1,000) used by the CMA[67], with the non-domestic half hourly market just above the threshold. By comparison with 2016, the HHIs for all three markets have fallen, with the biggest fall recorded in the domestic market.

Most final consumer prices in the GB retail energy markets were determined by market forces in 2017. The prepayment segment is an exception, as a temporary price cap was introduced from 1 April 2017 as recommended by the CMA. In addition, there are elements of the final price that are attributable to the regulated aspects of the market, in particular distribution and transmission charges, which are price controlled. Ofgem monitors domestic suppliers' electricity prices across GB. We receive price change notifications from Energyhelpline, an independent data provider and one of the comparison sites accredited by the Confidence Code run by Ofgem. We use this information to calculate the implications for domestic customers' retail bills, based on characteristics such as their consumption level, payment type and region.

Figure 6 below shows electricity price levels over the year, based on tariff offers available in the market. There is a big price differential between the largest six suppliers' average Standard Variable Tariffs (**SVT**) and their cheapest tariffs. The price differential between the two tariffs in December 2017 was £75. At the same time, the differential between the cheapest variable tariff available from the largest six suppliers and independents was £146.

[67] The CMA typically regards markets with HHI below 1000 as unconcentrated, markets with HHI between 1000 and 2000 as concentrated, and markets with HHI above 2000 as highly concentrated.

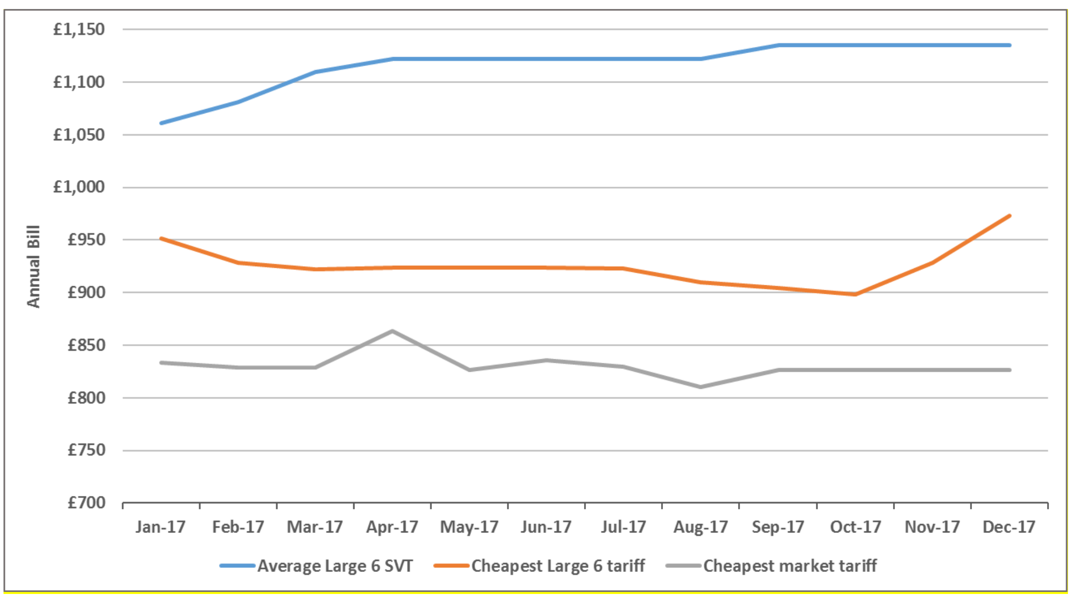
Figure 6: Domestic retail electricity price levels, Jan – Dec 2017



Source: Ofgem analysis of Energyhelpline data
Note: Price level is based on consumption level of 3,100 kWh per year

Figure 7 presents changes in typical domestic bills based on SVTs in GB's dual fuel market between January and December 2017.

Figure 7: Domestic retail dual fuel price levels, Jan – Dec 2017

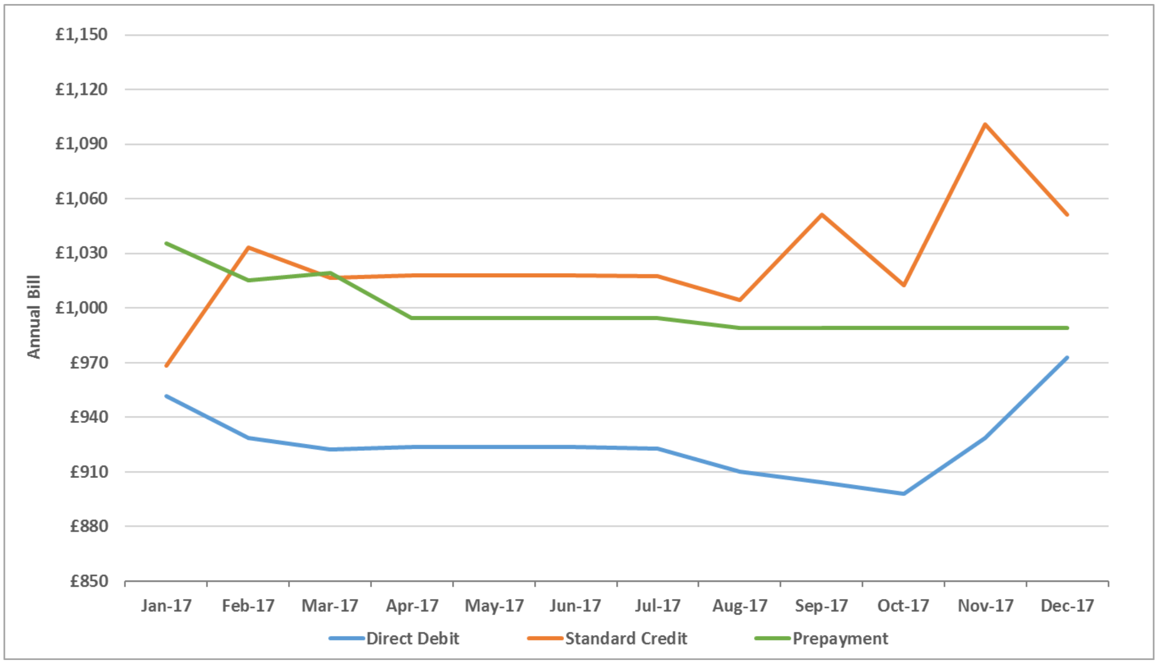


Source: Ofgem analysis of Energyhelpline data
Note: Price level is based on consumption level of 3,100 kWh per year for electricity, 12,000 kWh per year for gas

Over the year, suppliers continued to offer fixed tariff deals often priced at a discount relative to variable tariffs. In December 2017, the average bill of a one-year fixed tariff across the large suppliers was £926, while the average bill of SVT across the large suppliers was £1,136.

Figure 8 below display the change in average large suppliers' SVT by payment method in GB's dual fuel market between January and December 2017. There was a fall in the prepayment tariff, following the introduction of the price cap in April 2017. Payment via direct debit continues to be offered at a discount relative to prepayment and standard credit.

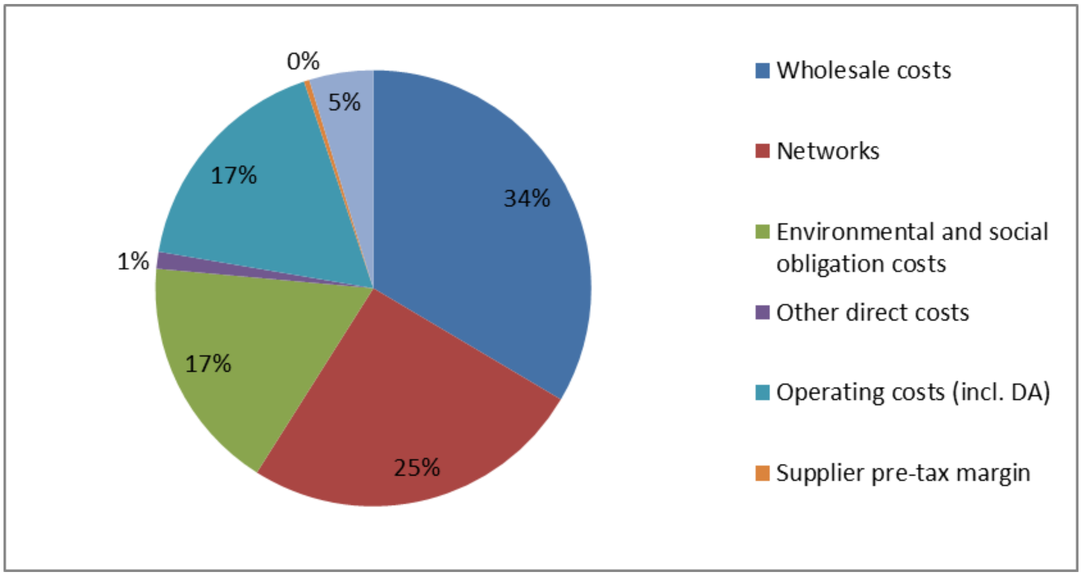
Figure 8: Typical domestic dual fuel bills by payment method, Jan – Dec 2017



Source: Ofgem analysis of Energyhelpline data
Note: Average of Big Six's standard tariffs and revised consumption level: 3,100 kWh per year

As well as monitoring domestic electricity bill levels, we also assess the extent to which particular costs have an impact on these bills. Suppliers face a range of costs that influence how they set retail electricity prices. These costs can vary within and between years, and include wholesale energy costs, the costs of the UK Government's environmental and social policies such as the Renewables Obligation and the Warm Home Discount, and transmission and distribution costs. Figure 9 shows the breakdown of a dual fuel bill for an average domestic customer of a large supplier.

Figure 9: Domestic electricity bill breakdown, 2017



Source: Ofgem analysis of Consolidated Segmental Statements (CSS) published by the six large suppliers

Consumer engagement and experience

Domestic switching rates

Consumers' ability to switch energy supplier is important for a well-functioning, competitive energy market, although it should not be considered separately. Therefore, Ofgem monitors switching rates together with pricing and market structure data.

In 2017, 5.1m domestic consumers switched their electricity supplier[68], equivalent to an average of approximately 427,000 per month. This represents an annual switching rate of 18.2%, 2.4 percentage points higher than in 2016. We also saw an increase in switching away from the six largest suppliers. On average 56% of customers that switched during 2017 moved to smaller or medium suppliers, an increase of 9% relative to 2016.

The speed and reliability of switching is also important (see section 4.1 for details of our programme to improve the switching process). In December 2017, the system average time[69] to complete a switch remained the same as last year at 15 days.

Our consumer surveys are an additional source of information on the consumer switching experience. They show that most of those who switched did so to save money. In our domestic consumer engagement survey[70] we found that 91% of consumers who switched supplier, changed tariff or compared tariffs in the last 12

---

[68] Switching between suppliers is known as 'external switching'.
[69] This is the average number of calendar days from the day when the supplier notifies the switching request to the network operator system until the day the switch is executed.
[70] https://www.ofgem.gov.uk/system/files/docs/2016/08/consumer_engagement_in_the_energy_market_since_the_retail_market_review_-_2016_survey_findings.pdf

months, were motivated by the prospect of saving money. From those who did switch in the last year, 86% expected to pay less for energy as a result of switching supplier or tariff, which is up from 77% in 2015. The number of consumers that are confident that they are on the best energy deal has decreased by five percentage points relative to 2015, at 50%.

Non-domestic switching rates[71]

In 2017, approximately 386,000 non-half-hourly and 28,000 half-hourly electricity consumers switched electricity supplier, and 117,000 non-domestic gas consumers switched gas supplier. This represents an annual switching rate of 16.2% for non-half-hourly electricity, 20.1% for half-hourly electricity and 17.6% for gas. The non-domestic non-half-hourly switching rates have largely remained the same. Non-domestic half-hourly switching rates increased by 3 percentage points over the last 12 months.

In April 2017, we published our quantitative survey on micro and small business consumer engagement, which covers both gas and electricity segments. It showed that 1 in 5 of smaller business customers reported having switched suppliers in the last 12 months.

Many businesses appear to be making informed switching decisions. On average, businesses that have switched in the last 12 months contacted four suppliers, either directly or through brokers. Businesses using brokers reported a higher number of quotes obtained than those that did not use brokers at all (five, compared with four).

Non-domestic switching is primarily price-driven and cost saving was by far the most likely reason for switching (85% of those who had switched in the last 12 months found or were offered a lower price contract or tariff the last time they switched). Knowing that their contract was coming to an end and receiving a renewal notice from an existing supplier was a significant trigger for switching (73% and 58% respectively). A price increase from the previous supplier (52%) and a recommendation from a broker (43%) were also key prompts to switch[72].

This research also showed that 35% of businesses have not switched in the last five years and 48% of these have never considered switching. The primary reasons for not switching remain that businesses are satisfied with their existing supplier, they do not believe switching will result in significant savings, and many are tied into contracts that prevent them switching.

Complaints by household consumers

Ofgem does not directly investigate domestic customer complaints. If a complaint is raised suppliers are required to meet the complaints handling standards set by Ofgem. If a complaint is not resolved to the consumer's satisfaction, and either eight weeks have passed since the complaint was made or it has reached a point of deadlock (where the energy company says it can do no more to resolve the complaint) the supplier

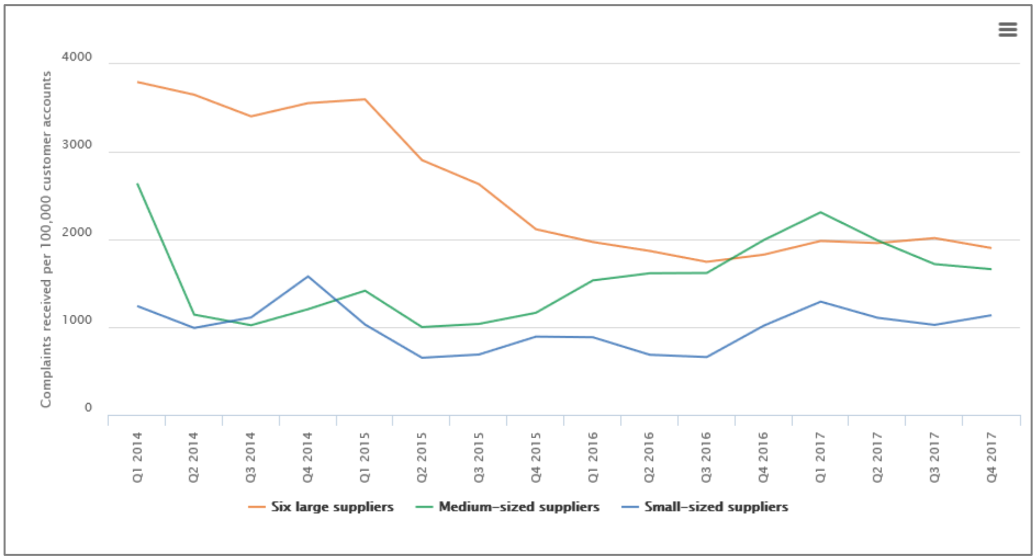
[71] Electricity and gas.

[72] https://www.ofgem.gov.uk/system/files/docs/2017/04/ofgem_-_micro_and_small_business_engagement_2016_-_research_report.pdf

must write to the consumer to tell them they can seek redress through the Ombudsman ('alternative dispute resolution').

All domestic suppliers publish their complaints data on their websites in a common format agreed with Ofgem. Figure 11 shows the number of complaints per 100,000 customers for large, medium, and small suppliers.[73]

Figure 11: Complaints received by supplier per 100,000 customers



Source: Ofgem analysis of suppliers' data

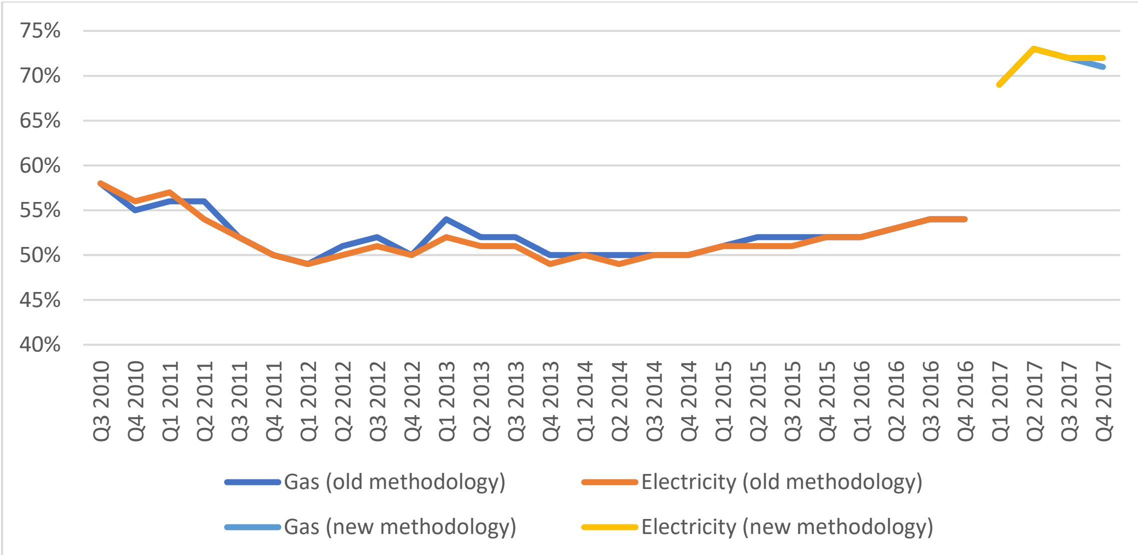
Consumer satisfaction

We expect high levels of customer service from our energy suppliers, making it easy for consumers to contact them when needed and providing clear energy bills that consumers can understand. As shown in Figure 12, by the end of 2017, 71% of gas and 72% of electricity customers were satisfied with their supplier. These results are not directly comparable with 2017 results for methodological reasons.[74] Further details are published and updated regularly on our website.[75]

---

[73] Large suppliers: British Gas, EDF Energy, E.ON, npower, ScottishPower, SSE. Medium Suppliers: Co-Operative, First Utility, Ovo, Utilita, Utility Warehouse. Small Suppliers: all remaining suppliers.
[74] In 2017 Gfk changed their methodology in a number of ways that affect the comparability of data, wave on wave. From 2017 this data comes from an online survey, whereas prior to 2017, surveys were done online and over the phone. Also, prior to 2017, customers were asked about the extent to which they were satisfied, and answered either very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, or very dissatisfied. From 2017 their answer scales have changed to a 7 point scale. For these metrics we now show the data for those who said extremely satisfied, very satisfied or fairly satisfied.
[75] https://www.ofgem.gov.uk/data-portal/customer-service

Figure 12: Consumer satisfaction with their supplier



Source: GfK Energy Research Panel

Contractual practices

Under Article 37(1) paragraphs (k) and (l), Ofgem is required to monitor restrictive contractual practices and ensure contractual freedom. We have teams to engage with a variety of stakeholders, ensuring that we are monitoring the market, and that we are open to dealing with any issues that may be brought to our attention. Additionally, the suppliers' licences contain conditions on providing clear contractual information to household and small business consumers.

Household customers are also protected by the general national rules that transpose Directive 2011/83/EU of 25 October 2011 on consumer rights and Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts. These rules were transposed by the Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013 and the Consumer Rights Act 2015. In respect of contracts concluded before October 2015, transitional provisions exist. Ofgem is one of the public bodies empowered to take action to enforce certain consumer protection legislation.

Compatibility of data exchange processes

Under Article 37(1)(u), Ofgem is required to contribute to the compatibility of data exchange for the most important market processes. All licensed suppliers and network operators must comply with industry codes (changes to which must be approved by Ofgem) in order to operate in the gas and electricity markets.

Access to consumption data from smart meters is managed centrally, through the Data and Communications Company (**DCC**), which is licensed and regulated by Ofgem.

Disconnections for debt
We require suppliers to tell us about disconnections for debt as part of their Social Obligations Reporting[76]. Monitoring supplier performance in this area allows us to identify issues of concern with supplier performance and take action.

Charges for and the execution of maintenance services
So that we can assess performance, the electricity and gas distribution networks must submit regulatory returns to us each year, showing relevant cost, volume and output information. A component of the DUoS charges that all customers pay as part of their energy bills reflect the costs of maintenance work.

Monitoring transparency
Under Article 37(1)(i) Ofgem is committed to ensuring the energy market is transparent to the benefit of consumers. In this section, we explain the rules about transparency of suppliers' activities and how we monitored compliance in 2017.

Financial transparency
Over the past few years, we have put in place measures to make suppliers' revenues, costs and profits more transparent. Since 2009, we have required large, vertically integrated suppliers to publish annual Consolidated Segmental Statements (**CSS**) on their websites. These statements break down suppliers' revenues, costs and profits and are reconcilable to audited accounts. In previous years, we produced an annual review summarising the large suppliers' CSS. This is archived on our website. In 2017, we published a summary as part of our annual report on the retail energy markets.
We have improved the reporting requirements for the statements. We now require companies to audit their statements, to publish them within four months of their financial year end, to provide a detailed cost breakdown, and insight into their trading activities.

Transparency for domestic consumers
In GB, consumers can compare suppliers' gas and electricity prices using a wide range of online energy price comparison websites. Ofgem currently administers a code of practice, the Confidence Code.[77] This helps to ensure that consumers can use a site they trust to provide accurate and reliable pricing information. In August 2016, we reviewed the Confidence Code, addressing the CMA's recommendation to remove the 'Whole of Market' (**WoM**) requirement from the Code to achieve investment and competition benefits. In our review, we proposed removing the WoM requirement in stages to leverage some of the benefits of its removal, while monitoring the consumer impacts it may have. We will publish our decision on next steps for the Confidence Code in due course.

Transparency for Supplier Costs Index
We publish the Supplier Cost Index, in order to provide insight into the most recent developments in the costs suppliers face. The index tracks ongoing trends in wholesale costs, network costs and the charges to suppliers associated with government

[76] https://www.ofgem.gov.uk/about-us/how-we-work/working-consumers/supplier-performance-social-obligations
[77] https://www.ofgem.gov.uk/information-consumers/domestic-consumers/switching-your-energy-supplier/confidence-code

programmes that are designed to, for example, help deliver low carbon electricity and energy efficient homes, and provide direct financial support to the fuel poor.

While the index gives insight into current and future cost pressures, it is neither able nor intended to predict what prices suppliers will set or when these will change. The costs that individual suppliers incur in supplying their customers may vary significantly from the index. For example, while the index reflects the level of wholesale prices in the month prior to the update, some companies may buy energy for their customers over an extended period of time to smooth their costs.

Recommendations on supply prices, investigations and measures to promote effective competition

Supply prices

In the past year non-prepayment, consumer prices in the GB retail energy market continued to be determined by market forces. Retail prices are *inter alia* affected by input costs such as wholesale energy prices, security of supply costs such as CM auctions, costs associated with government environmental schemes, such as the Renewables Obligation[78] and the WHD[79] and finally, network transmission and distribution costs.

Since 1 April 2017, PPM prices are regulated by means of a price cap. Following a two-year investigation that ended in June 2016, the CMA found that PPM consumers face higher actual and perceived barriers to information and access to switching. As a result, they often face higher annual bills than customers in other market segments. The CMA recommended a cap on prices as a temporary measure until 31 December 2020, to coincide with the completion of the smart meter rollout. The PPM price cap excludes interoperable smart meters.

On 2 February 2018, Ofgem extended this price protection to a further one million vulnerable, non-prepayment customers receiving the WHD. The WHD safeguard tariff will end when the "default tariff cap" comes in.

In February 2018, the Government introduced proposals for legislation to Parliament, to introduce a temporary tariff cap for customers on SVT and default tariffs. The new Bill was given Royal Assent on 19 July and the Government expects the cap to be in place by winter 2018-19. This legislation creates a new statutory role for Ofgem to deliver this measure for the Government. Ofgem will have a new duty to design and implement the tariff cap (the 'default tariff cap'). For instance, this includes those to whom the price cap should be applied, factors we should have regard to when we are designing it, and the process for reviewing or removing the price cap.

The 'default tariff cap' will not apply to consumers on the PPM safeguard tariff (these consumers are exempt from this price cap because they are already receiving price protection) and domestic consumers on non-default fixed term tariffs. Ofgem plans to consult on whether an exemption is necessary for consumers who have chosen SVT tariffs that support the production of renewable gas or electricity. Finally, legislation

[78] http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Pages/RenewablObl.aspx.
[79] http://www.ofgem.gov.uk/Sustainability/Environment/WHDS/Pages/WHDS.aspx.

also makes it clear that the 'default tariff cap' must be applied in the same way to all domestic suppliers and therefore there cannot be any exceptions for any particular suppliers.

Investigations
The Authority has concurrent competition and consumer protection powers with the CMA. We work with the CMA, including as members of the United Kingdom Competition Network, which aims to promote best practice and coordination between the sectoral regulators in the use of their concurrent competition powers.

Measures to promote effective competition/monitoring distortions or restrictions of competition
Our monitoring activities and actions that help to address issues hindering the promotion of competition and support markets to operate more effectively (i.e. by ensuring there is greater transparency of information to all parties including customers). In addition, we actively seek to ensure that adequate support is provided for society's most vulnerable customers.

We are implementing the CMA remedies (please see footnote 63 in Retail Markets Electricity Section of the report) around five objectives: regulation for effective competition, prompting greater consumer engagement, protecting and empowering those on non-standard meters, building industry systems and governance for the future, and enhancing our role as a robust and independent regulator.

These remedies include:

- a price cap on PPM;
- trialling prompts for the 'stickiest' customers to engage in the market and shop around for cheaper tariffs. We have worked with suppliers to conduct these trials and issued guidance on good trialling;
- a database which will lead to disengaged customers being contacted about better value deals. We have already run a small trial of different variants of the database service;
- removing part of our Retail Market Review reforms so customers can enjoy a wider selection of deals;
- consulting on a system of code governance that allows strategic change to be delivered smoothly, efficiently, and in consumers' interests; and
- consulting on the new Confidence Code rules for price comparison websites.

We believe that these initiatives will stimulate engagement in the market, and help make competition work for all consumers, as suppliers compete by driving down the prices and improving service. Subsequently, it will be easier and quicker for consumers to get a better deal, as we head towards a smarter market.

3.3 Security of supply

3.3.1 Monitoring balance of supply and demand

Under Article 4 of the Electricity Directive, Member States have to ensure they monitor security of supply issues.

Responsibility for ensuring security of supply in GB is shared across several entities. In addition, the market is regulated to provide for this. BEIS sets overall policy on energy security. Ofgem is responsible for regulating the market. NGET, as SO of the GB electricity system, has responsibility for ensuring that supply meets demand on a minute-by-minute basis each day.

The Third Package puts an obligation on NRAs to monitor investment in generation capacities to secure supply. We therefore review NGET's annual Electricity Ten Year Statement[80], Future Energy Scenarios[81], and Winter Outlook Report (**WOR**)[82] documents, which outline electricity demand and generation (closure and investment) projections. In 2017 we also published the annual Statutory Security of Supply Report (**SSSR**)[83] jointly with BEIS, which analyses the availability of electricity and gas for meeting the reasonable demands for energy consumers in GB.

Here we report the main results and insights from our monitoring and publications on the balance of electricity supply and demand during the reporting period.

Generation capacity
NGET assessed total installed maximum capacity on the GB electricity market for winter 2017/18 at 101.2GW. The figure includes total generation capacity on the transmission system and distributed wind generation and excludes interconnectors. Total generation capacity has increased sharply since last winter, when it was assessed at 73.7GW.Total installed de-rated capacity comes to 66.1 GW.

Demand
Actual peak electricity demand on the transmission network was slightly lower in 2017 than in 2016. Actual maximum demand for 2017 (including station load, pumped storage and interconnectors)[84] decreased by 1.3GW to 49.6GW. This trend is also seen in peak demand excluding station load, pumped storage and interconnectors[85], which decreased by 635MW to 51.6GW in 2017.

Minimum transmission demand has decreased slightly, and low demand can create challenges for the SO. When station load, pumped storage and interconnectors are

---

[80] https://www.nationalgrid.com/uk/publications/electricity-ten-year-statement-etys
[81] http://fes.nationalgrid.com/
[82] http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/FES/Winter-Outlook/
[83] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/663894/hc536-statutory-security-of-supply-report-2017.pdf
[84] Transmission System Demand (TSD) or Initial Transmission System Demand Outturn (ITSDO).
[85] National Demand (ND) or Initial Demand Outturn (INDO), based on NGET operational generation metering.

included, minimum demand dropped by 0.7GW to 18.3GW. No change was observed when station load, pumped storage and interconnectors were excluded, which remained stable at 16.5GW in 2017.

3.3.2 Monitoring investment in generation capacities in relation to SoS

Statutory Security of Supply Report
In December 2017, we published our joint SSSR[86] alongside BEIS. This is part of an obligation on government and ourselves to report annually to Parliament on the availability of electricity and gas for meeting the reasonable demands of consumers in GB. The report noted that GB has resilient electricity and gas systems with sufficient capacity to meet demand in all but the most unlikely circumstances. GB's electricity system has delivered secure supplies to date whilst facing the challenges of decarbonisation. The gas system has also delivered security of supply to date and is expected to continue to function well.

2017/18 Winter Outlook Report
Each October, NGET publishes the WOR[87]. It presents their view of gas and electricity supply and demand for the coming winter. The report followed the publication of their initial view of security of supply for the winter in their Winter Outlook Consultation, published in June 2017. The report covers both gas and electricity, and provides a whole 'winter view' and an operational view for both fuels.

For electricity, the main update was the addition of a security of supply assessment based on underlying demand, as well as transmission level demand figures that had been reported in previous years. This is because the CM analysis is based on underlying demand. The electricity security of supply outlook broadly improved compared to the outlook for winter 2016/17[88]. This has mainly been driven by plants without a CM contract staying open. For underlying demand[89], a de-rated margin of 10.3% (6.2 GW) was reported, alongside a loss of load expectation (**LOLE**) of 0.01 hours/year.

For gas, NGET expected sufficient availability in the winter to meet demand, with GB's gas demand expected to be met by a wide range of supply sources. Demand was expected to be slightly lower year-on-year due to reductions in gas demand for generation. They also expected storage withdrawal capability to return at the Rough long-range storage site, with nearly 1 bcm of gas to be withdrawn from the facility during winter. Without Rough last year, NGET observed much more cycling of medium range storage. They also noted that the last four winters had all been warmer than the

[86] Statutory Security of Supply Report 2017:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/663894/hc536-statutory-security-of-supply-report-2017.pdf

[87] Winter Outlook Report 2017. https://www.nationalgrid.com/uk/publications/winter-outlook
[88] De-rated margins of 1.1%, or an LOLE of 8.8 hours/year based on generation which is in the market (i.e. without Contingency Balancing Reserve (**CBR**). When CBR is included (3.5 GW), this changes to de-rated margins of 6.6%, or an LOLE of 0.5 hours/year.
[89] For transmission demand, the de-rated margin was 11.5%. The GW and LOLE figures were the same.

long-term average. But NGET assume seasonal normal weather conditions in their winter plan, and prepare for colder conditions.

Electricity Capacity Report
NGET have an obligation to produce an Electricity Capacity Report (**ECR**) each year[90]. The ECR sets out NGET's recommendation for the volume to procure for the CM auctions.

An independent Panel of Technical Experts (**PTE**) is commissioned by BEIS to scrutinise and quality assure the analysis carried out by NGET for the purposes of informing the policy decisions for the CM. We continue to work closely with NGET, BEIS and the PTE in scrutinising and reviewing the analysis as part of our market monitoring role and to inform policy decisions.

3.3.3 Measures to cover peak demand or shortfalls of suppliers

Capacity Market
The CM mechanism was introduced to maintain sufficient levels of capacity to ensure security of electricity supply. The CM provides regular revenue in the form of capacity payments to potential capacity providers. In return, these capacity providers commit to delivering electricity at times of system stress, or face penalties if they fail to do so.

Ofgem sets incentives and funding for the EMR Delivery Body (NGET), and monitors its performance in delivering the CM. Ofgem also enforces the CM Rules and the Electricity Capacity Regulations 2014, the Competition Act 1998, REMIT, and monitors NGET's compliance.

Since its introduction in 2014, to date there have been eight CM auctions. Two CM auctions took place in 2017/18: 2017/18 T-4 Auction for delivery in 2021/22 and 2017/18 T-1 Auction for delivery in 2018/19.

Summary of 2017/18 T-4 Auction results
802 Capacity Market Units (**CMUs**) or 74.2GW of capacity qualified and confirmed their entry for the 2017/18 T-4 Auction for delivery in 2021/22.[91] Eight CMUs opted-out of the CM. Most of these opt-out decisions were anticipated due to planned closures before the delivery year for CM participants.

The target capacity for the auction was 49,200MW. A total of 74,242MW entered the auction, of which 75% received Capacity Agreements. The auction procured 50,415MW of capacity at a clearing price of £8.40/kW/year,[92] at an estimated cost of £499.9m. Below is a breakdown of the full auction results:[93]

[90] The first report was published in 2014. The ECR 2017 is available here: https://www.emrdeliverybody.com/Lists/Latest%20News/Attachments/116/Electricity%20Capacity%20Report%202017.pdf

[91] A further 414 CMUs opted in to participate in the CM but failed to prequalify for the auction.
[92] Capacity auctions are 'pay-as-clear', therefore the same clearing price is paid to every participant that clears the auction for every kW of capacity they have been contracted to provide.
[93] https://www.emrdeliverybody.com/Capacity%20Markets%20Document%20Library/Final%20T-4%20Results%20(Delivery%20Year%2021-22)%2020.02.2018.pdf

Table 3: Breakdown of 2017/18 T-4 Auction awarded capacity by CMU classification

CMU Type	Capacity (MW)	%	No. of CMUs	%
Existing Generating	43,313	86	244	55
Existing Interconnector	2,403	5	3	1
New Build Interconnector	2,155	4	3	1
New Build Generating	767	2	70	16
Proven DSR	46	0	8	2
Refurbishing Generating	0	0	0	0
Pre-Refurbishment	571	1	13	3
Unproven DSR	1,160	2	101	23

Source: Final Auction Results - T-4 Capacity Market Auction for 2021/22, National Grid plc.

Table 4: Breakdown of 2017/18 T-4 Capacity Auction awarded capacity by CMU technology type

CMU Type	Capacity (MW)	%
CCGT	23,022	46
CHP and autogeneration	4,644	9
Coal/ biomass	3,016	6
DSR	1,207	2
Hydro	654	1
Nuclear	7,926	16
OCGT & Recip (Other)	706	1
OCGT & Recip (Diesel)	444	1
OCGT & Recip (Gas)	1,561	3
Storage	2,680	5
Interconnector	4,558	9

Source: Final Auction Results - T-4 Capacity Market Auction for 2021/22, National Grid plc.

Summary of 2017/18 T-1 *Auction results:*
The one year ahead auction (T-1) took place in January/February 2018. 416 CMUs qualified and confirmed their entry for the T-1 Auction for delivery in 2018/19.[94] 7 CMUs opted out of the CM. Most of these opt-out decisions were anticipated due to planned closures before the delivery year for CM participants.

The target capacity for the auction was 4,900MW. A total of 10,679MW entered the auction, of which 54% received Capacity Agreements. The auction procured 5,798MW

[94] A further 160 CMUs opted in to participate in the CM but failed to prequalify for the auction.

of capacity at a clearing price of £6.00/kW/year, at an estimated cost of £34.8m. Below is a breakdown of the full auction results:[95]

Table 5: Breakdown of 2017/18 T-1 awarded capacity by CMU classification

CMU Type	Capacity (MW)	%	No. of CMUs	%
Existing Generating	4,692	81	111	51
Existing Interconnector	658	11	66	30
New Build Generating	85	1	9	4
Proven DSR	5	0	1	0
Unproven DSR	358	6	32	15

Source: Final Auction Results - T-1 Capacity Market Auction for 2018/19, National Grid plc.

Table 6: Breakdown of 2017/18 T-1 awarded capacity by CMU technology type

CMU Type	Capacity (MW)	%
CCGT	2,215	38
CHP and autogeneration	673	12
Coal/ biomass	632	11
DSR	443	8
OCGT & Recip	1,723	30
Oil-fired steam generators	7	0
Storage	104	2

Source: Final Auction Results – T-1 Capacity Market Auction for 2018/19, National Grid plc.

[95] https://www.emrdeliverybody.com/Lists/Latest%20News/Attachments/174/Final%20Results%20T-1%202017%20(13.01.2018).pdf

4. The gas market

Chapter Summary

This chapter details developments in GB's gas sector during 2017 and the first half of 2018. This is broken down into sections covering network regulation, promoting competition, and security of supply in the wholesale and retail gas markets.

4.1 Network Regulation

4.1.1 Unbundling[96]

Transmission System Operators

Under Articles 9 and 10 of the Gas Directive, we have an obligation to ensure any undertaking that owns a transmission system is certified as independent from generation and supply interests before it is designated as a TSO.

At the request of the European Commission, the Gas Act was amended in April 2017 by the Electricity and Gas (Internal Markets) Regulations 2017. The effect of the amendment is that, in determining whether a person meets the ownership unbundling requirement, the Authority must take into account producers or suppliers owned, controlled by or connected with that person wherever they are located, instead of only taking into account such producers or suppliers in an EEA state. These amendments applied to new certification applications from April 2017 and transitional arrangements are in place for certified TSOs.

In 2017 there were no applications by gas TSOs to be certified as unbundled.

We continue to monitor the certification status of existing gas TSOs in GB, including through the review of annual declarations submitted by the relevant entities. We remain satisfied that the grounds for their certifications remain valid.

Distribution System Operators

In 2017 and to date, there were 27 gas DSOs, of which eight were incumbents and 19 embedded.

[96] Articles 9, 10, 11, 26 of the Gas Directive and Article 3 of Regulation (EC) 715/2009 (the **Gas Regulation**) outline our obligations with regard to the unbundling and certification of TSOs. In this section we refer to the Electricity and Gas (Internal Markets) Regulations 2011 and the Electricity and Gas (Ownership Unbundling) Regulations 2014 as 'the GB Regulations'. The GB Regulations implement the Third Package into the GB domestic regulatory regime including legislation, licences and industry codes. Ownership unbundling requirements are included alongside Regulations for TSOs, storage and Liquefied Natural Gas (**LNG**) system operators, and the unbundling requirements for DSOs. The GB Regulations have amended the Gas Act 1986 (the **Gas Act**) to include the requirement for the holders of gas transporter and gas interconnector licences to be certified as independent from generation and supply interests under one of the grounds for certification in the Gas Act.

We continue to have eight incumbent gas DSOs (i.e. no change in 2017): four network areas[97] for Northern Gas Networks Ltd, Scotland Gas Networks plc, Southern Gas Networks plc, Wales and West Utilities Ltd and Cadent, which was established after National Grid Gas plc (**NGG**)'s sale of its distribution business.

There are 19 independent (embedded) gas DSOs who own and operate a number of relatively small networks at various locations. They include 8 Independent Gas Transporters[98]: Energetics Gas Ltd, Energy Assets Pipelines Ltd, ES Pipelines Ltd, Fulcrum Pipelines Ltd, GTC Pipelines Ltd, Independent Pipelines Ltd, Murphy Gas Networks Ltd and Indigo Pipelines Ltd.

They also include eight site-specific operators: Severn Gas Transportation Ltd, Greenpark Energy Transportation Ltd, SP Gas Transportation Cockenzie Ltd, SP Gas Transportation Hatfield Limited, Caythorpe Gas Storage Ltd, Humbly Grove Energy Services Ltd, INOVYN Enterprise Ltd and WINGAS Storage UK Ltd.

On annual basis DSOs submit to us report relating to business independence, financial reporting and output performance. In that context, we were satisfied that the Gas Directive requirements relating to unbundling were being properly observed.

Storage and LNG System Operators
The Second and Third Packages established a number of unbundling requirements for storage operators as part of the mandatory third party access arrangements.

In GB, the default access regime for a gas storage facility is negotiated third party access (**nTPA**). Under nTPA, storage system operators cannot produce gas, except as an unintended consequence of storage activities. They also cannot supply, ship, or sell gas except for the efficient operation of the storage facility or of another storage facility. Legal and functional separation is required from any parent company or associated undertakings involved in these activities. These provisions, in Articles 15-16[99] of the Gas Directive, were transposed in Section 8(R) of the Gas Act. Ofgem published the latest version of its guidance on compliance with nTPA requirements in September 2015.[100]

In 2017, two storage facilities were subject to nTPA in GB: Rough and Hornsea. Rough, owned and operated by Centrica Storage Limited (**CSL**). Hornsea, owned and operated by SSE Hornsea Limited. Under current legislation they must operate their respective storage facilities independently of the affiliates carrying out any of the above restricted activities. This includes establishing an independence programme to ensure non-discrimination against other parties, and the appropriate disclosure or use of information. In addition, the storage system operator must publish an annual report setting out compliance with the independence programme.

[97] In 2016 NGG sold its majority stake in these gas distribution businesses.
[98] 'Gas Transporter' is defined within the Gas Act as a holder of a licence to convey gas through pipes in GB.
[99] A storage system operator shall be independent at least in terms of their legal form, organisation and decision making from other activities not relating to transmission, distribution and storage.
[100] https://www.ofgem.gov.uk/publications-and-updates/guidance-regulatory-regime-gas-storage-facilities-great-britain-version-2

All other storage facilities (seven operational) in GB have been granted Minor Facilities Exemptions (**MFEs**) from nTPA. MFEs are granted on the basis that the facility is not economically and/or technically necessary for providing efficient access to the system for the operation of an efficient gas market. The nTPA unbundling requirements set out above do not apply to facilities with an MFE.

For LNG facilities, the default access regime under the Third Package is regulated Third Party Access (**rTPA**). Under rTPA, LNG system operators must keep their (financial) accounts separate from any other business. These provisions, contained in Article 31 of the Gas Directive, were transposed in section 19E(2)-(3) of the Gas Act. Ofgem published guidance on rTPA in April 2012.[101] All three LNG facilities in GB[102] have been granted an exemption from rTPA requirements under section 19C of the Gas Act.

4.1.2 Technical functioning

The technical functioning of the network is of great importance to ensure safe, secure and reliable gas supply for consumers. In this section, we report on our responsibilities and activities for gas balancing services, maintaining security and reliability standards, monitoring time taken to connect and repair, monitoring safeguard measures and reporting on the RES regulatory framework over the course of 2017/18, in the transmission and distribution networks.

We recently published the RIIO Gas Distribution (**RIIO-GD1**)[103] and RIIO Gas Transmission[104] 2016-17 Annual Reports. These reports review the progress made by the relevant companies during the 2016-17 period of the RIIO price control and provide stakeholders with information on how the companies are performing against their obligations and incentives.

Balancing services
Under Article 41(6)(b) of the Gas Directive, regulators must fix or approve the methodologies used to calculate or establish the terms and conditions for the provision of balancing services. These balancing services must be economic and incentivise network users to balance their inputs and offtakes.

NGG is the gas transmission SO responsible for balancing the system across GB. In order to do this, NGG buys and sells gas as well as procures associated services. It also provides information to market participants such as demand forecasts. NGG is obliged to perform its balancing roles economically and efficiently.

Balancing arrangements in GB are designed to provide gas shippers with strong commercial incentives to balance their positions. Market-based imbalance charges are the primary tool used by NGG to balance the system. Shippers who are not in balance at the end of a gas day incur imbalance charges, known as 'cash-out.' The cash-out price is set when NGG buys or sells gas in the market. Rather than procure the entire

[101] https://www.ofgem.gov.uk/ofgem-publications/40393/guidance-regulated-third-party-access-regime-liquefied-natural-gas-facilities-gb.pdf.
[102] Isle of Grain, South Hook and Dragon LNG.
[103] https://www.ofgem.gov.uk/publications-and-updates/riio-gas-distribution-annual-report-2016-17
[104] https://www.ofgem.gov.uk/publications-and-updates/riio-gas-transmission-annual-report-2016-17

system imbalance, NGG trades small volumes to set the cash-out price and incentivise shippers to balance their inputs and offtakes.

As part of our gas Significant Code Review, we found evidence that the gas market could benefit from a Demand-Side Response (**DSR**) mechanism for large consumers. This mechanism, implemented in October 2016, enables large consumers to offer to reduce their demand during the build up to a gas emergency, in return for payment.

Ofgem sets incentives on NGG to promote behaviours that improve the efficient operation of the system. These incentives cover areas such as residual balancing, demand forecasting, shrinkage and maintenance.

In 2017, we continued our monitoring of NGG's performance against these incentives and relevant licence conditions. This is detailed in the RIIO Gas Transmission Annual Report 2016-17.

On 27 March 2018 we published a notice to modify NGG's gas transporter licence to extend three of NGG's SO incentives that were due to expire by three years for the period 2018-2021.[105] This modification will extend the following incentives to the end of the RIIO-T1 price control period:

- Two to Five Days Ahead Demand Forecasting;
- Maintenance;
- Greenhouse Gas emissions.

For more details on the RIIO model please refer to **section 4.1.3** of this report.

Security and reliability standards, quality of service and supply
Under Article 41(1)(h) of the Gas Directive we are required to monitor the compliance with, and review the past performance of network security and reliability rules for both the transmission and distribution networks. We also have an obligation to set and/or approve standards and requirements for quality of service and supply.

Gas quality is regulated through both the Gas Safety (Management) Regulations 1996 and the Gas (Calculation of Thermal Energy) Regulations 1996. These regulations set rules about the gas composition, calorific value and measurement standards to ensure the safety and quality of the supply.

Transmission
The long-term reliability standards of the National Transmission System (**NTS**) are provided for by the gas transporter licence which is granted and regulated by Ofgem.

We monitor quality of service by:

- requiring NGG to comply with standard special condition A9 of the gas transporter licence; and

[105] https://www.ofgem.gov.uk/publications-and-updates/gas-system-operator-incentives-2018-2021-modification-special-licence-conditions-national-grid-gass-transporter-licence

- monitoring the quality of service and supply to individual users as the standards are set out in the Uniform Network Code (**UNC**).

Distribution
Standard special licence condition D10 of the gas transporter licence for the distribution networks sets timescales within which Gas Distribution Network companies (**GDNs**) must provide connection services, attend/respond to gas emergencies and respond to telephone calls to its emergency services and enquiry service obligations telephone line. GDNs must provide services within these timescales at least 90 or in some cases 97 per cent of the time (dependent on the obligation) in order to comply with their licence obligations. The guaranteed standards of performance also require GDNs to meet expected levels of service or pay customers compensation if they fail.

We monitor quality of service by:

- requiring GDNs to comply with and monitor performance against standard special licence condition D10 – quality of service standards of the gas distribution licence; and
- monitoring GDN performance against guaranteed standards of performance in the Gas (Standards of Performance) Regulations 2005, and standard special licence condition D10.

Monitoring time taken to connect and repair
Article 41(1)(m) of the Gas Directive requires regulatory authorities to monitor the time taken by transmission and distribution system operators to make connections and repairs. We do this by requiring the GDNs to report on their performance in this regard. In the following paragraphs, we report on how we have monitored this for transmission and distribution system operators during 2017.

Transmission
The UNC governs connections to the NTS. Connections to the NTS are infrequent, and for major pipeline developments can take many years. The UNC requires NGG to provide quarterly data on connections agreements. NGG has published this data for its 2017 quarterly reporting periods under 'Connection Offer Performance Reports'.[106]

Distribution
We set Guaranteed Standards of Performance, which the eight GDNs must meet. The GDNs must meet the standards at least 90% of the time. 2016-17. The performance of the eight GDNs is summarised in section 2.1.1 of our price control annual report.[107]

Monitoring access to storage, linepack and other ancillary services
Under Article 41(1)(n) of the Gas Directive, regulators are required to monitor and review the access conditions to storage, linepack (the storage of gas by compression in gas transmission and distribution systems) and other ancillary services. In the GB gas market, the default regime is for all storage facilities to offer nTPA unless the facility has been granted an exemption. Key requirements for storage facilities are:

- to be legally unbundled from related undertakings; and

---

106 https://www.nationalgrid.com/uk/gas/industrial-connections/applying-connection
107 https://www.ofgem.gov.uk/publications-and-updates/riio-gas-distribution-annual-report-2016-17

- to offer access to third parties on non-discriminatory terms

NGG is required by its licence to procure Operating Margins on an annual basis as an ancillary service. The Operating Margins service is used to maintain system pressures in the period before other system management services become effective (i.e. national or locational balancing actions). Ofgem continues to monitor this process.

Monitoring correct application of criteria that determine model of access to storage

Under Article 41(1)(s) of the Gas Directive, regulators must monitor the correct application of the criteria that determine whether a storage facility falls under negotiated or regulated access. As noted above, the GB default regime for all storage facilities is to offer nTPA unless the facility has been granted an exemption.

Ofgem grants an MFE where we are satisfied that access to the storage facility by other persons is not technically or economically necessary for the operation of an efficient gas market. The owner of a storage facility may apply to Ofgem for such an exemption, and Ofgem may revoke an exemption if the criteria are no longer met. More details on our approach are set out in an open letter that was published 16 June 2009.[108]

Monitoring safeguard measures

Under Article 41(1)(t) of the Gas Directive we are also required to monitor the implementation of safeguard measures. These are used in the event of a sudden crisis in the energy market as referred to in article 46 of the Gas Directive. Article 46 was taken forward by and further specified in Articles 10(6) - (7) of the EU Gas Security of Supply Regulation (Regulation (EU) No. 994/2010), which was in turn repealed and replaced by Regulation (EU) 2017/1938 concerning measures to safeguard the security of gas supply. As such, the competent Authority (BEIS) is required to prepare, in accordance with Article 10 of Regulation 2017/1938, an emergency plan that outlines the action required to be taken in case of emergency.

The 'National Preventive Action Plan: Gas',[109] which describes the arrangements established between the gas industry, BEIS, and the European Commission for the safe and effective management of gas supply emergencies has been updated by BIES in December 2016. Ofgem provided comments to the document throughout the drafting process, and we are comfortable that the appropriate safeguard measures have been implemented. The next update of the 'National Preventive Action Plan: Gas' is scheduled for 2018.

4.1.3 Network and LNG tariffs for connection and access

Under Article 41(1)(a), 41(6)(a), 41(8), 41(10) and 41(12) of the Gas Directive, NRAs are required to fix or approve transmission or distribution tariffs or their methodologies. In this section, we report on our activities surrounding the regulation of tariffs and network charges (for transmission and distribution) during 2017.

---

[108] https://www.ofgem.gov.uk/publications-and-updates/gas-storage-minor-facility-exemptions-open-letter
[109] https://www.gov.uk/Government/publications/national-preventive-action-plan-gas

NGG is the sole owner and operator of the GB gas NTS. There are eight GB GDNs. We determine the revenues that both NGG and the GDNs can collect from users of the NTS and GDN via network charges at the price control review. The current gas transmission and distribution price controls are based on the RIIO model (RIIO-T1[110] and RIIO-GD1[111]) and began on 1 April 2013, running until 31 March 2021.

Following an assessment, we establish cost allowances and performance targets that form the basis of the price control and incentive framework. Incentive that allows allowed revenue to increase in response to user signals for new capacity is also included in these arrangements. Together, these elements determine the total amount of revenue (the 'allowed revenue') that NGG and the GDNs may earn on annual basis. All are required by the regulatory regime to set charges for the use of their networks to comply with the limits on allowed revenue that have been set. Should more or less than the permitted revenue be earned in any formula year, then a compensating adjustment is made in the following year.

Transmission

Users of the gas NTS are subject to three main elements of transmission charges:

- TO entry and TO exit charges. These are for the provision and maintenance of transmission network assets; and
- SO charges. These charges are for the day-to-day operation of the NTS.

Under its licence, NGG is obliged to develop and maintain a methodology for determining NTS charges and must comply with objectives below:

- the methodology results in charges reflect the costs incurred by NGG in its transportation business;
- it facilitates effective competition between gas shippers;
- it takes account of developments in the gas transportation business; and
- it is compliant with the Gas Regulation and legally binding decisions of the European Commission and/or the Agency.

NGG's charging methodology is set out in the contractual framework between GB gas network users and operators, the UNC. Ofgem must approve all material changes to the UNC.[112]

We do not set or approve the level of individual charges levied, only the charging methodology used to determine them. NGG is required to submit a report each year to us, which notes developments in the gas transmission charging methodology in the previous formula year, and outlines the further changes that may be necessary to better comply with objectives.[113]

[110] https://www.ofgem.gov.uk/network-regulation-%E2%80%93-riio-model/riio-t1-price-control
[111] https://www.ofgem.gov.uk/network-regulation-%E2%80%93-riio-model/riio-gd1-price-control
[112] Published on the Joint Office of Gas Transporters website.
[113] http://www2.nationalgrid.com/uk/Industry-information/System-charges/Gas-transmission/Forecasts/

Connection charges are levied on new connections to the NTS and reflect the costs incurred by NGG in providing any assets required to connect a user to the NTS. These connection costs are not determined by the price control review.

The current charging regime was designed to promote the effective use of the network and facilitate effective competition. Significant and ongoing structural changes to the GB gas market since implementation, and new EU legislation to harmonise transmission charges across Member States (TAR NC[114]), mean it is necessary to consider changes to the charging regime in order to further the interests of current and future consumers.

This work is being taken forward through the Joint Office of Transporters[115] who commenced a Gas Charging Review (**GCR**), following the publication of an open letter in November 2015[116] confirming Ofgem's policy preferences for the GCR.

On 8 March 2018 we directed NGG to undertake specific tasks to implement aspects of the EU TAR NC. Our direction includes a timetable of implementation of these tasks and guidance of where in the UNC the required changes should be made.[117]

As a result of ongoing work on the GCR, parties have been making modification proposals[118] to the charging methodology since 2017. We expect these to be with us for a decision in summer 2018.

Distribution

On the distribution side, the GDNs recover their allowed revenues via a combination of Local Distribution Zones (**LDZ**) capacity and commodity charges and an LDZ customer charge.

Similarly with NGG, the GDNs are obliged under the licence to develop and maintain a methodology that sets out how LDZ charges are determined and that complies with the same objectives as the NTS charging methodology objectives mentioned above. The licensee is not allowed to show preference for anyone who operates (or wishes to operate) a pipeline connected to the system under this specific licence. These objectives also apply to the GDNs' connection charging methodology that they are also obliged to maintain under the licence.

---

[114] Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas (**TAR NC**): https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R0460

[115] The Joint Office of Gas Transporters is the entity that administers the UNC

[116] https://www.ofgem.gov.uk/publications-and-updates/gas-transmission-charging-review-confirmation-policy-view-and-next-steps

[117] https://www.ofgem.gov.uk/publications-and-updates/decision-direct-national-grid-gas-plc-ngg-undertake-specific-tasks-implement-aspects-regulation-eu-2017460-european-network-code-harmonised-transmission-tariff-structures-gas-tar-nc

[118] UNC621: Amendments to Gas Transmissions Charging Regime: https://www.gasgovernance.co.uk/0621 UNC636: Updating the Parameters for the NTS Optional Commodity Charge https://www.gasgovernance.co.uk/0636 and UNC 0653: Introducing the NTS Optional Capacity Charge https://www.gasgovernance.co.uk/0653

Similarly with NGG's NTS charging methodology, the GDN charging methodologies are also set out in the UNC. All material changes to the charging methodology must be approved by Ofgem.

LNG facilities
The three[119] LNG facilities currently operating in GB are exempt from third party access. Therefore the provisions of Article 41(10) and (6) of the Gas Directive do not apply to them.

Any exempted LNG facility is required to operate under the terms and conditions of its exemption. Commercial terms and conditions are agreed between the facility operator and its primary capacity holders. However, if we believe terms and conditions published[120] by LNG operators are discriminatory, we are able take actions under the enforcement provisions in the Gas Act 1986, in particular section 28.

Prevention of cross-subsidies
Each NRA, under Article 41(1)(f) of the Gas Directive, is required to ensure that there are no cross-subsidies between transmission, distribution, storage, LNG and supply activities.

In GB, licensed gas transmission operators and DNOs are subject to conditions prohibiting regulated businesses from giving cross-subsidies to, or receiving cross-subsidies from, related undertakings. The regular information submissions that licensees are required to make, principally those relating to their price control arrangements, allow us to assess whether any risk or incidence of cross-subsidisation has arisen.[121]

Gas distribution licences contain a requirement for independent auditors to carry out a range of procedures that have to be agreed with us, in order to provide assurance that obligations to avoid discrimination and cross-subsidies are being respected. We review the auditors' reports and raise supplementary questions as appropriate.

One area we will continue to monitor is the interpretation and application of requirements for financial transactions to be completed at arm's length and on normal commercial terms. This is especially relevant for the terms of loans made to or by the relevant licensee. For gas distribution licensees, we also monitor the risk of licensee-owned freehold sites being sold to related parties at insufficient value. This particularly relates to gasholder sites in major cities, where land value for development is especially high at present.

Other key risk areas we take into account are:

- the basis of recharging for services provided at a group level;
- the justification for any management fees charged to the licensee by related parties; and

[119] Isle of Grain, South Hook and Dragon LNG.
[120] Under section 19D Gas Act.
[121] The prohibition on cross subsidies is prescribed by: the Gas Directive at Article 31(3); and Standard Special Condition A35 of the gas transporter licence (Standard Condition 41 for independent gas transporters).

- the interest rates charged on intra-group loans affecting the licensee.

Regulated and negotiated access to storage
Under article 41(1)(s) of the Gas Directive, regulators must monitor the correct application of the criteria that determine whether a storage facility falls under negotiated or regulated access. The default regime is for all storage facilities to offer nTPA unless the facility has been granted an exemption. More information on this can be found in **section 4.1.2**.

4.1.4 Cross-border issues

In order to reach a fully integrated European energy market, it is vital that NRAs coordinate effectively on cross-border issues. In this section, we report on our access to cross-border infrastructure, LNG terminals and storage facilities, network investment plans and cooperation with other NRAs during 2017/18.

Access to cross-border infrastructure including allocation and congestion management
Under Article 41(6)(c), 41(8) and 41(9) of the Gas Directive, NRAs are responsible for: fixing or approving methodologies used to calculate or establish the terms and conditions used for access to cross-border infrastructures, ensuring transmission and distribution system operators are granted appropriate incentives, monitoring congestion management of national gas transmission networks including interconnectors and the implementation of congestion management rules and capacity allocation mechanisms.

The GB gas system is interconnected with Belgium, the Netherlands, Northern Ireland and the Republic of Ireland. These interconnections play an important role in gas security of supply by allowing gas to flow to where it is valued most and allowing for a more integrated European gas market.

The paragraphs below give an overview of the arrangements on each of the interconnectors. Each interconnector is licensed by Ofgem and must submit its access rules and charging methodologies to us for approval on annual basis.

IUK
The interconnector with Belgium, Interconnector UK Limited (**IUK**) became operational in 1998. IUK can physically flow gas in both directions and has an import capacity of 25.5 billion cubic metres (bcm)/year and an export capacity of 20bcm/year.

IUK has sold all of its capacity in long-term contracts until 2018. IUK has also made post-2018 capacity available through auctions consistent with the requirements of the network code on Capacity Allocation Mechanisms (**CAM NC**).[122]

[122] Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R0459

BBL
The interconnector with Netherlands (**NL**), Blagzand Bacton Leiding Company (**BBL**) became operational in 2006. BBL can physically flow gas in one direction (from NL to UK) and has a total import capacity 18bcm/year.

BBL has an exemption from the Second Package requirements and has certain licence conditions switched off relating to third party access and approval of charging methodologies for 80% of its forward capacity.[123]

Moffat
The Moffat interconnector with the Republic of Ireland became operational in 1993 and is a physically uni-directional interconnector. The capacity available to exit the NTS at Moffat is 32.8 mcm/day. In December 2011, a virtual reverse flow service was introduced. This allows shippers to nominate flows from Ireland to GB on an interruptible basis. The maximum entry capacity at Moffat is 31.1 mcm/day.

Access to LNG terminals and storage facilities
For the reasons given in **section 4.1.1**, LNG and gas storage are not required to provide third party access therefore Article 41(10) does not apply to them.[124] However, in each case we monitor access arrangements and have the power to take action should we think any of these arrangements were to become discriminatory.[125]

The Gas Directive gives the right to any party affected to submit a complaint for review by the NRA regarding a decision on methodologies used or concerning the proposed tariffs or methodologies. Changes that were made to the Gas Act extend the scope of the dispute resolution mechanism in order to cover disputes arising from complaints to the Authority against owners of gas storage facilities and owners of LNG import or export facilities.[126] We did not receive any complaints in during this reporting period.

Implementation of the Third Package
The Third Package introduced new responsibilities for regulatory authorities regarding the rules for granting access to cross-border gas infrastructures.[127] In GB, changes were made to the standard conditions of the Gas Interconnectors Licence[128] to take full account of these new responsibilities. In 2017, there were a number of proposals from TSOs to help implement European Network Codes and Guidelines resulting from the Third Package.

On 28 September 2017, we approved proposed modifications to BBL's access rules that give effect to Project West, a market merger between BBL and Gasunie Transport Services, the Dutch TSO.

[123] Standard conditions 10, 11 and 11A of the gas interconnector licence.
[124] See Article 41(10) of the Gas Directive and https://www.ofgem.gov.uk/gas/wholesale-market/market-efficiency-review-and-reform/third-party-access-exemptions
[125] In the case of LNG we have enforcement provisions in the Gas Act, in particular Section 28. For Storage we have enforcement provisions in the Gas Act and certain powers under section 19B (acquisition of rights to use storage facilities).
[126] See sections 27B-27D of the Gas Act.
[127] See Articles 41(6)(c), 41(8), 41(9) and 41(10) of the Gas Directive.
[128] See standard conditions 10, 11 and 11A of the gas interconnector licence.

BBL also proposed changes to its access rules and charging methodology in order to introduce a capacity conversion service as required in CAM NC. We approved these proposed modifications on 27 December 2017.

On 28 February 2018, we published a decision approving proposed modifications to IUK's charging methodology. These modifications proposed by IUK sought to facilitate compliance with certain requirements in harmonised transmission tariff structures for gas (**TAR NC**).

On 5 March 2018 we published a decision approving proposed modifications to IUK's access rules. The proposed modifications sought to facilitate compliance with provisions in CAM NC.

NGG proposed the UNC modification 597 in October 2016 to facilitate compliance with an amendment to CAM NC. We approved the modification on the basis that it will better facilitate achieving the relevant objectives of the UNC.[129] A self-governance modification, UNC modification 598S[130], was also approved by the UNC Modification Panel and implemented in tandem with UNC modification 597 to help facilitate compliance with the amendment to CAM NC. These modifications were both implemented with effect from 6 April 2017, the date the amended CAM NC entered into force.

We expect further UNC modification proposals from NGG in 2018 in order to facilitate compliance with TAR NC. More details on this work can be found in **section 4.1.3**.

Cooperation

Article 41(1)(c) of the Gas Directive requires us to cooperate on cross-border issues with the other NRAs concerned and with ACER. These cross-border issues include the integration of national gas markets, jointly managed cross-border trade in gas and the allocation of cross-border capacity. We made changes to the Gas Act 1986 to reflect this.[131]

Examples of cooperation

In 2017, we continued to cooperate with neighbouring NRAs over a number of issues concerning interconnectors and full implementation of the European Network Codes and Guidelines.

In 2017 we have continued our engagement at a European level participating in ACER and CEER's relevant working groups and task forces. Ofgem is currently chairing CEER's Gas Storage Task Force (now the Gas Storage Network of Experts).

Monitoring investment plans and assessment of consistency with Community wide network development plan

We set price controls for NGG and as part of this we review the company's business plans. We explicitly require the business plans to consider the interaction with wider

[129] https://www.ofgem.gov.uk/publications-and-updates/uniform-network-code-unc-597-rules-release-incremental-capacity-interconnection-points
[130] http://www.gasgovernance.co.uk/0598
[131] See Regulation 34 of the Electricity and Gas (Internal Market) Regulations 2011, which inserted section 4D into the Gas Act.

European developments. We also require the company to consider the various uncertainties across the period for which the control is set and beyond.

In practice, major changes to the gas transmission network including those related to EU-wide network developments will arise through the commercial incremental entry and exit arrangements that we will be involved at major stages of development, i.e. setting revenue drivers to make sure that NGG receives an appropriate revenue adjustment. We will therefore have sufficient information to fulfil our duty under Article 41(1)(g).

We have established a monitoring approach to review ongoing performance against the outputs determined in the price control.

4.1.5 Compliance

In the section below, we report on our powers to enforce ACER's and the European Commission's decisions, as well as the investigations that have concluded during 2017/18 relating to existing legislation.

Compliance of regulatory authorities with binding decisions of the Agency and the European Commission, and with the Guidelines (Article 43)
Under the Third Package, we are required to ensure compliance with and implement binding decisions of ACER and of the European Commission and with the Guidelines. In order to enable Ofgem to do this, section 4C of the Gas Act provides the Authority to carry out its functions under Part I of that Act in the manner that it considers is best calculated to implement or ensure compliance with any binding decision of ACER or of the European Commission.

Compliance of transmission and distribution companies, system owners and natural gas undertakings with relevant EU legislation, including cross-border issues
We have powers to investigate compliance of transmission and distribution companies, system owners and natural gas undertakings with relevant EU legislation. If a breach is found, we have powers to impose penalties. As a condition of certification, TSOs are obliged to notify the Authority if they know (or reasonably should know) of an event or circumstances which have occurred, or are likely to occur, that may affect their eligibility for certification and must provide an annual declaration (approved by a resolution of the TSO's board of directors) in this regard. The Authority also has powers to require information to be provided by the TSO for monitoring the TSO's certification.

Interconnector (UK) Limited (**IUK**) and The Balgzand-Bacton Line (**BBL**) are obliged to give quarterly reports to the Authority on progress in complying with conditions set out in the Authority's final certification decision.

Ofgem, in close cooperation with other relevant NRAs, ensures TSOs are compliant with European Network Codes and Guidelines (as required by GB TSO licences) by monitoring GB TSO business rules, standard transportation agreements and any other relevant operational rules and agreements. As with certification, we require TSOs to notify the Authority if they know (or reasonably should know) of an event or circumstances that have occurred, or are likely to occur, that may affect their compliance with the legislative framework.

Update on Ofgem's enforcement investigations
We have not had any investigations in the reporting period relating solely to gas provisions. Please refer to **section 3.1.5** to view investigations relating to cross-cutting (electricity and gas) undertakings.

4.2 Promoting competition

In this section, we report on the current state of the wholesale and retail gas markets in GB and the main changes in 2017, as well as our monitoring activities in both the wholesale and retail gas markets during the past year.

4.2.1 Wholesale markets

The following section is an overview of our monitoring under Article 41(1)(i), (j), (k), (l), (u) and Article 44(3), and the main developments in the wholesale gas market in GB during 2017. Detailed information is summarised below.

- Supply and demand were healthy for most of the year, with GB benefitting from a diverse gas supply from a range of sources.
- Average day-ahead gas prices in 2017 increased 30% year-on-year.
- A combination of currency movements, lower levels of gas in storage and higher oil prices contributed to increases across the gas forward curve over the year.
- Traded volumes increased marginally in 2017 to 1,853bcm, with annual churn rising from 22 to 23.
- Futures volumes increased slightly and accounted for 58% of total annual traded volume.
- LNG imports to GB were down 34% year-on-year, to 7.36bcm in 2017.
- In 2017, the UK imported 47.3bcm of gas and exported 11.5cm, making it a net importer for 35.8bcm.

Policy developments in several areas of GB's wholesale gas market have continued throughout 2017. Some notable policy areas include:

- implementing a DSR mechanism for large consumers, as part of the Gas Significant Code Review; and
- development and implementation of European Network Codes and Guidelines.

4.2.1.1 Monitoring the level of prices, the level of tthe level and effectiveness of market opening and competition

Prices
Wholesale gas prices in GB are compiled and made available to market participants by a number of independent pricing agencies, energy market brokers and via exchanges. Argus Media, ICIS Heren and Platts provide pricing based on reported OTC trades, made available to the market via a subscription service. In addition, financial data providers (such as Bloomberg Professional service) provide close to real-time energy broker pricing based on OTC trades.

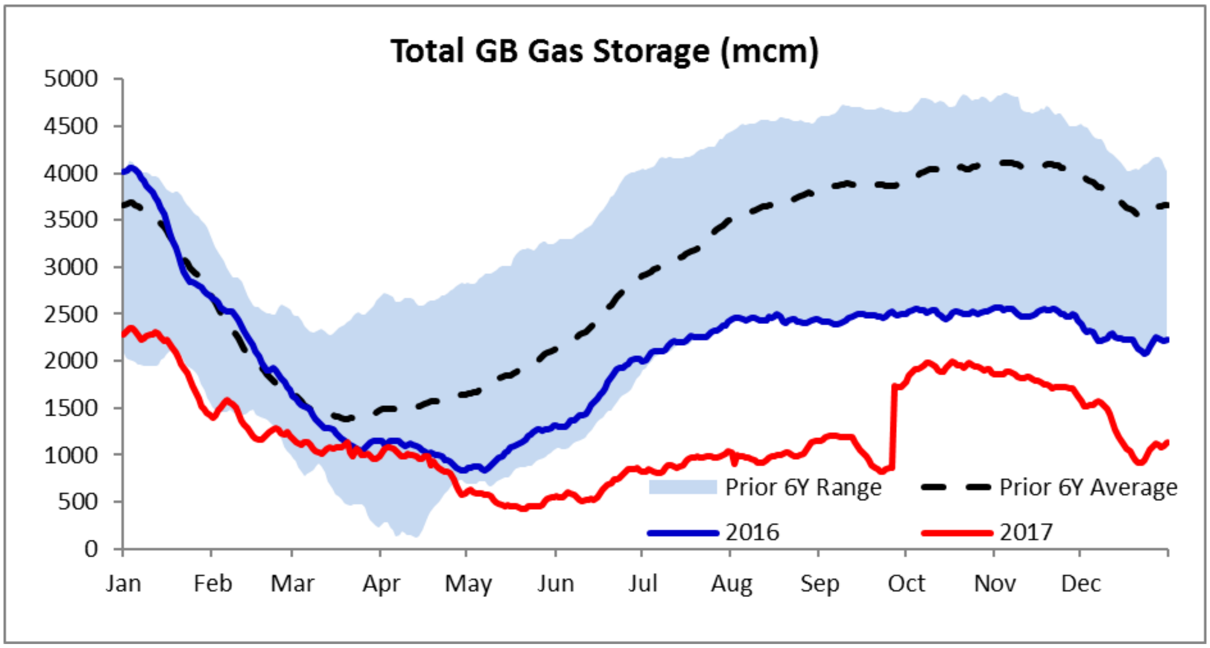
In addition to a wide range of OTC pricing data, ICE also provides pricing data to the market, both through the 'On-the-day Commodity Market' (**OCM**) and through the ICE Futures market.

Fundamentals

A healthy supply and demand picture persisted through the year, with GB benefiting from a diverse gas supply from a range of sources.

Total GB storage stocks in 2017 were lower than in 2016, due to outages at the long range storage facility Rough and the end of storage operations at Rough, although medium range storage responded with greater fill levels. Storage levels increased in October 2017 when Rough converted some cushion gas into working gas.

Figure 13: Total GB gas in storage during 2016 (blue line), compared with 2017 (red line), 6Y average (dotted) and prior 6 year range (blue bands)



Source: National Grid/Bloomberg/Ofgem

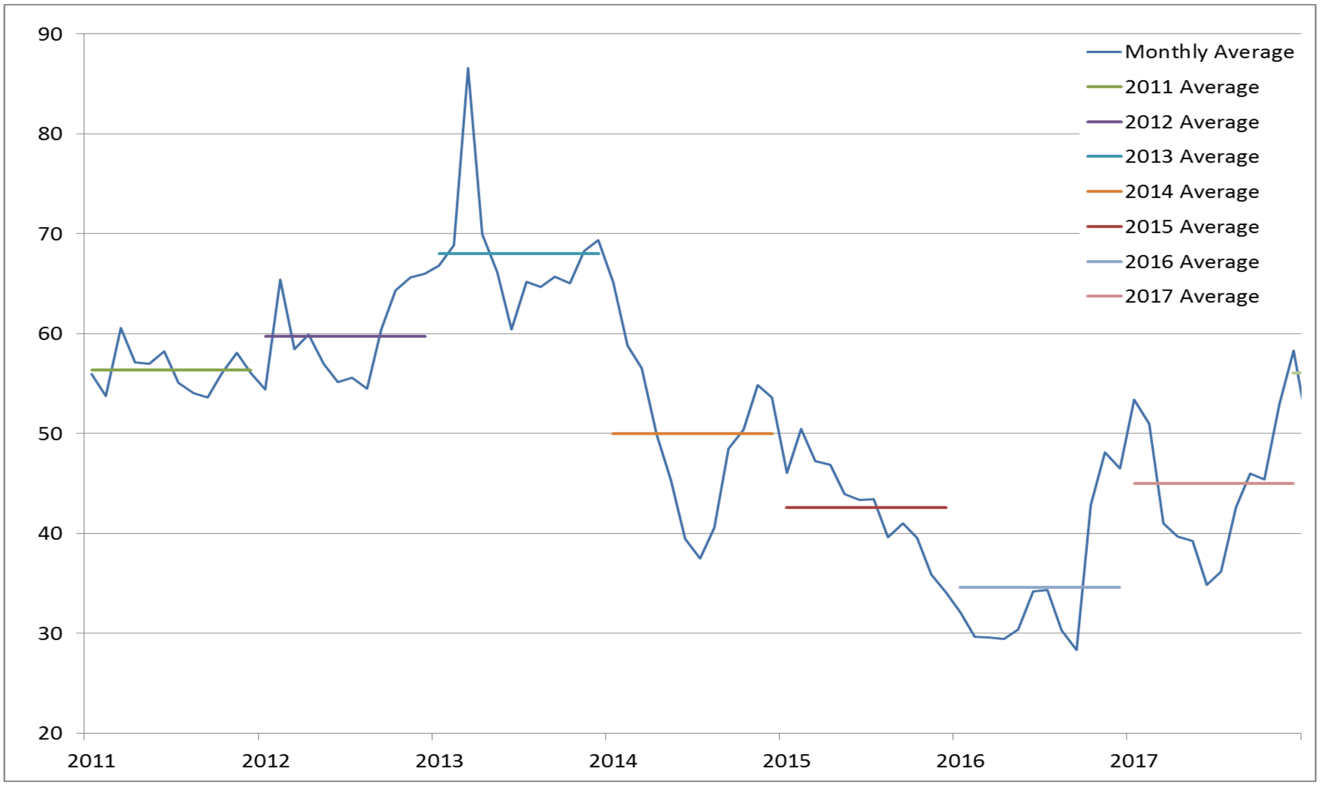
LNG flows fell year-on-year by 34% to 7.36bcm in 2017[132]. This was a sharper reduction that we have seen between 2015 and 2016 (20%), largely a result of price trends in the global LNG market and a 40% decrease in imports from UK's biggest LNG supplier, Qatar.

Total GB gas demand decreased slightly in 2017, down 2.2bcm year-on-year to 79.6bcm/year. This has been driven by a decrease in the amount of gas used for electricity generation (down 3.6%), as a result of low carbon electricity sources. Domestic consumption also decreased (down 4.6%) with warmer temperatures throughout the year in comparison to 2016.

[132] https://www.gov.uk/Government/statistics/gas-section-4-energy-trends.

Price developments
GB wholesale gas prices both for near-term and forward delivery generally increased throughout 2017 driven by a combination of currency movements, lower levels of gas in storage and higher oil prices. The average day-ahead gas price in 2017 was the highest since 2014 at 45p/therm,[133] compared with 35p/therm in 2016 (see Figure 14).

Figure 14: Monthly average day-ahead NBP price (p/therm, light blue) and yearly average day-ahead prices since 2011

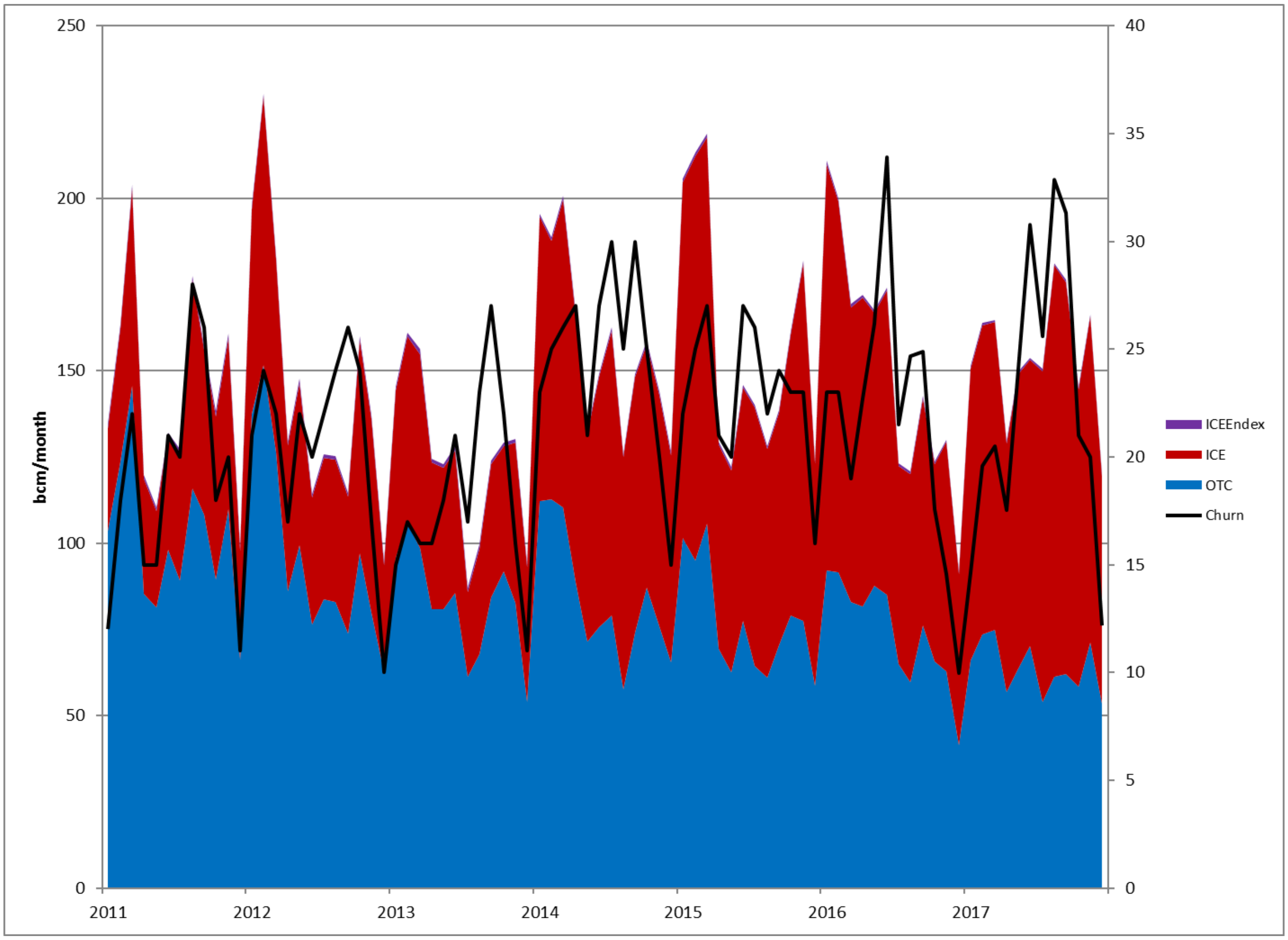


Source: ICIS Energy, Ofgem

Liquidity
Traded volumes and churn were fairly similar in 2017 compared with 2016[134]. Traded volumes increased fractionally year-on-year to 1,853bcm, with annual average churn increasing from 22 to 23. The share of total traded volume of GB gas on the exchange (ICE Futures Europe) increased slightly at 58% in 2017.

[133] Price data from ICIS Energy.
[134] Based on data from London Energy Brokers' Association, ICE and National Grid plc.

Figure 15: NBP trading volumes and churn, 2011 to 2017



Source: Combined data from LEBA, ICE, ICE Endex, Bloomberg and National Grid plc

Transparency

REMIT is a key tool in ensuring the transparency of prices within the wholesale energy market. For further information, please refer to **section 3.2.1**.

Market opening and competition

Market integration

The GB gas market is well integrated with both European and global gas markets. IUK interconnector connects GB with Belgium, while BBL connects GB with the Netherlands. GB is connected to the LNG market through the Isle of Grain, South Hook and Dragon LNG terminals.

For IUK, each shipper has a share of the Forward Flow and Reverse Flow Standard Capacity. Historical analysis[135] indicates that IUK is price responsive to a relatively high

[135] https://www.ofgem.gov.uk/sites/default/files/docs/2013/07/interconnector-flows-further-analysis-next-steps-final_0.pdf

level of efficiency. In the case of BBL, experience suggests that flows to GB may be becoming more flexible under normal operating conditions.

In 2017, the UK imported 47.3bcm of gas and exported 11.5bcm, making it a net importer for 35.8bcm. Pipeline imports from Norway, the Netherlands and Belgium increased by 8.2% year-on-year while LNG imports decreased by 34% since last year[136].

Market concentration
The GB market receives its gas supplies from a variety of different sources comprising indigenous supplies from the UK Continental Shelf, imports from Norway (via the Vesterled, Langeled and Tampen Link pipelines), imports from Continental Europe (via IUK and BBL) and from the LNG market (via the above terminals). With this diversification of supply also comes a diversity of shippers on the wholesale market.

For the interconnectors, originally nine shippers acquired capacity rights in IUK for 20 years from 1 October 1998 through to 30 September 2018. Currently, 13 shippers hold primary capacity rights[137]. For BBL, there are currently 14 shippers[138].

For LNG, six shippers (BP, Centrica, Engie, Uniper, Iberdrola and Sonatrach) import gas through the Isle of Grain.[139] The South Hook Terminal is owned by a UK joint venture of Qatar Petroleum (67.5%), ExxonMobil (24.15%) and Total (8.35%). Dragon LNG is equally owned by two shareholders, Shell and Petronas.

Rough is the UK's largest gas storage facility and the only long-range seasonal facility. In June 2017, CSL announced it was permanently closing, following technical issues and an extensive well testing programme, which began in 2015. CSL has been given permission to permanently end Rough's status as a storage facility, and it intends to produce all recoverable cushion gas from the field, which is estimated at 183bcf.[140]

4.2.2 Retail markets

As mentioned in previous **section 3.2.2**, a large amount of Ofgem's engagement with the retail energy market does not distinguish between the electricity and gas sectors - it is considered as a whole. Where Ofgem does assess the electricity and gas retail markets separately, the information has been documented in **sections 3.2.2** and **4.2.2** respectively.

4.2.2.1 Monitoring the level of prices and the effectiveness of market opening and competition

---

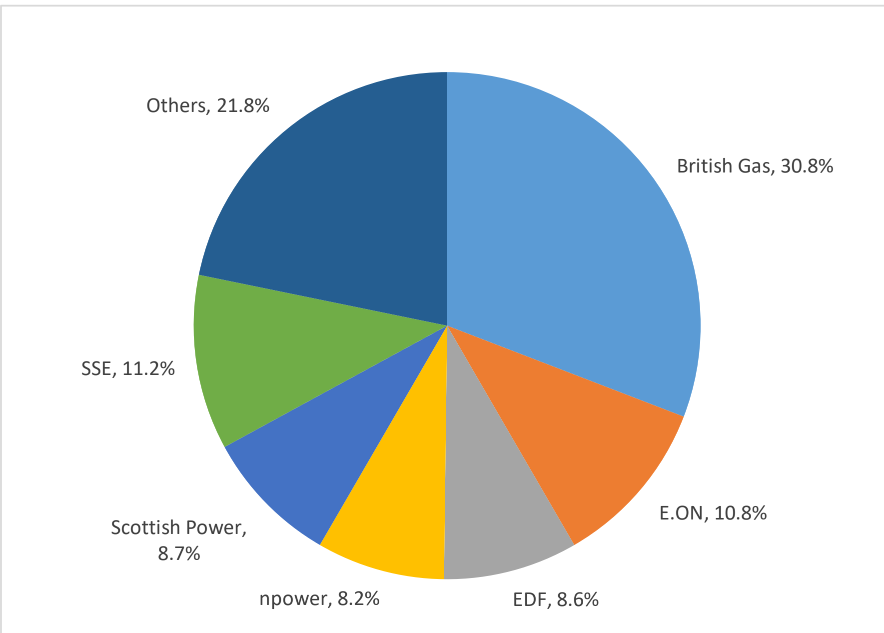
[136] Source: Department for Business, Energy & Industrial Strategy Energy Trends 2017 Table ET 4.3
[137] Shippers are listed on IUK's website (accessed in April 2018): http://www.interconnector.com/access-services/products-services/current-shippers/
[138] Shippers are listed on BBL's website (accessed in April 2018): http://www.bblcompany.com/commerce/shippers-list.
[139] Shippers are listed on the Isle of Grain's LNG terminal website (accessed in April 2018): http://grainlng.com/who-are-we/our-customers/
[140] https://www.gov.uk/cma-cases/rough-gas-storage-facility-review-of-undertakings#decision-to-release-undertakings; https://www.centrica.com/news/cessation-storage-operations-rough

Market structure

Domestic market shares
Before the full introduction of competition in 1999, British Gas had a monopoly to supply all domestic gas consumers in GB. In GB the majority of the domestic gas supply market is now accounted for by British Gas and by the five large vertically integrated electricity suppliers (which evolved from the Public Electricity Suppliers (**PESs**) through mergers and acquisitions). In comparison to a previous year, in December 2017 there were 58 small and medium sized domestic gas suppliers in the UK.

There were also around 23.2m domestic gas consumers As Figure 16 below shows, the former incumbent suppliers accounted for 78% of gas supply to these customers, down from 83% in 2016. The combined market shares of these smaller suppliers has increased by 5 percentage points relative to December 2016, to 22%.

Figure 16: GB domestic gas suppliers' market shares, December 2017



Source: Ofgem analysis of Xoserve gas meter point data

Non-domestic market shares[141]
The non-domestic gas market is characterised by a larger number of independent suppliers. In addition to the former incumbent suppliers, there are 57 independent suppliers, with 8 of them entering the market in 2017.

They have varying focus and market share across two main segments: one for meter points with annual average consumption below 732,000 kWh (Small Annual Quantity,

[141] The data presented in this report is based on number of supply points. However, it should be noted that the market shares by volume may show a different story as some suppliers may have a low number of supply points which have however very high volumes of energy supplied.

proxy for small business customers), and the other for meter points with annual average consumption above 732,000 kWh (Large Annual Quantity, proxy for large business customers).

Table 8 shows that in the segment of small business customers British Gas is the leading supplier, as in the non-domestic market as a whole. Its market share has decreased by 3.6% relative to 2016. E.ON has seen a decrease of 1.9 % in its market share, while SSE have had a 1.6%point increase. Independent supplier Opus has increased its market share by 1.4%.

International gas producers have a strong presence in the segment of large business customers. The leading one -Total Gas and Power with 11.8% market share - has lost nearly 1% relative to December 2016. British Gas lost over 3% over the same period. Gazprom has registered the largest increase, of around 1.4%, followed by Opus (1.2%).

Table 8: Market shares in non-domestic gas market, December 2017

Gas supplier	Non-domestic sites	
	<732MWh	**>732MWh**
British Gas	26.8%	23.5%
E.ON	12.0%	10.6%
Total Gas and Power	9.3%	11.8%
Opus	9.3%	7.6%
Contract Natural Gas Ltd	5.9%	5.4%
Npower	5.5%	5.1%
Gazprom	7.7%	9.1%
Corona	6.1%	8.2%
SSE	6.7%	7.24%
Others	10.7%	11.5%

Source: Ofgem analysis of Xoserve meter point data

Herfindahl–Hirschman Indices

The HHI measure of concentration shows that in December 2017 gas markets were concentrated on the CMA's definition, with the market for domestic gas customers being the most concentrated (with 2016 figures in brackets):

- domestic – 1,443 (1,741);
- non-domestic, small businesses – 1,251 (1,457); and
- non-domestic, large businesses – 1,130 (1,147).

The HHI fell in 2017 relative to 2016 in domestic and small business segments while the non-domestic large business segment has remained almost unchanged relative to 2016.

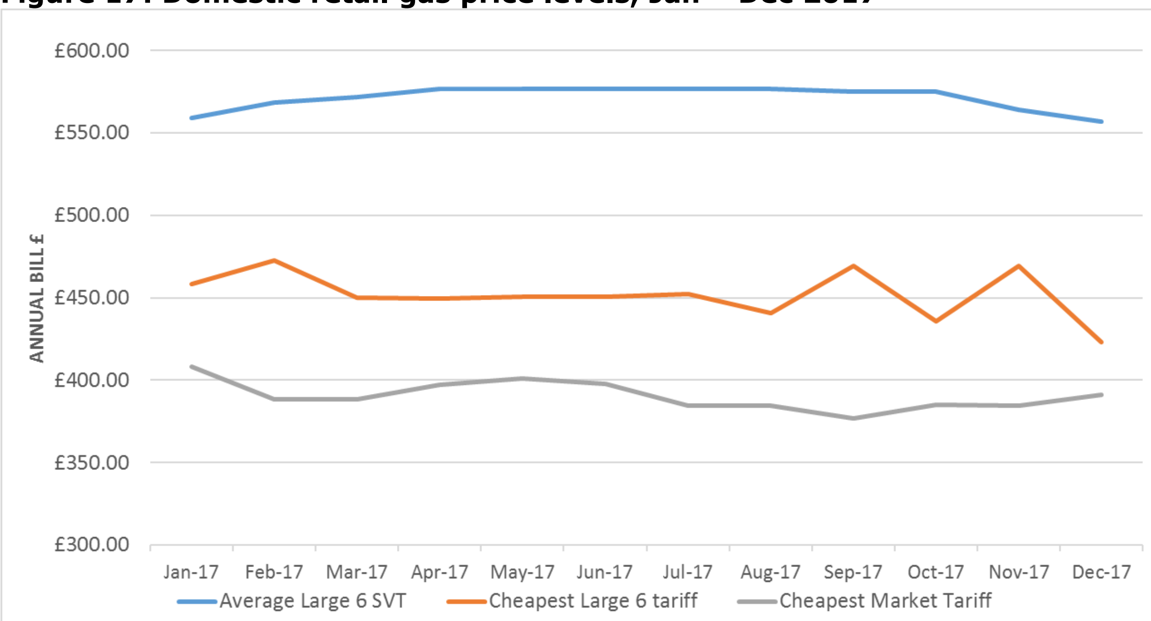
Prices for domestic consumers

Most final consumer prices in the GB retail energy markets were determined by market forces in 2017. The prepayment segment is an exception, as a temporary price cap was introduced from 1 April 2017 as recommended by the CMA. In addition, there are elements of the final price that are attributable to the regulated aspects of the market, in particular distribution, metering and transmission charges, which continue to be

price controlled. There are also a number of other costs that influence how suppliers set retail gas prices, including wholesale energy costs and the costs of the UK government's environmental and social policies such as the Renewable Obligation and the WHD, which can vary over time. As for electricity, Ofgem monitors domestic suppliers' gas prices across GB.
As in the electricity market, over the year suppliers continue to offer fixed tariffs with most fixed deals being priced at a discount relative to variable tariffs. Again as the electricity market, smaller suppliers generally offered the cheapest fixed deals.

Figure 17 shows the change in domestic gas bills based on incumbent SVT and cheapest tariffs across GB's gas market between January and December 2017. Over the year, the cheapest gas bill offered by the largest six suppliers decreased by 8% (£35). The cheapest tariff on the market decreased by 4% (£17). In December 2017, the price differential between the cheapest tariff offered by the largest six suppliers and independent suppliers was £32.

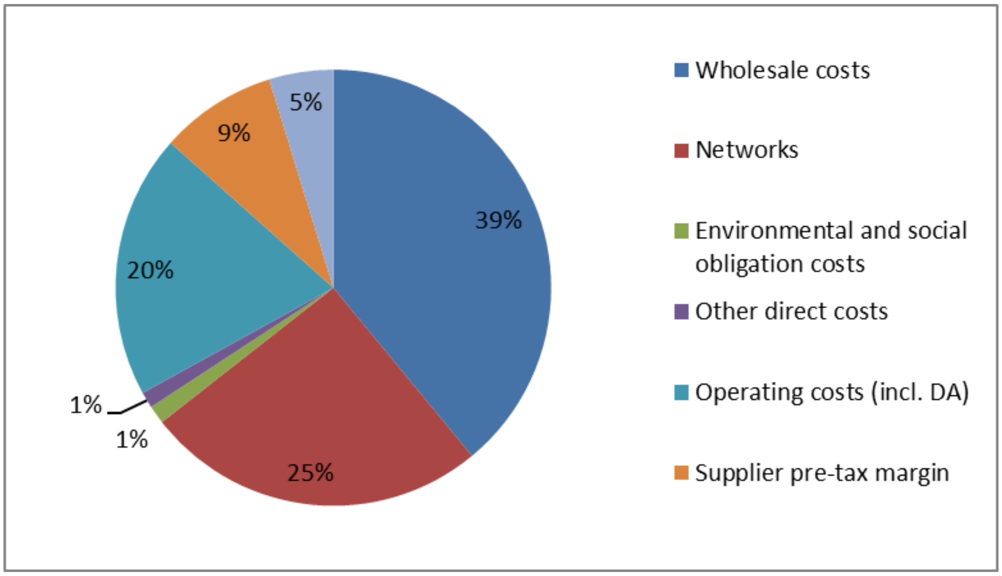
Figure 17: Domestic retail gas price levels, Jan – Dec 2017



Source: Ofgem analysis of Energyhelpline data
Notes: Price level is based on revised consumption level of 12,000 kWh per year

As well as monitoring domestic gas price levels, we also assess the extent to which particular costs have an impact on these bills. Suppliers face a range of costs that influence how they set retail electricity prices. These costs can vary within and between years, and include wholesale energy costs, the costs of UK government environmental and social policies, and transmission and distribution costs. Figure 18 shows the breakdown of an average gas bill for an average domestic customer of a large supplier.

Figure 18: Domestic gas bill breakdown, 2017



Source: Ofgem analysis of CSS published by the six large suppliers

Consumer engagement and experience

Domestic switching rates

In 2017, approximately 4.1m domestic consumers switched their gas supplier[142], equivalent to 345,000 per month. This represents an annual switching rate of 18.6 %, 2.7 percentage point higher than in 2016. We also saw an increase in switching away from the six largest suppliers. On average 58% of customers that switched during 2017 moved to smaller or medium suppliers, an increase of 11% relative to 2016.

The speed and reliability of switching is also important. In December 2017, the system average time to complete a switch remained the same as last year at 17 days. Consumer surveys are an additional source of information on the consumer switching experience.

Non-domestic switching rates

There has been an increase of approximately 2.4% in the non-domestic gas switching rate. In April 2017, we published our quantitative survey on micro and small business consumer engagement, which covered both gas and electricity segments. We summarised the main findings of this survey in **section 3.2.2.**

Recommendations on supply prices, investigations and measures to promote effective competition

Ofgem's work on recommendations on supply prices, investigations and measures to promote effective competition is cross-cutting and it applies to both the electricity and gas markets. Subsequently, it has been covered in more detail in the retail market overview in **section 3.2.2.3**.

[142] Switching between suppliers is known as 'external switching'.

4.3 Security of Supply

Under Article 5 of the Gas Directive, Member States have to ensure the monitoring of security of supply issues.

In GB, no single body is responsible for ensuring security of supply; we rely on the market to do this. However, Government sets overall energy policy on energy security, Ofgem is responsible for regulating the market, and National Grid as operator of the GB gas system has responsibility for ensuring that supply meets demand each day.

In December 2017, we published our joint SSSR[143] alongside BEIS. This was part of an obligation[144] on Government to report annually to Parliament on the availability of electricity and gas for meeting the reasonable demands of consumers in GB. The report concluded that GB's gas market has delivered security to date and is expected to continue to function well, with sufficient delivery capacity to meet demand. The report noted that sufficient gas is available from a combination of domestic, regional and global gas markets and the GB gas system is robust to all but the most extreme and unlikely combinations of infrastructure and supply shocks.

For more information on security of supply issues please see **section 3.3** of this report.

[143] https://www.gov.uk/government/publications/statutory-security-of-supply-report-2017
[144] Under section 172 of the Energy Act 2004 as amended by section 80 of the Energy Act 2011.

5. Consumer protection and dispute settlement in electricity and gas

Chapter Summary

The following chapter provides details of our consumer protection and dispute settlement work in both the GB gas and electricity sectors during 2017. This includes developments in the domestic and non-domestic sectors and further information on smart metering and smarter markets, our consumer vulnerability strategy and protecting consumers.

5.1 Consumer protection

According to Articles 37(1)(n) of the Electricity Directive and 41(1)(o) of the Gas Directive, Ofgem must help to ensure that consumer protection measures are effective and enforced, especially when the new technology enters the market. Here, we report on the several aspects of current and future consumer protection.

Price protection for vulnerable customers
Following a two-year investigation, the CMA found that PPM consumers face higher actual and perceived barriers to information and access to switching. As a result, they often face higher annual bills than customers in other market segments. The CMA recommended a cap on prices as a temporary measure until 31 December 2020, to coincide with completion of the smart meter rollout.

On 2 February 2018, Ofgem extended this price protection to around a further one million non-prepayment customers receiving the WHD. This was on the basis that these customers are more likely than average to be vulnerable. We chose this proxy because these customers could be easily identified by suppliers who participate in the WHD scheme, allowing the protection to be introduced quickly. The WHD safeguard tariff is set at the same level as the existing protection for prepayment customers. It applies to SVT and default fixed-term tariffs. This measure will end in December 2019 if it has not already been replaced by other price protection.

Similarly, like the prepayment meter price cap, the WHD safeguard tariff protects consumers by reducing their bills. The saving delivered will vary over time, because the level of the safeguard tariff moves with cost indices, and suppliers' prices will also change over time. Before the introduction of the safeguard tariff, we estimated that the average saving per eligible dual fuel customer could be around £120 per year.[145] This estimate was based on the level of the safeguard tariff over Winter 2017-18. The level of the safeguard tariff has since increased.

---

[145] At typical consumption.
https://www.ofgem.gov.uk/system/files/docs/2017/10/financial_protections_for_vulnerable_consumers_-_technical_document.pdf

Ofgem is now developing further price protection in response to the government's proposed temporary tariff cap for customers on SVT and default tariffs.

Protecting consumers who have a prepayment meter force-fitted[146]
In January 2018, Ofgem introduced a new licence condition to protect consumers when a supplier is considering force-fitting a PPM by using a court warrant. We were concerned that previously suppliers were failing to identify vulnerable consumers during the warrant process, charging vulnerable consumers excessive costs and that there was inconsistency in warrant charges across supplier. Measures that have been introduced include:

- a prohibition of the use of warrant on PPM installations for people for whom the experience would be severely traumatic, i.e. due to mental health issues;
- a prohibition on suppliers levying warrant-related charges in certain cases related to consumers in vulnerable situations, i.e. consumers in severe financial difficulty;
- a cap on the amount of warrant charges at £150 in all other cases; and
- a proportionality principle covering costs and actions of suppliers for all customers in the debt recovery process.

These measures are designed to protect all consumers, including the most vulnerable, from experiencing unnecessary hardship due to having a meter installed under warrant. We have sent a strong message to suppliers that using a warrant to install a PPM is a last resort. They must step in early stage to help customers manage debt through repayment plans.

Introducing a vulnerability principle into the supply licence to better identify vulnerable consumers[147]
In August 2017, Ofgem decided to amend the SoC for both domestic and non-domestic customers. This is part of Ofgem's wider move to rely more on enforceable principles rather than detailed rules to regulate supply businesses. As part of these reforms, Ofgem introduced a broad vulnerability principle to the domestic SoC. The vulnerability principle signals are that suppliers must have special regard to domestic consumers in vulnerable situations so they are not at a disadvantage in accessing the benefits of the energy market. Suppliers now need to make an extra effort to identify and respond to the needs of those in vulnerable situations to comply with the SoC and treat all their customers fairly.

Working with other regulators to better identify vulnerable consumers and share data[148]
Ofgem has been collaborating with Ofwat and the UK Regulators Network (**UKRN**) to explore how making better use of data can help identify customers in vulnerable situations across the energy and water sectors. We published our policy report in October 2017, which:

---

[146] For more information see Ofgem's decision to cap prepayment warrant charges for indebted customers.
[147] For more information, see Ofgem's decision to change the Standards of Conduct.
[148] For more information, see: UKRN cross-sector project: Making better use of data

- highlighted collaboration already taken place across sectors,
- explored how companies can make better use of data and work towards sharing non-financial vulnerability data,
- presented principles for effective sharing of non-financial vulnerability data, based on building customer confidence and effective company collaboration, and
- outlined our expectations on the energy and water sectors to develop work in this area.

A joint industry-working group has been established with the goal of delivering cross-sector data sharing by 2020. Two companies, United Utilities and Electricity North West, have begun a data sharing proof of concept pilot in north-west England to show data sharing is possible and to identify the challenges which need to be overcome. The regulators will hold the working group and individual companies to account and will publish a progress report in autumn 2018.

Making better use of data and developing cross sector data sharing will help companies to identify customers in vulnerable situations. Data will help companies offer tailored support to their customers and it will mean those in vulnerable situations will not have to have the same stressful conversations about their circumstances with multiple companies. Data sharing will also be beneficial in emergency situations (i.e. flooding) where companies need to coordinate their responses in prioritising support for those vulnerable customers at risk.

Reporting on how well suppliers are supporting vulnerable consumers
Every year Ofgem publishes data on how well suppliers perform against their social obligations. We do this to make suppliers' performance transparent, encourage improvement and innovation, and build trust in the market. The vulnerability report presents a view on the extent to which vulnerable consumers are experiencing positive outcomes in the retail energy market. It provides information on inclusive services (such as PSR registration and gas safety checks), affordability and debt (such as debt prevention, debt repayment and switching rates), and staying on supply (such as PPM and (self) disconnections). The data is presented alongside good practice case studies from suppliers, customer cases from Citizens Advice, research carried out by consumer groups and Ofgem.

As a result of highlighting good practices and poorer performance, we have seen real improvements in suppliers' practices since we started collecting this data via social obligations in 2016.

Introducing a principles-based Priority Services Register to better support vulnerable consumers[149]
We modified the PSR rules that came into effect on and from 1 January 2017 to require companies to be proactive in identifying customers who would benefit from PSR services, expanded eligibility criteria to include vulnerable consumers, and to provide flexibility to offer innovative services. Being on the PSR gives consumers access to

[149] For more information see Ofgem's decision to modify the Priority Service Register licence conditions.

certain non-financial services free of charge (such as a way to identify representatives, meter reads and sending communications to a nominated person).

- Network operators still have to provide specific services to ensure a minimum level of protection for consumers who are at particular risk of detriment in the event of interruption of supply. Suppliers and network operators are free to provide any other additional priority services of a similar nature to customers they consider require them.
- Companies must record and share relevant data about their customers with identified vulnerability needs within the parameters of wider data protection and/or privacy laws. Suppliers and network companies must share this data amongst each other.

Suppliers must take all reasonable steps to promote the PSR so that more customers are aware of the support available. Where possible, companies should collaborate with consumer groups and other third parties to develop customer advice and information on priority services in order to improve awareness.

Guaranteed Standards of Performance

The reforms of the supplier Guaranteed Standards of Performance undertaken in 2015[150] took effect on suppliers in January 2016[151]. They set the levels of service for electricity and gas suppliers to achieve when making and keeping appointments, replacing domestic credit and PPMs (faulty or otherwise) and, where necessary, reconnecting supplies.

Most guaranteed standards apply only to domestic customers. Only the Guaranteed Standard on making and keeping appointments applies to both domestic and microbusiness customers. Every time a supplier fails to meet a guaranteed standard it must pay a compensation of £30 to the affected customer within 10 working days (or face an additional £30 payment to that customer).

In June 2018 we published a consultation on introducing new Guaranteed Standards that directly compensate consumers where they suffer an erroneous transfer or a delay to switching, final billing, or credit repayment on switching. Subject to the outcome of the consultation process, we hope to introduce these new Guaranteed Standards by the end of 2018.

Consumer insight and engagement

In 2017, we continued to commission and publish a range of research to inform policy decisions and put consumer perspectives at the heart of our regulatory processes. We listened to consumers through regular quantitative surveys and qualitative focus groups, and deliberative fora such as the Ofgem Consumer First Panel in August 2017. Some examples from our work in 2017 include:

---

[150] https://www.ofgem.gov.uk/sites/default/files/docs/2015/11/gosp_reforms_-_consultation_response_10th_nov_final_0.pdf

[151] Electricity and Gas (Standards of Performance) (Suppliers) Regulations 2015 were made by the Authority and received Ministerial consent. The new Regulations commenced from 1 January 2016 and have been published at: http://www.legislation.gov.uk/uksi/2015/1544/contents/made

- quantitative research with micro and small business consumers to track their engagement and satisfaction with the energy market[152];
- quantitative research with domestic consumers to help with our understanding of how market engagement changes over time – this work included a new consumer segmentation to help us understand how different engagement barriers affected different groups of consumers; and
- Ofgem's Consumer First Panel (of domestic consumers) discussed a range of key policy issues, including information needs that fed into our work on principles-based regulation.

During 2017, Ofgem's dedicated Behavioural Insight Unit focussed on building the organisation's understanding of customers' behaviour and on developing its ability to run randomised controlled trials (**RCTs**). One of our major achievements this year was designing and completing our first RCT with suppliers, the Cheaper Market Offers Letter trial. The robust evidence generated from this trial means we now know that disengaged customers do respond to a letter, and that they respond differently depending who this letter is from. The simple, low cost, letter increased switching rates from a baseline of 1.0% to 3.4% in one of the trial arms. We now aim to build on this through more trials and research with customers in 2018.

Monitoring suppliers' social obligations (domestic consumers)
We continue to collect social obligations reporting from domestic suppliers, which includes data on debt levels and debt repayments, PPMs, disconnection rates and help for customers in vulnerable situations. This data helps us to:

- check that suppliers are complying with our rules,
- challenge poor performance,
- encourage and share good practice, and
- inform future policy.

Our latest quarterly and annual reports can be found on our website[153].

Disconnections for debt
Social obligation reporting also requires suppliers to provide us with information about debt and disconnections for debt for domestic consumers. Monitoring supplier performance in this area allows us to identify issues of concern with supplier performance and take action. The latest data related to domestic energy debt and disconnection is published on our website.

Energy Best Deal (domestic consumers)
The successful partnership with Citizens Advice delivering the Energy Best Deal continued in 2017. The campaign provides Citizens Advice advisers and other advice workers with the training needed to deliver face-to-face advice to lower income households on energy rights and how to get the best from their energy deal.

---

[152] https://www.ofgem.gov.uk/publications-and-updates/micro-and-small-business-engagement-energy-market-2017-quantitative-research-report
[153] https://www.ofgem.gov.uk/about-us/how-we-work/working-consumers/protecting-and-empowering-consumers-vulnerable-situations/consumer-vulnerability-strategy/consumer-vulnerability-strategy-social-obligations-reporting-sor

Appointment of Supplier of Last Resort

The 'Supplier of Last Resort' (**SoLR**) process ensures that customers of a failed energy supplier continue to be supplied in an orderly fashion through the appointment of another supplier (the SoLR) to take on responsibility for supplying those customers. This process also enables protection of the failed supplier's customer credit balances, as we take into account who can best protect credit balances as part of the process of selecting a replacement supplier.

In January 2018 we announced that we had appointed Green Star Energy[154] as the new supplier for Future Energy (Supply) Limited and Future Energy Utilities Limited's (**Future Energy**) gas and electricity customers, following an earlier announcement that Future Energy had ceased trading and our decision to revoke Future Energy's licences.

Through this process, we were able to effectively protect the consumers affected by Future Energy's insolvency[155]. The speed with which the situation was resolved (in the course of matter of days, over a weekend period) ensured that the costs to the rest of industry were kept to a minimum and broader confidence in the energy market was maintained.

Smart metering

Smart meters are able to record and export consumption data each half-hour, allowing consumers to be settled using this data. This could have a number of benefits for consumers:

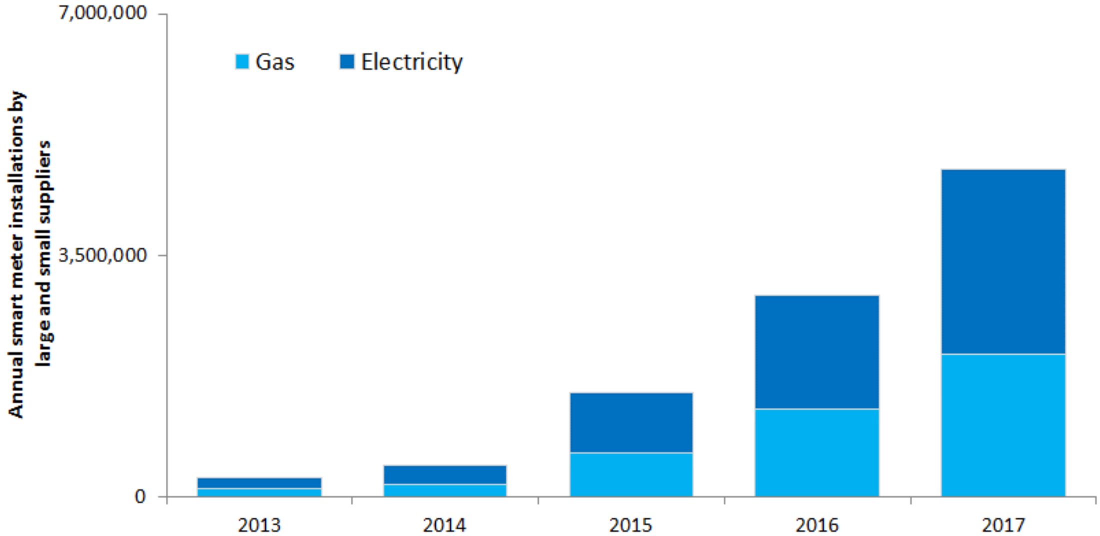
- make the settlement arrangements more efficient, reducing barriers to entry to the market, for example reducing credit/collateral requirements;
- facilitate uptake of smart tariffs to incentivise consumers to shift load away from peak periods, reducing consumer bills;
- promote innovation and competition in the energy market by facilitating DSR, flexibility and innovative business models;
- shift demand away from system peak, helping to alleviate security of supply concerns and reducing the need for network reinforcement. This will deliver increasing benefits as the share of intermittent, inflexible and distributed generation grows; and
- allow suppliers to forecast demand more accurately, supporting competition and reducing costs.

Licence conditions require suppliers to take 'all reasonable steps' to ensure that smart metering systems are installed in homes and small businesses by the end of 2020.

As of 27 March 2018, over 10 million smart and advanced meters were operating across homes and businesses in Great Britain.

[154] Green Star Energy is a trading name of Hudson Energy Supply UK Limited.
[155] https://www.ofgem.gov.uk/publications-and-updates/appointment-green-star-energy-supplier-last-resort

Figure 20: Annual domestic smart metering installation activity



	2013		2014		2015		2016		2017	
	Gas	Elec	Gas	Elec	Gas	Elec	Gas	Elec	Gas	Elec
Small	-	-	-	-	137,500	147,500	4,700	7,000	72,500	88,600
Large	121,000	171,400	189,200	279,700	504,600	718,400	1,264,900	1,648,600	1,998,700	2,586,200
All	121,000	171,400	189,200	279,700	642,100	865,900	1,269,600	1,655,600	2,071,200	2,674,800

Source: BEIS

Ofgem continued throughout the reporting period to provide independent advice and expertise for the government's smart meter implementation programme. We now play a key role in monitoring and, where appropriate, enforcing compliance with the new regulatory obligations relating to smart meters to ensure that the interests of consumers remain protected during the transition period to smart metering.

Regulating the Data and Communications Company
The DCC provides the centralised smart metering communications infrastructure across Great Britain which allows to send and receive information from smart meters.

Ofgem monitored the DCC during 2017 to ensure it has abided by its licence conditions. Our monitoring included annual *ex post* price control arrangements and the approval of DCC's charging statements. Our role is to ensure that DCC's costs are incurred economically and efficiently.

The majority of the DCC infrastructure went live on 8 November 2016, and full functionality was available in spring 2017. As of April 2018 we are implementing an Operational Performance Regime (**OPR**).

The rollout of smart metering has the potential to make retail energy markets work better for consumers. However, this will require reforms to the arrangements that govern how market participants interact with each other and consumers. We are continuing to progress work to deliver necessary changes to supplier process, the electricity settlement process and consumer empowerment and protection.

Electricity settlement
The settlement process puts incentives on suppliers to match the electricity they buy in the wholesale market with their customers' demand in each half hour of the day.

Currently the majority of consumers in GB are settled 'non-half-hourly' using estimates of when electricity is consumed based on a profile of the average consumer. This is because most sites do not have meters that can record consumption in each half-hour period.

To secure the benefits of the smart meter rollout, half-hourly settlement is required. In 2015, we agreed to take forward a project to reform the electricity settlement arrangements as smart meters are rolled out in GB. In 2017, the deadline to migrate medium and larger non-domestic consumers to half-hourly settlement passed on 1 April. We put in place changes to facilitate elective take-up of half-hourly settlement by suppliers including first-movers and innovative market participants. We also moved forward with our project on mandatory half–hourly settlement. This included consultation on our plans for proposed reforms. Our Forward Work Programme for 2017-18 outlined our commitment to take forward the policy and design phase of the project. In order to make necessary reforms to domestic codes, the Electricity Settlement Reform Significant Code Review was launched in July 2017.[156]

5.2 Dispute settlement

Under Article 37(11) of the Electricity Directive any party that has a complaint against a transmission or distribution system operator in relation to that operator's obligation under the Directive may refer the complaint to the regulatory authority. Each regulatory authority is required to issue a decision within two months following receipt of the complaint. That period may be extended by two months where additional information is sought by the regulatory authority. That extended period may be further extended with the agreement of the complainant. Member States are required to ensure that regulatory authorities have the powers to enable them to make such decisions.

Sections 44B-D of the Electricity Act set out our determination functions and procedures under Article 37 of the Electricity Directive. These sections were inserted by the Electricity and Gas (Internal Markets) Regulations 2011. Under Section 44C, any dispute that is referred to us for determination is determined by us or, if we think fit, by an arbitrator appointed by us. The decision is binding on the parties to the dispute. However, any party can seek a judicial review of our decision. No new Article 37 disputes were raised in 2017.

Sections 27B-D of the Gas Act set out our determination functions and procedures under Article 41 of the Gas Directive. These sections were inserted by the Electricity and Gas (Internal Markets) Regulations 2011. Under Section 27C, any dispute that is referred to us for determination is determined by us or, if we think fit, by an arbitrator appointed by us. The decision is binding on the parties to the dispute. However any party can seek a judicial review of our decision. No Article 41 disputes were raised in 2017.

[156] https://www.ofgem.gov.uk/publications-and-updates/electricity-settlement-reform-significant-code-review-launch-statement-revised-timetable-and-request-applications-membership-target-operating-model-design-working-group

Utility Regulator
ELECTRICITY GAS WATER

Northern Ireland National Report 2018

Contents

Contents

1 Foreword

We are nearing the end of our current corporate strategy period and it is pleasing to see the real and significant progress towards meeting the targets we set ourselves back in 2014. In everything we do there is a balance to be struck between protecting the short- and long-term interests of consumers.

Our regulation of utilities is focused on promoting successful enterprises because we believe this will be reflected in the service they provide to consumers. A key regulatory tool that we have is our price control reviews. Last year was particularly significant given the conclusion of our biggest price control, for NIE Networks. This set out a six and a half year price control aimed at supporting prudent investment in infrastructure, improvements in asset management, providing performance incentives and promoting innovation at the lowest possible cost to consumers.

Regulation plays an important role by facilitating new developments that benefit not just the consumers affected but the economy and society as a whole. In the last year a major milestone towards the new all-island wholesale market, the Integrated Single Electricity Market (ISEM), was reached with the first capacity auction in December. We believe in the benefits of access to natural gas and have a track record of growing the natural gas industry in Northern Ireland. The further progress towards bringing natural gas to county Down and Gas to the West is a further vote of confidence in the natural gas industry in Northern Ireland.

Of course our work is not just about the medium to longer term. Rising international wholesale energy prices led to increases in electricity bills. There were also gas tariff increases in the Greater Belfast and Ten Towns areas. Any increase in regulated prices is regrettable for households and businesses and our job is to remain vigilant on tariffs and act if things change to allow a further price review.

We value the engagement and support of those who work with us. While there is currently no NI Assembly, we are conscious of the need for us to remain accountable and continue to work within energy and water policy frameworks. We are grateful for the support of the Department for the Economy.

The board has met with and visited industry, statutory and consumer stakeholders during the year and is grateful for this engagement. With some uncertainty in the wider environment, such as on the impact of Brexit, we will continue to work closely with all stakeholders. As ever, during another busy year, it is important to recognise the commitment of board colleagues. My board colleagues and I are also indebted to everyone who works for the Utility Regulator for their dedication and hard work.

Bill Emery
Chairman

2 Main developments in the gas and electricity markets

Main conclusions of the report and a general evaluation of market development and regulation.

2.1 Electricity

Along with the Commission for Energy Regulation (CRU – formerly known as the Commission for Energy Regulation) we developed and delivered the Single Electricity Market (SEM) in 2007. The Single Electricity Market (SEM) continues to delivers benefits to consumers. The SEM ensures there is greater transparency around the costs of generation ensuring appropriate costs for consumers. Further development of new generation on the island of Ireland has increased investment and competition in the wholesale market.

We have been progressing the development of an enhanced market, the I-SEM. The I-SEM will allow the redesign of the market to ensure power is efficiently used on the system and will help with security of supply, lead to greater market transparency and allow for improved interconnection.

During the last year we made progress across all the significant I-SEM workstreams: energy trading arrangements, capacity remuneration mechanism, governance and licensing, forwards and liquidity and market power.

The key areas of policy development related to the detailed design of the energy trading arrangements, the publication of decisions on measures to promote liquidity and market power mitigation measures.

A significant amount of ongoing engagement has taken place with industry. We continue to work, along with the system operators, SONI and EirGrid, to ensure the necessary systems and processes are in place to aid market readiness. I-SEM is now expected to go live on 1 October 2018.

While the UK government's decision to leave the EU could potentially impact on I-SEM we are continuing, having consulted both governments, to progress delivery by the go-live date.

In 2017 we agreed RP6, the next price control for NIE Networks (NIEN) – the electricity networks company in Northern Ireland, which will run from

October 2017 to 2024. An important part of RP6 has been the extensive engagement with NIEN and other stakeholders – including on our overall approach to the price control.

Our draft RP6 determination was published in March 2017, with the final determination published on 30 June 2017.

In 2017 we also finalised the price control for the electricity system operator (SONI). The price control will facilitate the development of transmission pre-construction projects and the operation of the I-SEM and DS3 projects.

The Market Monitoring Unit (MMU), which is based at our offices, has continued to monitor the SEM over the past year. The MMU engaged with generators and operators to monitor compliance with the market rules.

Power NI is the regulated electricity supplier providing services to just under 500,000 customers. In 2017 we reviewed the tariffs of Power NI (the regulated electricity supplier). This resulted in a price increase for domestic electricity customers of 5.6%. However, domestic electricity prices in NI are lower than both Great Britain (GB) and the Republic of Ireland (RoI).

Following a public consultation we identified a key change in our Power NI price control. Since Power NI are no longer dominant in the business electricity market and following comments from our public consultation we decided to remove price regulation from business electricity customers from 1 April 2017.

2.2 Gas

We continue to promote the economic development of the natural gas industry in NI and made significant progressing on extending the network in the past year.

During 2016-2017 construction of the Strabane element of the gas to the west project was completed with the first customer connection in January 2017.

We have also set interim capital expenditure allowances for the Strabane section of the network and have put processes in place to set the overall capital expenditure allowances.

For the high pressure pipeline, planning approval was received and a number of contracts are in place. We expect construction of the high pressure pipeline to begin in June 2017 and be operational by the end of 2018. This will result in an additional 40,000 gas customer connections in the west of NI.

Work on constructing the gas network to County Down has also progressed. The town of Ballygowan has been connected with work progressing in Hillsborough during the year. This work has been facilitated by our GD17 price control decisions and provides for an additional £58m investment in the natural gas network. This will see an additional 27,000 consumers enjoy the benefits of access to natural gas.

Once the Gas to the West, Gas to East Down and gas network developments are completed, it will provide the potential for 67% of NI consumers to choose gas. By 2022 we expect 60% of NI consumers to be connected to gas. The network coverage will run from Derrylin in the West to Bangor in the East, from Coleraine in the north to Newry in the south.

Our incentives on gas distribution network operators to make new connections, continues to be successful. At the end of 2016 the number of consumers connected to the natural gas network had increased to 228,000. This is encouraging given our corporate strategy key performance indicator of 250,000 connections by 2019.

The final determination for the price control for the gas distribution companies – Phoenix Natural Gas (PNGL), firmus energy (fe) and SGN (Scotia Gas Networks) (called GD17) was published in September 2016. This builds on the progress delivered during the previous price control and covers costs which make up around 40% of the final customer gas bill.

Following the publication of the GD17 determination, both PNGL and SGN accepted our determination. Firmus Distribution Limited however appealed our determination to the CMA on several grounds. We expect the CMA to make a decision on the appeal by June 2017.

We have also progressed GT17, the price control for the four high pressure gas conveyance licence holders in NI for the period 1 October 2017 to 30 September 2022. The four licence holders are: GNI (UK) Limited (GNI (UK)), Premier Transmission Limited (PTL), Belfast Gas Transmission Limited (BGTL) and West Transmission Limited (WTL). The approach for the price control was published in June 2016, followed by a consultation on our draft proposals. We expect to publish the final determination in July 2017.

A regulated tariff review was completed for SSE Airtricity Gas Supply NI in the Greater Belfast area. We approved an increase of 7.6% in March 2017.

In the Ten Towns gas distribution area we reviewed firmus energy's tariffs and approved an increase of 12.2% in March 2017.

We are continuing to progress arrangements for harmonising gas transmission systems as required by the EU Gas Regulation (EC) 715/2009 and the network codes. We also work closely with OFGEM and Commission for Energy Regulation (Ireland) on cross-jurisdictional issues.

3 The electricity market

3.1 Network regulation

3.1.1 Unbundling

Report on TSO certification, DSO provisions regarding branding and resources and new developments regarding certification revisions

- Articles 10,11 2009/72/EC and Article 3 Regulation (EC) 714/2009
- Article 26

NIE Networks (NIEN, the transmission owner) applied for certification under Directive 2009/72/EC on 30 January 2013 on the grounds of Article 9(9) of the Directive. By the date of application NIEN ownership had been acquired by ESB which had extensive generation and supply interests in the SEM. The SEM Committee, which had determined that TSO certification was a SEM matter, issued its preliminary decision to the EC on 12 February 2013. This recommended certification subject to certain qualification measures including transfer of the transmission planning function from NIEN to System Operator Northern Ireland (SONI). The EC made a decision to approve the certification of SONI subject to the qualification measures in the SEM Committee preliminary decision and to some additional measures. The decision on certification for SONI was taken in June 2014, and the relevant licence changes have now been implemented.

Moyle Interconnector Limited, which owns the electricity interconnector between Northern Ireland and Scotland, applied for certification on the grounds of ownership unbundling on 25 January 2013. The SEM Committee issued a preliminary decision to the EC on 7 May 2013 recommending certification subject to certain qualification measures. The European Commission did not raise any objections to certification of Moyle Interconnector Limited as a fully unbundled TSO. The decision on certification for SONI was taken in June 2014, and the relevant licence changes have now been implemented.

3.1.2 Technical functioning

- Balancing services (Article 37(6)(b), Article 37(8))
- Security and reliability standards, quality of service and supply (Article 37(1)(h),)

Report relevant security and reliability regulation and data

- Monitoring time taken to connect and repair (Article 37(1)(m))

Clarify here at least if there is in your country a definition for "time to connect" for consumers and for producers

- Monitoring safeguard measures (Article 37(1)(t))
- RES regulatory framework: Report on connection, access and dispatching regimes for RES-E, in particular on priority issues. Report also on the balancing responsibility for RES-E. (Article 11 Regulation (EC) 713/2009)

The wholesale electricity market in Ireland (SEM) is a gross mandatory pool, with energy prices set ex-post. Balancing services are paid for through imperfections charges, constraint payments and make whole payments. These are pass-through costs; generators recover their short-run marginal costs. SONI is obliged under its licence to take into account the quantity, nature and cost when purchasing System Support Services.

Monitoring of security and reliability standards, time taken to connect and repair and safeguard measures are currently conducted through licence compliance. Transmission licences are held by NIEN, Moyle and SONI.

The loss of load expectations statistic is used by SONI as a security standard, which is concerned with the likely number of hours of shortage in a year. The security standard for NI is 4.9 hours per annum and if this standard is exceeded it indicates a higher than acceptable level of risk.

The System Operator, SONI, annually publishes the Generation Adequacy Statement which provides its forecast of generation capacity and forecast electricity demand for the upcoming ten-years. This allows for the assessment of capacity margins and identifies areas in which these could be increased, which highlights area of potential future investment. Above all the Generation Capacity Statement provides an estimation of future security standards based on expected generation capacity margins[1]. In 2017 we modified SONI's licence to include a requirement for them to develop a 10 year network development plan. It is expected that SONI will consult on the 10 year network development plan in 2018.

3.1.3 Network tariffs for connection and access

- Article 37(1)(a), Article 37(6)(a), Article 37(8), Article 37(10), Article 37(12) , art 37(3)(c) and (d)

Report on relevant new tariff regulation provisions

- Prevention of cross-subsidies (Article 37(1)(f))

Specify the methodology used in tariff regulation (i.e. cost plus vs incentive regulation), the method of checking undertaking's cost data, methodology for allocation of costs to grid users and if benchmarking is used please describe methodology used by NRA

Electricity Suppliers in Northern Ireland pay a number of regulated charges which they pass on to their customers. Regulated charges for the use of the electricity distribution network in Northern Ireland and a levy known as the Public Service Obligation (PSO) are set by NIEN and SONI, and the maximum amount recoverable is approved by the Utility Regulator. The "Regulated Tariffs Values" for the tariff year beginning October 2017 was published by the Utility Regulator in September 2017[2], detailing the use of system tariffs for that year.

NIEN is the transmission network owner and also the distribution system owner and operator. Two price control periods were applicable during 2017 RP5 began in 2012 running to September 2017, the current five-year price control commenced in 2017. NIEN is allowed revenue and therefore annual Distribution Use of System tariffs (DUoS) are determined by the terms of this price control. It also receives a Use of System allowance (UoS) from the TSO. The allowed capital expenditure (CAPEX) is limited (e.g. replacement of assets.) with exceptional items individually approved by the regulator.

[1] The All-Island Generation Capacity Statement for 2017 -2026 was published by the Eirgrid Group – http://www.eirgridgroup.com/site-files/library/EirGrid/4289_EirGrid_GenCapStatement_v9_web.pdf
[2] https://www.uregni.gov.uk/sites/uregni/files/media-files/Regulated%20Entitlement%20Values%20-%20Information%20Note.pdf

We published our draft RP6 determination in March 2016 and our final determination in June 2017.

We established, along with NIEN, the Consumer Council for Northern Ireland (CCNI) and the Department for the Economy (DfE), a Consumer Engagement Advisory Panel (CEAP). This provided consumers with an opportunity to give their views and have these reflected within NIEN's business plan submission.

We also worked closely with NIEN on the information required in the company's RP6 business plan submission. In particular, we have engaged with NIEN on regulatory information and guidance (RIGS) which allows comparison with GB electricity companies and provides transparent annual cost reporting.

NIEN is prohibited under licence obligations to provide or receive any cross-subsidy from any other business of the Licensee, this also includes any affiliate or related undertaking of the Licensee (whether or not a Separate Business).

We have a statutory duty to promote competition, where appropriate, in the generation, transmission, distribution and supply of electricity. Connections to the electricity grid by renewable developers and micro generators continue to be an area of extensive interest. After a disputes determination, in August 2015, there was a significant increase in requests for connection applications. We allowed NIEN and SONI time to develop new methodologies and consult further on the best operational processes. An alternative connection application and offer process decision paper was produced in May 2016.

In November 2016 we published a call for evidence to begin the process of our review of electricity distribution and transmission connections policy. In 2017 we consulted on how extensions should be treated and our proposal to clarify NIEN and SONI's ability to refuse to provide connection offers. We also identified next steps on other connections issues.

In 2016 the ability to work on contestable competition for connections of 5 MWs and over opened. We are continuing to engage on the implementation of contestability for all customers and are intending to consult further on licence modifications to enforce the implementation processes. This work continued throughout 2017 and it is expected that contestability will be fully implemented in 2018.

3.1.4 Cross-border issues

- Access to cross-border infrastructure, including the procedures for the allocation of capacity and congestion management (Article 37(6)(c), Article 37(8), Article 37(9), use of revenues for interconnectors (article 37(3)(f))

Report in particular on cases where specific cross-border cooperation between NRAs happened besides the general activity of the NRA in the frame of ACER/FG

- Monitoring technical co-operation between Community and third-country TSOs (Article 37(1)(s))
- Monitor TSO investment plans in view of TYNDP art 37(1)(g)
- Cooperation (Article 37(1)(c))

Other relevant cooperation agreements/activities of the NRA besides the RI

The Moyle Interconnector between Scotland and Northern Ireland lies within a Member State and has not previously been regarded as an interconnector for the purposes of the Electricity Directive. Nonetheless, Moyle has aimed to comply with the requirements of the directive regarding congestion management.

The interconnector owners are required to prepare relevant access arrangements in respect of the Interconnector. The purpose of these rules is to set out the auction mechanism including how participants can make an offer to acquire capacity units, together with the requirements on the Interconnector owner in terms of accepting an offer for capacity units from a participant. The access rules also address other areas including the curtailment approach should capacity become unavailable due to an outage.

Moyle Interconnector access rules are approved annually by both us and Ofgem with input from the Regulator in Ireland regarding the East-West Interconnector.

Compliance

- Compliance of regulatory authorities with binding decisions of the Agency and the Commission (Article 37(1)(d)) and with the Guidelines (Article 39))

Which decisions/actions have been taken following binding decisions of the Agency or the Commission.

- Compliance of transmission and distribution companies, system owners and electricity undertakings with relevant Community legislation, including cross-border issues (Article 37(1)(b), Article 37(1)(q), Article 37(3)(a),(b),(e) and Article 37(5) all but (a) and (c) + imposing penalties (Article 37(4)(d))

Report in particular on monitoring systems for TSO certification compliance and in the next future NC compliance. Report on other compliance cases and existing active monitoring methods

Compliance of transmission and distribution companies, system owners is through their licences. There are no issues to report.

3.2 Promoting Competition

3.2.1 Wholesale markets

Please provide a brief illustration of the state of competition of wholesale market and the main changes in the recent year

The all-island Single Electricity Market is the combination of two separate jurisdictional electricity markets in Ireland and Northern Ireland and is governed by the SEMC. The SEMC comprises of representatives from: the Commission for Regulation of Utilities (CRU) for Ireland, the Utility Regulator and an independent member.

The Single Electricity Market (SEM) has been in place since 2007 and ensures that the price of electricity charged to consumers reflects the costs of producing the electricity.

The SEM Committee meets monthly to take decisions on SEM matters. It comprises members of our board, the CER Commissioners and two independent members.

2017 was the tenth full year of operation of the Single Electricity Market. The SEM is a gross mandatory pool with gate closure at 10.00 hrs day ahead. The ex-post market schedule sets the half hourly system marginal price and allocates infra marginal rent to those included in the schedule. Capacity payments are made to all available generators based on an annually calculated capacity pot. Regulated directed contracts and also non directed contracts provide hedging for market participants. The market is operated by SEMO – the Single Electricity Market Operator which is a joint venture between the system operators in NI and Ireland.

Along with CRU we have taken major steps to deliver the new electricity market, the I-SEM. The new I-SEM project is timely, allowing the two regulators to take account of other changes in the electricity market since its opening, changes which include a substantive increase in renewables on the system and interconnection with GB with the east west interconnector. The redesign is focused on ensuring the most efficient deployment of all the power on the system and achieving an acceptable level of security of supply.

A number of industry liaison groups have been formed and we are working, along with the system operators (SONI and EirGrid), to ensure the necessary systems and processes are in place to aid market readiness.

We also took steps to promote sustainability. To address the impacts that increasingly high levels of wind placed on the electricity system, we have been progressing the delivery of a secure, sustainable electricity system (DS3) programme with CRU. The objective of DS3 is to facilitate increased levels of renewables and effectively decrease the levels of curtailment.

The starting operational limit on fluctuating generation (such as wind) at any given time was 50%. Through the successful completion of the DS3 programme, this limit has been increased, first to 55%, and by the end of 2017 the system was operating at 65%. One of the DS3 goals is to move the limit to 75%.

The past year has also seen the development of further products in system services with 11 products now being procured as standard. Work is progressing to procure an additional 3 system services in 2018 and beyond. This is an increase from the original seven products and facilitates a more flexible system as well as providing an increased level of system service payments.

In addition 2017 has seen the benefits of a trial by the system operators to allow new providers of system services. Participants in the trial include wind generators and demand side units with the goal being that such units will be proven to be reliable providers of system services and therefore be paid for system services in future.

The trials also included three new system services. These additional system services will allow the electricity system to respond more flexibly to fluctuations in wind on the system. For example, there are rewards for service providers who can respond very quickly to system needs.

3.2.1.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

- Article 37(1)(i),(j) (k), (l) (u) and Article 40 (3)

Report separately the three issues: prices, transparency and effectiveness of competition. In particular regarding prices report on fundamentals, price developments and liquidity. Regarding transparency report on the access to prices and on how robust prices are and if at national level transparency obligations regarding pricing exist.

Price

The SEM market monitoring unit (MMU), based at our offices, continues to monitor the SEM and carried out a number of investigations into bidding practices in the market.

The MMU[3] publishes a public report on the Single Electricity Market (SEM) for each quarter, the latest publication covers Q4 2017[4]. These reports provide a particular focus on recent trends in the market in relation to pricing, demand, scheduling and forward contract prices.

The MMU continuously reviews generator participants' behaviour in the market, including investigations into the exercise of market power. It also monitors the compliance of market participants with the bidding code of practice and other market rules. The MMU is also the point of contact for participants who wish to register complaints relating to market behaviour.

[3] www.semcommittee.com/market-monitoring-unit

[4] https://www.semcommittee.com/sites/semc/files/media-files/SEM-18-033%20-%20MMU%20quarterly%20report%20Q1%202018_0.pdf

MMU quarterly reports - key facts

- The system marginal price (SMP) in the SEM reduced from an average of €42/MWh in 2016 to €48/MWh in 2017.
- Gas has been the dominant fuel type since the SEM began..
- Levels of demand were broadly similar to those seen in 2016 up by less than 1% on average.

The Annual Capacity Payment Sum for 2017 was also calculated. This is the revenue earned by generators in the SEM in return for the provision of available capacity. This resulted in a slight increase in capacity, mainly due to the increase in forecasted demand levels. This increase however was offset by a reduction due to DS3 system services revenues.The MMU forms part of a Market Power Mitigation strategy developed by the Regulatory Authorities (RAs) during 2006. The MMU reviews the behaviour in the market on an ex-post basis. This includes investigating the exercise of market power and monitoring the compliance of market participants with their licence obligations in relation to participation in the market.

Transparency

The Market Operator for the SEM (SEMO) publishes all commercial and technical data relating to bids for any trading day.[5] This information is published four days after the trading day, and also includes all relevant price information for each half hour period.

Market opening

Introducing incentives to help pool generation resources and reduce electricity usage is also an area where there have been developments.

During 2015-16 we moved forward the licensing arrangements for aggregated generator units (AGUs) and demand side units (DSUs). AGUs and DSUs have a role to play in the electricity market, providing some further flexibility on the system and a means to incentivise and access demand side management. We granted our first licence for a DSU in May 2015.

[5] http://www.sem-o.com

Effectiveness of competition

The SEM Committee publishes quarterly market monitoring reports which set out recent trends in the market in relation to pricing, demand, scheduling and forward contract prices

A report on generators' financial performance was published in December 2016[6].

3.2.2 Retail market

Please provide a brief illustration of the state of competition of retail market and the main changes in the recent year

Competition in the retail market was set up in Northern Ireland in a progressive way, starting with the non-domestic sector in 1999, and extending to the domestic market in 2007.

New suppliers entered the electricity market from June 2010 in the electricity market. Since then, more suppliers have been attracted to the Northern Ireland market. At the end of 2016, there were 8 active suppliers in the electricity sector, 6 of them operating in both, domestic and industrial sectors.

In December 2016, the electricity supply company Open Electric went into Administration and as a result, we revoked its electricity supply licence. There is an established system in place to transfer the customers of a failed supplier to Power NI, the nominated replacement electricity supplier. This is known as the Supplier of Last Resort (SoLR) arrangement. During the event, over 1,000 customers were seamlessly transferred to Power NI with no loss of supply experienced.

To keep the development of the retail energy sector in Northern Ireland under closer review, we regularly gather and analyse market information. Our duty to keep the development of the retail energy market under review was further enhanced by the IME3 directive which requires us to monitor how the market is working. In order to fulfill our statutory duties we also wish to provide consumers with access to clear and easily understood information on suppliers, products and tariff/service choices.

[6] https://www.semcommittee.com/publication/sem-16-086-cepa-generator-financial-performance-report

As part of the existing market monitoring we carry out in the gas and electricity retail sectors we publish quarterly reports (QTRs) at the end of February, May, August and November[7]. These reports deliver transparency for stakeholders and consumers and examine in detail essential indicators which are also used by other National Regulatory Authorities (NRAs) in Europe when monitoring their retail markets.

We previously consulted on proposals for an enhanced monitoring framework, called the Retail Energy Market Monitoring (REMM) framework. REMM allows us to monitor the supply markets, inform policy and protect consumers. This information is currently used to draft our quarterly and annual transparency reports.. . During 2018/19 we have committed to launching the next phase of REMM: Consumer Insights and Market Analysis (CIMA). This will focus on deploying the REMM framework to (i) improve evidence-based regulation and reporting within UR; (ii) define and publish retail market outcomes externally to promote transparency and consumer empowerment; (iii) improve supplier compliance analysis and assurance, by undertaking supplier licence compliance audits.

Power NI's share by connections in the domestic credit market is 69.3% and their share of the prepayment market is 45.2%. In the gas sector too, increased competition and switching has begun to reduce the domestic market share of the incumbent suppliers.

We commenced our project "Measures to Enhance the operation of the Small Business Energy Market"[8] in 2017. This project examines the issues in the small business energy market for both electricity and gas which may prevent customer fully engaging in the market. We published a consultation paper in October 2017 which set out a number of measures around tariff transparency; level of deposits and how long they are held for; exit fees; rollover contracts; and T&Cs for small business customers (including notice of price changes etc). The objective of the project is to help increase transparency in this market making it easier for customers to engage in it and take advantage of competition in this market. The

[7] See for instance QTR for period to end of 20172016 - https://www.uregni.gov.uk/sites/uregni/files/media-files/Transparency%20Report%202017%20Q4%20UPDATED%202018-03-02.pdfwww.uregni.gov.uk/sites/uregni/files/media-files/2017-02-27%20Transparency%20Report%202016%20Q4%20UPDATED%201.pdf

[8] https://www.uregni.gov.uk/news-centre/consultation-measures-enhance-operation-small-business-energy-market

proposed scope of coverage for these measures is up to 50MWh for electricity and 73.2 MWh for gas.

3.2.2.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

- Article 37(1)(i),(j),(k),(l),(u) and Article 40 (3)

Report separately the three issues: prices, transparency and effectiveness of competition. In particular regarding prices report on fundamentals, price developments and liquidity. Regarding transparency report on the access to prices and on how robust prices are and if at national level transparency obligations regarding pricing exist. Please report here separately dual fuel prices

In the monitoring of the energy retail market, the key indicators are: market shares, active suppliers in each market segment, market activity per market segment, rates of switching, domestic prices in Northern Ireland and a price comparison with other EU countries. Future work in terms of collecting and assessing further retail information will be included into this series of reports.

Northern Ireland electricity domestic price for medium customers (2,500 – 4,999 kWh consumption per annum) for semester 2 (July – December) 2017 significantly fell below the EU median and UK medium domestic tariff to 14.2p/kWh.

The customer complaints procedure in Northern Ireland is detailed on our website: www.uregni.gov.uk/consumer-information. In the first instance customers are asked to resolve any difficulty with their supplier. All domestic suppliers are required by licence to have a Code of Practice on complaint handling. This details a procedure to facilitate the fair and prompt settlement of complaints and disputes as well as a system for reimbursing or compensating complainants. They are also required under the licence to inform customers of the role and contact details of the Consumer Council Northern Ireland (CCNI)[9] both in contracts and on bills.

If customers are not satisfied with the supplier's handling of, or response to, a complaint, they may ask CCNI to intervene on their behalf. The CCNI has statutory responsibility to assist energy customers with complaints at the second stage (after the supplier process has been exhausted).

[9] Consumer Council for Northern Ireland http://www.consumercouncil.org.uk/

We also deal directly with complaints and disputes, with regard to the transmission and distribution operator. Details of our process are given on our website

www.uregni.gov.uk/publications/appeals_complaints_and_disputes_policy_updated_june_2013

With regard to complaints, IME3 has been implemented and all suppliers are fully compliant with the Code of Practice on Complaints Handling. We continue to work with suppliers on their Codes of Practice to ensure provision of an accessible, equitable and transparent, simple and inexpensive complaints procedure.

- Article 37(1)(k)

We hold competition powers concurrently with the Competition and Markets Authority (CMA). In June 2016 we consulted on guidance relating to the application of our competition powers. The final guidance was published in September 2016 on our website. We also availed of CMA expertise to assist with the development of draft competition guidelines published in June 2017.

We received one complaint during the year which the complainant subsequently decided to pursue via the Competition and Appeals Tribunal (CAT).

- Article 37(1)(l)

The EU's IME3 directives set out a series of measures to make sure consumers are adequately protected in the energy markets.

The UR produced minimum standards in relation to four Energy Supplier Codes of Practices, which included:

- Code of Practice on Payment of Bills;
- Code of Practice on Provision of Services for persons who are of Pensionable Age or Disabled or Chronically Sick;
- Code of Practice on Complaints Handling Procedure and;
- Code of Practice on Services for Prepayment Meter Customers.

All electricity and gas suppliers in NI already comply with these minimum standards in their Codes of Practice.

New market entrants to either the electricity supply market or the gas supply market in Northern Ireland must be compliant with these Codes.

We also have in place a mandatory Marketing Code of Practice. Suppliers must also ensure that they have a Code of Practice on the efficient use of gas/electricity which complies with the conditions of their licence.

In 2017 we met with suppliers and third sector organisations before publishing a second consultation on the code of practice on energy bills and statements. The final code of practice was published on 05 July 2017 and suppliers have since been working to produce new bills and statements for consumers which comply with the new code. This code of practice has brought together all the requirements relating to bills and statements and includes principles which will help suppliers in the development of customer friendly bills and statements.

In September 2017 we published an updated marketing code of practice alongside an information paper. The code of practice was updated and amended as a result of various issues which had arisen regarding the clarity of the code, and its interpretation. We also added several new definitions to the glossary. This is a mandatory code for all suppliers.

The UR's second consultation on the Energy Theft Code of Practice closed in April 2017. This will be a mandatory code of practice for both suppliers and network operators. To ensure compliance with the Code, suppliers and distribution network operators in gas and electricity are required to establish and implement detailed industry procedures to prevent, detect, investigate and manage the outcome of the investigation into energy theft

During this year, we have been continuing to delivering Year 1 and 2 of the Consumer Protection Strategy (CPS), which we launched in February 2016. The CPS is a five-year (2016-2021) strategy and action plan to address the long-term needs of domestic consumers. The CPS is designed to build upon the existing regulatory protections and so enhance the level of consumer protection present in NI.A number of projects that fall under the following four key objectives of the CPS:

- focus on affordability,
- ensure consumers have equal access to utility services,
- empower consumers through education and transparency and
- provide leadership through being a best-practice regulator.

A number of projects, designed to provide enhanced consumer protections, have been delivered under the above four objectives. A few of these projects are detailed below:

1. The UR also worked closely with the Consumer Council in the development of their interactive, independent energy price comparison tool which allows consumer to compare prices for all energy suppliers. We also collaborated with the Consumer Council on the development of a Switching leaflet, aimed at consumers who do not have access to the internet. We engaged with a number of consumer bodies in the development of both the design and content of the leaflet, to ensure that it would be useful and appropriate for the intended audience. This leaflet went into public circulation in spring 2017.

2. Northern Ireland Electricity Networks (NIE Networks) and Northern Ireland Water(NI Water) have been involved in a process to review their Care Registers. A final decisions paper was published in March 2018. This paper set out 10 actions for both NIE Networks and NI Water to progress. The UR has allowed a time line of one year for the full implementation of these 10 actions. The main outcome of this review has been increased co-operation between the two companies in regards to signing vulnerable customers up to their registers and increasing awareness of the registers amongst the public.

3. Quick Check 101, is a new scheme designed to help vulnerable customers who may be the victims of bogus callers, falsely claiming to be from a utility company. Under the scheme, customers can phone the PSNI101 telephone number to check the identity of callers to their home who claim to represent an energy or water network company. The new scheme is a collaboration between the PSNI and energy and water network companies, supported by the Commissioner for Older People and the Utility Regulator, in a bid to help people feel safer in their homes. The energy and water companies involved are firmus energy, NIE Networks, Northern Ireland Water, Phoenix Natural Gas and SGN Natural Gas.

4. We have worked with partners on energy –saving schemes, in particular the Department for the Economy (DfE) and the Department for Communities (DfC). The UR has engaged with the DfE regarding the now postponed EnergyWise Scheme and with DfC regarding their fuel poverty scheme, ‘Affordable Warmth’.

3.2.2.2 Recommendations on supply prices, investigations and measures to promote effective competition

- Article 37(1)(o)

Report on recommendations at national level on supply prices and competition

Describe system of regulated prices (if they exist)

- Article 37(4)(b)

Report on investigations carried out, main results and possible measures adopted

Report on tariff deficit if it exists

Electricity supply licensees require transparency of customers' terms and conditions, including price. There conditions apply to all licensees and are legally binding. Electricity customers are guaranteed the right to be supplier under fair and transparent terms. They cannot be discriminated in terms of price and the regulatory framework includes legally binding supplier of last resort provisions.

We have the powers necessary to investigate and enforce effective competition and the functioning of the retail market. We regularly request information to the network and supply companies, and monitor the received data.

We regulate the end prices of the dominant former incumbent electricity supplier. Power NI is the regulated electricity supplier providing services to just under 500,000 customers. In 2017 we reviewed the tariffs of Power NI (the regulated electricity supplier. This resulted in a price increase for domestic electricity customers of 5.6%. However, domestic electricity prices in NI are lower than both Great Britain (GB) and the Republic of Ireland (RoI).

3.3 Security of supply (if and insofar as NRA is competent authority)

Implementation of safeguard measures Art. 42

The Fuel Security Code is designed as a Northern Ireland response to a Fuel Security Event. The Fuel Security Code currently in force in Northern Ireland under the Electricity (Northern Ireland) Order 1992 as amended (the 1992 Order) was drafted in 1992.

The objectives of the Fuel Security Code are to assist with the effective management of an event where primary fuel supplies for electricity generation are disrupted: a Fuel Security Event.

The Code enables Government to direct the electricity industry to provide information on power supplies and to take specific action to manage such disruption in a way to ensure as far as is reasonably practical.

3.3.1 Monitoring balance of supply and demand

- Article 4

SONI prepare an annual Generation Capacity Statement which covers both demand predictions and the generation margins. The latest statement published in April 2017 shows:

- Current level of electricity peak demand is 1795 MW[10]. This has been forecasted to reach 1810 MW[11] by 2026. This forecasted peak is a decrease on previous estimates[12];
- The large reduction in demand forecasts in NI and Ireland has led to an increase in generation adequacy. However, due to environmental constraints a number of generation plant are expected to be decommissioned;
- During the period 2017 to 2020 there is sufficient generation capacity to achieve compliance with the generation security standard. The reduction in

[10] Observed generation, excludes house load.
[11] Total Energy Requirement (median scenario)
[12] Further information available at: http://www.soni.ltd.uk/media/documents/Operations/CapacityStatements/Generation%20Capacity%20Statement%202017-2026.pdf

capacity at Ballylumford at the end of 2018 is likely to result in the surplus dropping to levels of under 300 MW, however there is an option to extend the life of this plant out to 2020;

- By 2021, more severe restrictions are placed on the Kilroot coal plant, and this could have the result of pushing Northern Ireland into deficit. This is based on the assumption that forecasts of demand, generation capacity and availability are achieved. It also relies on imports from GB and a reliance on generation in RoI. There remains however a risk of operational scenarios that could result in load shedding due to a generation capacity shortfall as generators unit sizes are large and there is a dependency on imports;
- With the addition of a second North-South interconnector generation there is sufficient generation to meet demand in all median and low demand scenarios out to 2026;
- There is currently 2692 MW of installed capacity, this figure excludes available capacity via imports on interconnector and tie lines. There is also 1111 MW of Partially dispatchable or non dispatchable generation capacity (including 945 MW of Wind) installed on the NI system;
- Imports of 450 MW from GB and 100 MW from Ireland are expected to be available to support security of supply.

The most significant transmission project in NI is the second north-south interconnector. To view SONI's most recent Generation Adequacy Report (2017) see:

http://www.soni.ltd.uk/media/documents/Operations/CapacityStatements/Generation%20Capacity%20Statement%202017-2026.pdf

Monitoring investment in generation capacities in relation to SoS

- Article 37(1)(r)

Operational network security

- Article 7 2005/89/EC

Investment in interconnection capacity for the next 5 yrs or more

- Article 7 2005/89/EC

Expected future demand and envisaged capacity for the next 5 years and 5-15 years

Article 7 2005/89/EC

In addition to the Generation Capacity Statement SONI are required by licence to publish an annual "Transmission System Capacity Statement" this details the statutory operational requirements, the existing network, its configuration and its planned development over the ten year period to 2025[13].

3.3.2 Measures to cover peak demand or shortfalls of suppliers

- Article 4

The Transmission System Capacity Statement analyses the potential for the system to meet peak demand.

[13] http://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Ten-Year-Transmission-Forecast-Statement-2016.pdf

4 The gas market

4.1 Network regulation

4.1.1 Unbundling

- Articles 10,11 2009/73/EC Article 3 Regulation (EC) 715/2009
- Article 26

Report on TSO certification, DSO provisions regarding branding and resources and new developments regarding certification revisions. Report also on storage and LNG

NI has three Distribution System Operators (DSOs). Phoenix Natural Gas Limited is solely a Network Operator, with no supply business and firmus energy (Distribution) Limited continues to have an integrated supply business (firmus energy (Supply) Limited). firmus energy (Distribution) Limited however does not have at present , more than 100,000 connected customers, therefore it remains an integrated Distribution and Supply business. SGN is developing the distribution network to the west of NI, and connected its first customers in 2017. Construction began on the transmission pipeline which will underpin the further development of the gas distribution network in the west.

The arrangements for unbundling at the transmission level are being examined as necessary as part of the certification process required under the third energy package.

In relation to GNI (UK)'s application for certification as full ownership unbundled, the UR notified its Decision to the European Commission on 31st March 2016.

We have also continued to monitor the compliance of PTL and BGTL with their certification as full ownership unbundled and no issues arose.

4.1.2 Technical functioning

- Balancing services (Article 41(6)(b), Article 41(8))
- Security and reliability standards, quality of service and supply (Article 41(1)(h))

Report relevant security and reliability regulation and data

- Monitoring time taken to connect and repair (Article 41(1)(m))

Clarify here at least if there is in your country a definition for "time to connect" for consumers and for producers

- Monitoring access to storage, linepack and other ancillary services (Article 41(1)(n))
- Monitoring correct application of criteria that determine model of access to storage (Article 41(1)(s))
- Monitoring safeguard measures (Article 41(1)(t))

NI currently has no gas storage facilities; however Islandmagee Storage Limited is progressing plans to develop an underground natural gas storage facility in the Larne Lough area of Northern Ireland.

Islandmagee Storage Limited completed the drilling of a salt core well in 2015 and are currently progressing the Front End Engineering Design of the project.

4.1.3 Network and LNG tariffs for connection and access

- Article 41(1)(a), Article 41(6)(a), Article 41(8), Article 41(10) and Article 41(12)

Report on relevant new tariff regulation provisions

- Prevention of cross-subsidies (Article 41(1)(f))

Specify the methodology used in tariff regulation (i.e. cost plus vs incentive regulation), the method of checking undertaking's cost data and if benchmarking is used please describe methodology used by NRA

- Regulated and negotiated access to storage 41(1)(s)

Report on the decisions adopted by MS

Distribution

Information is collected in relation to volumes, revenues and costs, split across relevant customer categories, which are then used to calculate appropriate tariffs. A combination of incentive-based regulation, along with performance-based outputs is implemented for distribution companies. A price control is applied, alongside a performance-based system, which is adjusted, via the "Uncertainty Mechanism" based on actual performance, with incentives included to encourage efficiency and network growth.

The current price control, referred to as GD17, will be for a 6 year duration, for the period, 1 January 2017 – 31 December 2022. The final determination for the price control for the gas distribution companies – Phoenix Natural Gas (PNGL), firmus energy (fe) and SGN (Scotia Gas Networks) (called GD17) was published in September 2016. This builds on the progress delivered during the previous price control and covers costs which make up around 40% of the final customer gas bill.

Our determination will result in a reduction in consumer bills. Industrial and commercial consumers will see the largest fall due to their higher consumption levels, but domestic bills will also reduce. In the firmus energy distribution area, domestic bills will fall by £16 per annum and domestic consumers in the PNGL distribution area will see an average £1 reduction. In its first price control, the new SGN distribution area will see charges for domestic consumers £33 less per annum than that originally submitted by the company.

Our final determination provides for:

- investment of £226 million in the gas network;
- sets targets for approximately 89,000 new gas connections;
- allows 1,377 km of additional gas pipelines to be built; and
- approximately a further 134,000 more customers will have gas outside their property meaning that 60% of NI properties will have access to the benefits of natural gas by 2022.

In terms of the regulatory period, the distribution system operators have licences extending 20 to 40 years. In terms of incentives, the network operators are incentivised to lay gas pipe in the most densely populated areas and receive additional allowances to maximise new domestic connections. DSOs provide information on tariffs and connection charges to market participants and other interested parties; this information is available on the website of the individual DSOs.

We have also published GT17, the price control for the four high pressure gas conveyance licence holders in NI for the period 1 October 2017 to 30 September 2022. The four licence holders are: GNI (UK) Limited (GNI (UK)), Premier Transmission Limited (PTL), Belfast Gas Transmission Limited (BGTL) and West Transmission Limited (WTL).

Key areas for the price control are controllable and uncontrollable operating expenditure, expenditure to replace or upgrade existing equipment where necessary as well as, for GNI (UK) and WTL, the rate of return. The price control also sets out the allowances for the single system operator targeted for implementation in Northern Ireland for 1 October 2017.

Transmission

At the transmission level, the tariff is set using an entry exit methodology by us and tariff setting is overseen on an annual basis. The transmission tariffs are calculated by collecting forecast volumes, capacity bookings and revenue requirements from the power and distribution sectors at the beginning of the gas year. The individual submissions are then totalled and capacity and commodity tariffs are calculated for all sectors. A reconciliation process is applied at the end of the year when actual volumes, capacity and revenues are known.

The TSOs are also price controlled in NI. The GT17 price control was published in August 2017 covering and covers the period of 2017-2022. The regulatory approach to the price control depends upon the financing model under which the TSO operates.

To improve the rate at which certain pipelines are financed, we have employed a mutualised financing model where the normal regulatory control over any allowed operational expenditure accrued by the TSO has been removed. The resulting transfer of risk onto consumers, through potential inefficient operating costs, can be limited through corporate governance licence conditions contained within the conveyance licence held by the TSO. One of which is a condition that, in the form of a shadow price control, allows us to review the level of operating expenditure forecast to be incurred by the TSO.

Where a more standard regulatory model is used, a ‘pain-gain’ mechanism is applied at the transmission level where TSOs can share in any capital expenditure efficiencies gained.

A new single Gas Market Operator for Northern Ireland (GMO NI) went live on

1 October 2017. The GMO NI encompasses the four transmission system operators in Northern Ireland as a contractual joint venture. This single system of operation was implemented to deliver cost efficiencies and other benefits to consumers and users including a single network code, IT system and co-ordinated market arrangements. The previous arrangement with multiple system operators was a barrier for the Utility Regulator in minimising system operation costs for consumers.

LNG

We have no LNG facilities in NI.

4.1.4 Cross-border issues

- Access to cross-border infrastructure including allocation and congestion management (Article 41(6)(c), Article 41(8), Article 41(9), Article 41(10) and Article 41(12))

Report in particular on cases where specific cross-border cooperation between NRAs happened besides the general activity of the NRA in the frame of ACER/FG. Provide case study/data on standard contracts t.b.d by ACER (i.e. average cost/conditions of importing/exporting 1 MW). Only provide text explanations in the National Report as data are included in the data base.

- Cooperation (Article 41(1)(c))

Other relevant cooperation agreements/activities of the NRA besides the RI

- Monitoring investment plans and assessment of consistency with Community-wide network development plan Article 41(1)(g)

Along with the Commission for Regulation of Utilities (CRU) and Ofgem we worked together to coordinate the joint implementation of the EU network codes on Capacity Allocation Mechanism (CAM), Interoperability, and Balancing at the Moffat entry point. All three NRAs continue to monitor the development of the EU network codes and to assess the potential impact to their networks.

4.1.5 Compliance

- Compliance of regulatory authorities with binding decisions of the Agency and the Commission (Article 41(1)(d)) and with the Guidelines (Article 43))

Which decisions/actions have been taken following binding decisions of the Agency or the Commission

- Compliance of transmission and distribution companies, system owners and natural gas undertakings with relevant Community legislation, including cross-border issues (Article 41(1)(b), Article 41(1)(r), Article 41 (3) and Article 41(5)) + imposing penalties (Article 41(4)(d))

Report in particular on monitoring systems for TSO certification compliance and in the next future NC compliance. Report on other compliance cases and existing active monitoring methods

Compliance of transmission and distribution companies, system owners is through their licences. There are no issues to report.

4.2 Promoting Competition

4.2.1 Wholesale markets

Please provide a brief illustration of the state of competition of wholesale market and the main changes in the recent year

All gas for NI is purchased at the UK NBP.

4.2.1.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

- Article 41(1)(i) , (j), (k) (l) (u) and Article 44(3)

Report separately the three issues: prices, transparency and effectiveness of competition. In particular regarding prices report on fundamentals, price developments and liquidity. Regarding transparency report on the access to prices and on how robust prices are and if at national level transparency obligations regarding pricing exist.

As above all gas for NI is purchased at the UK NBP.

4.2.2 Retail market

Please provide a brief illustration of the state of competition of retail market and the main changes in the recent year

The gas market in the Greater Belfast area has been open to competition to domestic customers since 2007. However, there were no competing suppliers in the domestic market until 2010. In this distribution licensed area there has been six active gas suppliers in the non-domestic sector during 2017: SSE Airtricity Gas Supply (SSE Airtricity), firmus energy, Electric Ireland, VAYU, Go Power and Flogas Natural Gas. In the Greater Belfast licensed area there has been two active gas suppliers in the domestic sector in 2017. SSE Airtricity is subject to a price control over the domestic and small I&C (industrial and commercial) customers who consume less than 2,500 therms per annum in the Greater Belfast area. A maximum average tariff is employed in these sectors for customers of SSE Airtricity. Other suppliers are free to compete against this maximum average tariff. In the Greater Belfast area, during 2017 the domestic and small I&C market share of the incumbent supplier (SSE Airtricity) remained at around 75% throughout the year (based on connection numbers). The SSE Airtricity share of the Medium and LargeI&C market was 34% at the end of the year.

The Ten Towns gas area opened to competition for large I&C (industrial and commercial) customers in October 2012. SSE Airtricity entered this market to compete against the incumbent firmus energy from 1 January 2013. The remainder of the market (small I&C customers and domestic customers) opened to competition from April 2015. There are now 6 active suppliers in the Ten Towns I&C market, Electric Ireland, firmus, Flogas, Go Power, SSE Airtricity and Vayu. There are no competing suppliers in the domestic market in the Ten Towns area. firmus energy is the incumbent supplier in the Ten Towns area. During 2017 firmus energy's share of the total I&C market continued to reduce across all customer segments. For instance, firmus's share of the medium and large I&C customer segment reduced from 46% to 42% between the end of 2016 and 2017. Domestic customers continued to be supplied exclusively by the incumbent supplier, firmus energy, during 2017.

4.2.2.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

- Article 41(1)(i),(j) (k), (l) (u) and Article 44 (3)

Report separately the three issues: prices, transparency and effectiveness of competition. In particular regarding prices report on fundamentals, price developments and liquidity. Regarding transparency report on the access to prices and on how robust prices are and if at national level transparency obligations regarding pricing exist. Make reference to dual fuel if necessary.

SSE Airtricity Gas Supply (Northern Ireland) Limited (SSE Airtricity) has a regulated tariff for domestic and small industrial and commercial customers (using less than 2,500 therms per annum) in the Greater Belfast distribution network area. This follows reduction of the scope of SSE Airtricity's price control to exclude non-domestic customers using between 2,500 and 25,000 therms, which was effective as of 1 April 2017.

Firmus Energy (Supply) Ltd (firmus energy) has a regulated tariff for domestic and small industrial and commercial customers (using less than 25,000 therms per annum) in the Ten Towns distribution network area. In November 2017, following consultation it was decided to reduce the scope of firmus energy's price control to exclude non-domestic customers using between 2,500 and 25,000 therms, which will be effective from 1 April 2018.

We enter into a formal tariff review process with SSE Airtricity and firmus energy twice per year with a view to tariff changes being effective from 1st April and 1st October each year. We also monitor gas prices on an ongoing basis and an ad-hoc tariff review for SSE Airtricity and firmus energy may be initiated at any stage if the Utility Regulator considers that gas prices have increased or decreased enough to warrant a tariff review. We monitor the SSE Airtricity and firmus energy regulated tariff against the standard tariffs of other supply companies in NI, the UK and ROI. Transparency reports are published by us every quarter which provides comparisons of the gas tariffs in NI, GB and ROI.

During 2017 the SSE Airtricity and firmus energy regulated tariffs for domestic customers were similar or lower than the standard domestic tariff of the incumbent supplier, Bord Gais, in ROI and lower than the average of the big six suppliers in GB (based on their standard domestic tariffs). Supply companies in NI have a licence obligation to inform customers at least 21 days in advance of any change (increase or decrease) in the tariff. Suppliers are also required to provide advanced notification of when customer is coming to the end of a fixed term or discounted tariff period (no less than 28 days but no more than 42 days before).

We review the SSE Airtricity and firmus energy gas purchasing strategies each year and also receives regular gas purchasing reports from SSE Airtricity and firmus energy showing the volumes and cost of gas purchased for the short and long term future.

We also monitor the effectiveness of competition in the retail gas markets in NI. There are two retail markets in NI: the Greater Belfast market and the Ten Towns market. Competition in these markets is monitored by us on a quarterly basis and an analysis of the competition is published in our transparency reports: see https://www.uregni.gov.uk/transparency-reports

- Article 41(1)(p)

Report on recommendations at national level on supply prices and competition

- Article 41(4)(b)

Report on main investigations, results and possible measures adopted

Report on tariff deficit if it exists

We determined, and published, price controls for SSE Airtricity and firmus energy which set out procedures which SSE Airtricity and firmus energy must comply with in setting tariffs. The price controls also set out a level of operating expenditure for each company for each year of the control which is then used when compiling the supply opex costs for the tariff. At each tariff change we publish a paper which provides detail on the various elements of the tariff, details of any over/under recovery which has been built up or lost in previous tariff periods and therefore incorporated into the new tariff and comparisons with tariffs in GB and ROI.

4.3 Security of supply (Article 5) (if and insofar as NRA is competent authority)

The Department of Energy and Climate Change (DECC) is the designated Competent Authority with respect to the security of supply for the UK Member State (as notified to the Commission under Regulation 994). As such a number of the requirements of Article 5 of Directive 2009/73/EC are carried out by DECC. However we do contribute to some of the elements identified below.

4.3.1 Monitoring balance of supply and demand

100% of Northern Ireland gas supplies are currently provided from Great Britain via the National Transmission System Exit Point at Moffat. As such the wider monitoring of UK demand and supply is largely carried out by DECC and National Grid. However the Transmission System Operators in Northern Ireland and the Republic of Ireland regularly engage with National Grid on demand and supply issues downstream of Moffat.

There are also a number of government and TSO groups that have been established between the UK and Ireland to facilitate communication on emergencies and security of supply. These groups also co-ordinate the work required under Regulation 994.

4.3.2 Expected future demand and available supplies as well as envisaged additional capacity

Forecast Total Volumes (mscm):-

Year	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Volume	1432	1415	1444	1542	1522	1608	1644	1636	1659	1668

All of NI gas supplies are currently provided from Great Britain via the NTS Exit Point at Moffat. As noted previously there is significant industry interest in developing gas storage facilities in the Larne area of NI which could strengthen security of supply within the region.

TSOs now annually produce a gas capacity statement which examines the ability of the gas network to meet future supply and demand scenarios over a ten year period. This assessment included the Islandmagee storage project and network extension to the West and North West as discussed above.

This approach ensures that any areas requiring investment are identified and addressed so that future demands on the system can be met. The capacity statement is published on the GMO website.

4.3.3 Measures to cover peak demand or shortfalls of suppliers

- Art 41(1)(t): implementation of safeguard measures

The transmission companies in Northern Ireland have emergency arrangements in place to deal with either a physical disruption to the network or a restriction in gas supplies. The arrangements are a legal requirement and are contained within each TSO's Safety Case. The safety case outlines the emergency stages and the actions that are to be undertaken at each stage.

Additionally power stations are required to hold reserves of alternative fuels to enable fuel switching in the event of a restriction to gas supplies. The emergency measures are tested annually alongside the Republic of Ireland and Great Britain exercises.

Gas Supply licenses in NI also require that suppliers have access to gas supplies to meet peak demand during severe winter conditions.

5 Consumer protection and dispute settlement in electricity and gas

5.1 Consumer protection

- Compliance with Annex 1 (Article 37(1)(n)) and (Article 41(1)(o))
- Ensuring access to consumption data (Article 37(1)(p)) and (Article 41(1)(q))

Article 11A of the Electricity Order and Article 10A of the Gas Order provides the Authority with powers to impose conditions on licensees to give effect to this obligation. Part VI of the Energy Order provides the Authority with such enforcement powers as are necessary to compel compliance. The conditions which ensure that these consumer protection measures are adhered to are set out in part II of the electricity supply licences, Customer Related Conditions and Part 2 of the Gas Supply licences, Conditions Applicable to the Supply of Gas by the License Holder. The implementation of the third package has seen these conditions further enhanced.

We ensure customer access to consumption data via conditions in the gas and electricity supply licences. Licence Condition 38 and 44 in electricity supply licences and 2.19 and 2.28 in gas supply licences ensures that customers have access to, and are informed of their consumption and that information is provided in such detail and format as is approved by the Utility Regulator and the consumer representative body. Licence conditions were updated as a result of the third package to ensure that consumers are entitled to further detailed information on their electricity and gas consumption.

We have consulted on and implemented licence modifications under the EU Third Internal Energy Package. The licence modifications implemented under the EU Third Internal Energy Package also required Gas and Electricity suppliers to develop and publish Codes of Practice to enhance the consumer protection measures. During 2015, we further extended the consumer protection under the Codes of Practice by developing minimum standards for the Codes of Practice. This strengthened the consumer protection covered by all supplier Codes of Practice. The licence conditions ensure that customers are provided with access to their consumption data and transparent information in relation to tariffs, terms and conditions and complaints handling procedures. It also requires suppliers to offer customers a range of payment methods, to facilitate supplier transfers within 15 working days, and to provide a code of practice on provision of services for vulnerable customers. Licence conditions also set out timeframes for suppliers providing terms and conditions to new customers and for suppliers to give notice to customers at least 21 days prior to any changes to the terms (including price) being made. Suppliers must also inform customers of their right to withdraw prior to when the terms of their contract are changing. Suppliers also have a licence condition requiring final bills to be issued to customers within six weeks from the date the change of supplier takes place.

The Consumer Protection Strategy (CPS) is the UR's flagship strategy and action plan designed to bring about an enhanced level of domestic consumer protection. The CPS was launched publically by UR in early 2016.
The CPS stated that UR would carry out a formal review of the CPS in 2018. Following the Consumer Summit which was held in April 2018, the UR are drafting a consultation to review the CPS aims, projects and priorities. We will develop a new Consumer Protection Programme (CPP) which will become an integral part of the UR's new Corporate Strategy. There will again be years 1-3 prioritised CPP specific projects which we will consultant upon via the CPS review.

5.2 Dispute settlement

- Article 37(11), 37(5)(c), Article 37(4)(e)
- Article 41(11) and Article 41(4)(e)

Report on cases, in particular on major issues concerning network users (access tariffs, connection disputes/refusals...), including producers and consumers

As a direct result of Directive 2009/72/EC we were given the legal authority to act as a dispute resolution authority for certain matters in relation to electricity.

Prior to the implementation of the Directive into national law, we had been, and still are, able to determine certain complaints or disputes, such as disputes arising between an electricity distributor and any person requiring a connection to that distributor's distribution system.

On the implementation of the Directives, our dispute resolution remit was extended further, as now individuals and companies are able to refer certain disputes or complaints regarding the transmission and distribution of electricity in Northern Ireland to us for resolution.

In June 2011 we published its "Policy on the Resolution of Complaints, Disputes and Appeals". This sets out procedures which the Utility Regulator will generally follow when dealing with a complaint or dispute which it has been requested to determine. This policy was amended in June 2013[14].

Under the Gas (NI) Order 1996 billing disputes must in the first instance be referred to the Consumer Council for Northern Ireland. The Consumer Council has 3 months in which to resolve the matter to the customers' satisfaction or the matter is referred to us. We have had no referrals during this period.

The Gas Market Operating Group (GMOG) was established by us to address any operational barriers to entry into the Greater Belfast gas market. The group was extended several years ago to cover the Greater Belfast gas market and the Ten Towns gas market. During 2015 the group was extended again to cover any retail related issues in relation to the gas market that is being developed for the West area. The group includes active representation from supply and distribution license holders, the DfE in NI, the Consumer Council in NI and the Utility Regulator. The

[14] http://www.uregni.gov.uk/publications/appeals_complaints_and_disputes_policy_updated_june_2013

GMOG identifies barriers to entry into the gas market in NI; these issues are then discussed with the group with a view to making a decision on the best way to address each issue.

We also initiated the set-up of a Gas Supplier Forum group. This group identifies any requirements for supplier to supplier agreements in relation to customer switching and overcoming supplier barriers to competition. Agreements are then drawn up to be included in the Supply Meter Point Agreement. This group includes active representation from gas supply licence holders, the Consumer Council NI and us; however the Distribution licence holders also attend to ensure all decisions made for supplier agreements will work in accordance with the distribution market rules.

In 2017, we did not receive any formal disputes relating to billing issues. Three disputes in relation to network connections were raised for electricity. We were able to resolve the issues on one of these disputes without the need to proceed with the formal dispute process. The other two disputes are still being processed.

There has been an increase in supplier licence compliance and investigatory work. During this year we resolved two formal investigations via regulatory undertakings and charitable contributions. In both cases, the companies involved arranged an independent review of certain aspects of their regulatory compliance process.

- We have also satisfactorily closed a number of informal investigations during the year and agreed alternative resolutions including charitable donations and/or customer goodwill gestures.