

Energy market investigation

Legal and regulatory framework

20 February 2015

This is one of a series of consultative working papers which will be published during the course of the investigation. This paper should be read alongside the updated issues statement and the other working papers which accompany it. These papers do not form the inquiry group's provisional findings. The group is carrying forward its information-gathering and analysis work and will proceed to prepare its provisional findings, which are currently scheduled for publication in May 2015, taking into consideration responses to the consultation on the updated issues statement and the working papers. Parties wishing to comment on this paper should send their comments to energymarket@cma.gsi.gov.uk by 18 March 2015.

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Executive summary

1. The supply and acquisition of gas and electricity in Great Britain¹ including, in particular, generation, transmission, distribution and supply, is subject to a complex legislative and regulatory framework, at both EU and national level. This framework has developed in stages during the course of the last 30 years, with the key changes broadly falling into the following four categories:
 - (a) Liberalisation measures.
 - (b) Green measures.
 - (c) Measures relating to security of supply.
 - (d) Other key measures such as consumer protection.
2. The policy issues and tensions inherent in the gas and electricity sectors (notably points (a) to (c) above) are often described as the energy ‘trilemma’ (a term coined by the World Energy Council).

Liberalisation

3. Prior to the Treaty of Lisbon in 2009, energy policy was within the exclusive competence of the individual member states of the EU (Member States), with national governments generally having full responsibility for decisions regarding, in particular, industry structure, asset ownership and renewable energy policy.
4. The EU institutions sought to exert some influence over the development of the energy markets in Member States through having exclusive competence over measures to achieve the internal market.² This led to the three energy liberalisation packages which were put in place in the period 1996 to 1998, in 2003 and in 2009. Since 2009, the EU has had shared competence (with Member States’ national governments) over energy policy.³
5. The gas and electricity markets in Great Britain have historically been at the forefront of market liberalisation in the EU,⁴ having initially been privatised in

¹ The regulation of the energy market in Northern Ireland differs on certain aspects from that in Great Britain. The terms of reference for this market investigation were explicitly restricted to Great Britain.

² Also through EU competition policy and competition, merger control and state aid laws.

³ Article 194 of the Treaty on the Functioning of the European Union (TFEU).

⁴ As a consequence, in large part the first two packages (each consisting of two Directives) required minimal implementation in Great Britain (as the sectors had already been liberalised, opened up to competition and subject to independent regulatory oversight to at least the level of the EU requirements. The third package of 2009 (see paragraph 29), in contrast, has entailed certain changes to national legislation in order to ensure implementation.

1986 and 1989,⁵ respectively, followed by a period of increasing liberalisation⁶ of the sectors. The regulatory regime underwent further substantial reform in 2000, which led to the creation of GEMA/Ofgem⁷ as the combined economic regulator for the energy markets in Great Britain.⁸ The key measures impacting on the liberalisation of the Great Britain energy markets are detailed below (in paragraphs 10 et seq.).

6. This working paper provides an overview of the current regulatory framework, as it applies to Ofgem's objectives and duties, and an outline of the relevant industry documentation that is applicable to industry participants, such as the standard licences and main industry codes that apply to industry participants (see paragraphs 32 et seq.).

Green measures

7. In contrast to energy policy, the EU has had shared competence over environmental policies since 1993. The growing global, EU and national importance of climate change objectives and renewable energy policies led to various measures being introduced (largely in the last decade),⁹ including the following:
 - (a) The 20-20-20 climate and energy targets for 2020 (see paragraphs 52 to 70).
 - (b) Measures to internalise the cost of carbon emissions, such as the EU Emissions Trading System (EU ETS), UK Climate Change Levy (CCL) and carbon price floor (CPF), and Emissions Performance Standard (see paragraphs 75 to 92).
 - (c) Measures to give direct support to low carbon generation, such as the Levy Control Framework, Renewables Obligation (RO), investment

⁵ With certain licensable activities (such as gas transportation, gas shipping, gas supply, electricity generation, electricity transmission, and electricity supply and distribution) subject to economic regulatory control, initially through Office of Gas Supply (Ofgas) and Office of Electricity Regulation (Offer), respectively, followed by the subsequent separation of networks from 'contestable' activities (principally the wholesale and retail supply markets).

⁶ Privatisation is not a requirement of liberalisation, and has not been required by internal market measures subsequently adopted by the EU. In Great Britain, however, privatisation was accompanied by, and followed by, an ongoing policy of liberalisation such that contestable activities (eg the wholesale and retail supply of gas and electricity, including generation) were no longer subject to price controls, but were to operate as competitive markets.

⁷ The Gas and Electricity Markets Authority (GEMA) is the decision-making body under the relevant UK legislation and oversees the work of the Office of Gas and Electricity Markets (Ofgem). For the purposes of this working paper, the terms GEMA and Ofgem are used interchangeably. GEMA was created by, and Ofgem (the executive arm of GEMA) was created pursuant to, sections 1 and 3 Utilities Act 2000 (UA00).

⁸ Ofgem's principal objective was initially to protect the interests of consumers in relation to their energy supply, wherever appropriate by promoting effective competition between energy suppliers and generators.

⁹ In addition, certain changes were made in 2010 to Ofgem's principal objective in the Gas and Electricity Acts to require it to consider the interests of future and existing consumers in the reduction of greenhouse gas emissions and in security of supply.

contracts, Contracts for Difference, Feed-in Tariffs and the renewable heat incentive (RHI) (see paragraphs 93 to 114)

- (d) Measures aimed at promoting energy efficiency, including the Green Deal, the Energy Companies Obligation (ECO) and smart metering (see paragraphs 115 to 120).

Security of supply

8. In addition to liberalisation and green measures, certain further measures have been introduced with the aim of achieving security of supply goals, including in relation to the balancing mechanism (BM), the Capacity Market and the electricity demand reduction pilot (see paragraphs 128 to 154).

Other

9. This working paper also summarises other key legislative and regulatory changes introduced recently that have materially impacted the gas and electricity markets in Great Britain. These included measures implemented following Ofgem's Energy Supply Probe and Retail Market Review (RMR), UK government measures relating to fuel poverty, and certain changes brought about by the Energy Acts 2010 and 2013 (see paragraphs 155 to 169).

Liberalisation

Pre-2009 liberalisation

Great Britain liberalisation 1980s to 1990s

10. Great Britain has generally been at the forefront of many of the developments aimed at liberalisation that have subsequently been introduced at EU level. It first privatised (a) the gas market, through the Gas Act 1986 (GA86), and (b) the electricity market, through the Electricity Act 1989 (EA89).¹⁰ Over

¹⁰ The European Parliament initially introduced measures in 1990 and 1991 to improve the transparency of electricity and gas prices for industrial end-users (through Directive 90/337/EEC), and to promote cross-border trading and interconnection between EU Member States for electricity and gas transit (through Directives 90/547/EEC and 91/296/EEC, respectively). Between 1996 and 1998 the first energy liberalisation package was introduced by the EU, consisting of Directive 96/92/EC (the Electricity Directive) and Directive 98/30/EC (the Gas Directive) setting out common rules for the internal market in electricity and natural gas, in particular, as regards (a) Member States' decision-making on building new electricity generation capacity; (b) access to, and initial unbundling steps regarding, transmission and distribution systems for electricity and gas; and (c) the supply and storage of natural gas. In 2003, the second energy liberalisation package was implemented by the EU, consisting principally of Directives 2003/54/EC and 2003/55/EC and also Regulations 1228/2003/EC and 1775/2005/EC, which introduced a range of measures including: (a) greater consumer protection through contractual transparency for domestic and vulnerable customers, complaint-handling and free switching; (b) further separation of integrated energy undertakings with TSOs required to be legally, organisationally and decisionally separate from operators of other energy activities; (c) mandated access to transmission and distribution systems based on published cost-reflective, objective and non-discriminatory tariffs; and (d) designated national regulators

subsequent years, the sector was liberalised and evolved such that the natural monopoly networks (transmission and distribution) were separated from the competitive or contestable markets at wholesale/generation and retail levels, and initial price caps were ultimately removed as competition developed. The GA86 and EA89 remain the principal domestic legislative instruments governing both the activities of companies engaged in the supply or acquisition of gas and electricity in Great Britain today and the oversight of the sector by Ofgem and the Secretary of State.

The gas market

11. Liberalisation of the energy sector in Great Britain began in 1986 with the privatisation of British Gas through powers contained in the GA86, which also laid the foundations for economic regulation of the market and established a licensing regime for gas transportation, shipping¹¹ and supply activities (see paragraph 41).
12. As regards gas transportation, after privatisation British Gas was initially responsible for both the operation of the gas transmission system and the supply of gas, among other things. In its 1993 report into British Gas, the Monopolies and Mergers Commission (MMC) described this situation as an 'inherent conflict of interest'. To address this issue, British Gas fully demerged in 1997, creating entirely separate businesses which included a business handling transmission (Transco) on the one hand and a business handling trading and supply (Centrica) on the other.
13. This separation of network (essentially a natural monopoly) from other (contestable) businesses is an important feature of both the gas and electricity sectors. Such separation later came to be described in EU directives as 'unbundling' (with the third package in 2009 (see paragraph 29) ultimately endorsing full 'ownership unbundling' as the primary model for the EU for both gas and electricity).
14. Following a series of mergers and renaming exercises from 2000 to 2005, Transco later became National Grid Gas plc (NGG), a subsidiary of National Grid plc (National Grid). NGG is currently the sole system operator for the onshore gas transmission network in Great Britain.

as responsible for ensuring non-discrimination, effective competition and the efficient functioning of the 'market', for approving transmission and distribution tariffs, and for the provision of balancing services.

¹¹ Gas shippers bring gas to or transport it within Great Britain and provide it to suppliers so that they can provide it to end-consumers.

15. As regards gas supply, the GA86 gave the Secretary of State the power to remove the monopoly of British Gas over supply to customers.¹² Competition in gas supply to customers was subsequently introduced in stages over a period of 14 years, starting with supply to large industrial customers.¹³ Competition was extended in 1992 to a wider proportion of the industrial and business sector,¹⁴ and ultimately to all domestic consumers in November 2000.¹⁵
16. Initially, in both gas and electricity, as competition was nascent, price caps were imposed to protect consumers. The move to full competition in domestic retail supply (for both gas and electricity) occurred with the removal of price caps by Ofgem in 2002.
17. The GA86 required that any person engaging in certain activities in the gas market, including gas transporters, shippers or suppliers, required a licence unless exempt.¹⁶
18. As part of the move to a liberalised market, the GA86 created the post of the Director General of Gas Supply, supported by the Ofgas for the purpose of independent regulation of the gas market.¹⁷ The primary duties of each of Ofgas and the Secretary of State when exercising functions related to gas supply were to ensure that gas suppliers could, so far as was economical to do so, meet all reasonable demands for gas; and, without prejudice to that duty, to secure that such suppliers were able to finance the provision of gas supply services.¹⁸ Secondary duties included protecting the interests of

¹² Section 3 GA86.

¹³ To premises at rates of consumption of gas that exceeded 25,000 therms. British Gas was initially the sole business authorised to supply the vast majority of the market under section 7 GA86. The first independent supplier of gas to large industrial customers was AGAS (now Total Gas & Power) in 1987.

¹⁴ To premises with usage that exceeded 2,500 therms per year. See [The Gas \(Modification of Therm Limits\) Order 1992](#). This lower limit included certain businesses that are 'Micro Business Consumers' within the definition applied by Article 2(1) of [The Gas and Electricity Regulated Providers \(Redress Scheme\) Order 2008](#) (S.I. 2008/2268), ie a non-domestic consumer with an annual consumption of: (a) electricity of not more than 100,000 kWh; (b) gas of not more than 293,000 kWh; or fewer than ten employees (or their full time equivalent) and an annual turnover or annual balance sheet total of less than €2 million. This definition has been incorporated by Ofgem into gas supplier standard licence conditions 7A and 36, and electricity supplier standard licence conditions 7A and 42.

¹⁵ In 1992, four references were made to the MMC, requiring it to report on whether, and if so how, the operations of British Gas in most aspects of the Great Britain or UK gas market operated against the public interest. The MMC concluded, among other things, that British Gas' conduct in undertaking its integrated business as both a trader in the supply of gas and as owner of the transportation system, which its competitors had no choice but to use, operated against the public interest, restricted innovation and resulted in higher prices to non-tariff (mostly larger industrial) customers and to users of over 2,500 therms/73,250kWh of gas a year. Consequently, among other measures, the MMC recommended that British Gas divest its trading business by March 1997 and that, until then, it operate the trading and transport businesses separately, with separate accounts. The MMC also recommended a reduction in British Gas' monopoly supply, from the then level of 2,500 therms to 1,500 therms/43,950 kWh per year, with removal of the monopoly three to five years after the divestment of British Gas' trading activities.

¹⁶ Responsibility for granting licences lay initially with the Secretary of State.

¹⁷ Ofgas was responsible for enforcing compliance with standard conditions regarding licensable activities under GA86.

¹⁸ Section 4(1) GA86.

consumers, promoting efficiency and economy on the part of suppliers, and enabling effective competition between suppliers to large industrial customers.¹⁹

19. A further primary duty was added to the GA86 in 1992 requiring Ofgas and the Secretary of State to secure effective competition between gas suppliers in relation to the conveyance and storage of gas.²⁰ The Gas Act 1995 (GA95) promoted and further obliged Ofgas and the Secretary of State, as a primary duty, to secure effective competition in the carrying on of all licensable activities.²¹ The GA95 also made consequential amendments and introduced new secondary duties (including (a) a duty to secure effective competition in the conveyance of gas to pipeline systems and to new areas, supplying and laying service pipes, and in relation to ancillary activities; and (b) a duty to take into account, when exercising certain statutory functions, the effect on the environment of gas conveyance activities).²² Responsibility for granting licences was also transferred to Ofgas,²³ and the Secretary of State was given the power to set standard conditions for gas licences.²⁴ GA95 also broadened the scope of what are commonly referred to as 'vulnerable consumers' to comprise the chronically sick, the disabled and those of pensionable age.

The electricity market

20. As with the GA86, the EA89 paved the way for privatisation and subsequent liberalisation of the electricity market, by establishing a licensing regime²⁵ for electricity generation, transmission, interconnection, and distribution and supply²⁶ activities (see paragraph 40).
21. The separate licensing of generation and transmission activities heralded the end of the integrated business of the Central Electricity Generating Board which had previously conducted all generation and transmission business across England and Wales. National Grid Company plc (now National Grid Electricity Transmission plc (NET), a subsidiary of National Grid)²⁷ was

¹⁹ Section 4(2) GA86.

²⁰ Section 38 Competition and Service (Utilities) Act 1992.

²¹ Section 1 GA95.

²² Section 1 GA95 introduced a new section 4(3) GA86. The GA95 also introduced the Network Code, which subsequently became the Uniform Network Code (with the introduction of British Electricity Trading and Transmission Arrangements (BETTA); see further below).

²³ Section 5 GA95.

²⁴ Section 8(2) GA95. In addition, Schedule 3, paragraph 43 GA95 inserted section 36A into GA86, and gave certain concurrent competition law powers to Ofgas under the Fair Trading Act 1973 and the Competition Act 1980.

²⁵ At this early stage of liberalisation, responsibility for the grant of licences lay principally with the Secretary of State.

²⁶ Electricity distribution and supply are now separate licensable activities.

²⁷ Jointly owned by the regional electricity companies that existed following the introduction of the EA89. The regional electricity companies sold their stakes in National Grid in the mid-90s, shortly after it was listed on the London Stock Exchange.

awarded a single national transmission licence for England and Wales, and was also responsible for running the 'Pool', a mechanism for setting a single wholesale price for electricity, and for balancing generated capacity and electricity demand.²⁸ Three generation licences were initially awarded to National Power (now RWE npower), PowerGen (now E.ON) and Nuclear Electric (now EDF). In Scotland, by contrast, a dual region, fully vertically integrated model was retained at the time (consisting of the North of Scotland Hydro-Electric Board (now Scottish and Southern Energy (SSE)) and the South of Scotland Electricity Board (now Scottish Power)), with Scottish Nuclear (principally, now EDF) providing additional generation capacity.

22. As regards supply and distribution, the existing regional monopolies of the 14 area boards²⁹ were initially maintained by virtue of public electricity supply licences being granted to regional electricity companies, with provision for gradual introduction of supply competition, initially for large customers (ie with peak demand in excess of 1 MW).³⁰ Licences were granted to independent suppliers and also to the regional incumbents for supply outside of their incumbent area. Competition to supply electricity was further opened up in 1994 (when supply was generally permitted to customers with peak demand in excess of 100 kW) and again in 1998/99 when the remainder of the market was opened up to competition.
23. In a similar manner to the GA86, the EA89 created the post of the Director General of Electricity Supply, supported by Offer for the purpose of regulating the electricity market. Offer was responsible for enforcing compliance with standard conditions regarding licensable activities under EA89. In addition to making various provisions to facilitate privatisation of the electricity sector, the EA89 also contained provisions concerning nuclear fuel, radioactive waste and the decommissioning of nuclear installations. The EA89 imposed primary duties on Offer and the Secretary of State that broadly mirrored the duties of Ofgas initially set out in the GA86, together with a duty, subject to certain caveats,³¹ to promote competition in the generation and supply of electricity. Secondary duties were also imposed which were similar to those in the GA86.

²⁸ The Pool operated as a day-ahead market. Generators would bid to supply National Grid for each settlement period a day in advance, with the last unit needed to meet demand fixing the market clearing price. It was compulsory for licensed generators to sell the majority of their generated electricity output into the Pool and for licensed suppliers to purchase all their electricity from the Pool to meet the demand of their customers. Licensed generators and suppliers were obliged to become party to the Pooling and Settlement Agreement under their respective licences, alongside National Grid.

²⁹ Established under the Electricity Act 1947 to supply electricity to customers in their allotted areas: 12 in England and Wales, and two in Scotland.

³⁰ Regulation of the UK electricity industry – 2002 – Industry brief by Gillian Simmonds for the CRI and University of Bath School of Management – page 7. The first customers able to seek alternative supply were able to source their needs directly from alternative suppliers or from the Pool.

³¹ Section 3 EA89.

Great Britain liberalisation 2000 to 2009

24. Further changes were made to the regulatory regimes for both electricity and gas by the UA00, for instance, giving the Secretary of State new powers, via secondary legislation, to alter the scope of 'licensable activities'.³²
25. In particular, as regards the electricity market, the UA00 mandated separate licences for electricity distribution and supply activities.³³ The regulation of operators in the electricity market was also brought into line with the regulation of operators in the gas market, for example making the regulator responsible for issuing electricity licences (rather than the Secretary of State)³⁴ and giving the Secretary of State the power to set standard conditions for electricity licences.³⁵ Changes were also made to the supply and distribution licence provisions in the EA89 to remove the distinction between activities conducted within, or outside, an undertaking's former regional monopoly area.³⁶
26. The UA00 also abolished the Pool and replaced it (in 2001) with the New Electricity Trading Arrangements (NETA) in England and Wales,³⁷ which incorporated the following features built around half-hour trading periods: (a) provision for a forwards and futures market and short-term power exchanges for electricity trading;³⁸ (b) a revised real-time mechanism for maintaining an energy balance³⁹ on the electricity transmission network; and (c) a mandatory imbalance settlement process.
27. In addition, the UA00 combined the formerly separate regulatory bodies, Ofgas and Offer⁴⁰, to create GEMA and Ofgem.⁴¹ The UA00 introduced a new principal objective and a revised set of duties for Ofgem which were essentially equivalent as regards both its gas and electricity functions. The new 'principal objective' was to protect the interests of consumers (later amended to 'existing and future consumers' by section 83 of the Energy Act 2008 (EA08)) in relation to their energy supply, wherever appropriate by

³² Sections 43 and 88 UA00, adding section 56A EA89 and section 41C GA86, respectively. This power was subsequently used by the Secretary of State to make the provision of smart meter communication services a licensable activity through the Electricity and Gas (Smart Meters Licensable Activity) Order 2012 (SI 2012/2400).

³³ Section 30 UA00.

³⁴ *Ibid.*

³⁵ Section 33 UA00.

³⁶ Section 30 UA00, which substituted a new section 6 to the EA89.

³⁷ Part 4 UA00; implemented via changes to generation and supply licence conditions.

³⁸ There are a number of power exchanges offering electricity futures contracts across Europe, including: APX-Endex, Nasdaq OMX Commodities, and the European Energy Exchange AG.

³⁹ See paragraphs 1288 to 1544. NETA was extended under the Energy Act 2004 to Scotland in 2005 under the BETTA, which introduced a single wholesale electricity market for Great Britain under a single licensed transmission system operator, NGET.

⁴⁰ Section 1 UA00.

⁴¹ Ofgem took over responsibility for enforcing compliance with standard conditions regarding licensable activities under the GA86 and the EA89 (section 3(2) UA00).

promoting effective competition between persons engaged in supply and certain upstream activities.⁴² Whilst the principal duty remained broadly unchanged,⁴³ the secondary duties were re-focused to ensure that Ofgem carried out its functions in the manner best calculated (a) to promote efficiency and economy by certain gas and electricity operators;⁴⁴ (b) to protect the public; and (c) to ensure security of supply, taking into account the effect on the environment of such activities. A further set of considerations was also made available to Ofgem in exercising its functions.⁴⁵

28. A subsequent addition to Ofgem's secondary duties was made pursuant to the Energy Act 2004, which required them to have regard to best regulatory practice.⁴⁶

Liberalisation from 2009 onwards

The third energy liberalisation package

29. The EU's third energy liberalisation package in 2009 (the third package) aimed at building on the previous EU energy liberalisation packages and augmenting measures taken under Articles 101 and 102 of the TFEU during and following the EU's sector inquiry published in 2007⁴⁷ to achieve a fully functioning internal market for energy by 2014. It sought to do this through a range of measures, some of which had already been introduced in previous packages and some of which were new or went further than those measures previously introduced. The principal measures introduced in the third package were comprised in two Directives (2009/72/EC and 2009/73/EC) concerning common rules for the internal market in electricity and gas, respectively,⁴⁸ with two Regulations ((EC) 714/2009 and (EC) 715/2009) concerning cross-border market access and the creation of the European Network for Transmission System Operators for electricity, and for gas (ENTSOG), and a Regulation ((EC) 713/2009) establishing the Agency for the Co-operation of Energy Regulators (ACER).

⁴² Sections 9 and 13 UA00 for gas and electricity, respectively.

⁴³ Ofgem was still required to have regard to ensuring the following: (a) so far as was economical to do so, all reasonable demands in Great Britain for gas conveyed through pipes are met; (b) all reasonable demands for electricity are met; (c) such gas and electricity suppliers were able to finance the provision of such services; and (d) the interests of individuals who are disabled or chronically sick, individuals of pensionable age, individuals with low incomes, and individuals residing in rural areas. The EA08 subsequently added a further environmental primary duty of having regard to the need to achieving sustainable development.

⁴⁴ Electricity transmission operators, distributors or suppliers, and conveyors of gas.

⁴⁵ Concerning the interests of consumers in relation to the conveyance of other utilities services. Among other things the UA00 also adjusted the scheme for the modification of licences.

⁴⁶ Section 178 Energy Act 2004, amending sections 4AA GA86 and 3A EA89.

⁴⁷ The European Commission launched an inquiry into competition in gas and electricity markets in 2005, pursuant to Article 17 of Regulation 1/2003. Its conclusions were published in 2007 and among other measures the third package was proposed in September 2007 based on its findings.

⁴⁸ The requirements of the Directives were principally to be transposed into domestic legislation by 3 March 2011.

30. The Directives of the third package repeated many of the provisions from the second energy liberalisation package⁴⁹ but, in addition, incorporated the following main new elements:
- (a) Additional consumer protection measures, such as a three-week limit on switching supplier, a stronger imperative for transparency of contractual terms and dispute settlement, and a greater emphasis on protecting vulnerable consumers.⁵⁰
 - (b) Increased autonomy and decision-making powers (subject to judicial review) for national regulatory authorities (in Great Britain, Ofgem) including a much greater number of duties and related powers for the furtherance of their duties as independent regulators.
 - (c) Full unbundling of transmission system operators (TSOs), which must be fully disintegrated from any generation/production, distribution or supply activity,⁵¹ including a duty on national regulators to ensure that there are no cross-subsidies between different licensable activities.⁵²
 - (d) Cross-border supply and regional co-operation between national regulators with a view to integrating their national markets at one or more regional levels.⁵³
 - (e) An increased emphasis on emissions reduction and security of supply.

Implementation of the third package in Great Britain

31. Due to the steps that had already been taken in Great Britain to open up the gas and electricity markets to competition, there were – relative to other Member States – few further measures that were required to be introduced in

⁴⁹ Such as regarding consumer protection; mandated access to transmission and distribution systems; and national regulators' responsibilities for (a) ensuring non-discrimination, effective competition and the efficient functioning of the market, (b) approving transmission and distribution tariffs, and (c) the approval of methodologies used to calculate or establish the terms and conditions for connection and access to national networks and for the provision of balancing service.

⁵⁰ See, for example, Articles 3.7 and 3.13 of Directive 2009/72/EC and Articles 3.3 and 3.9 of Directive 2009/73/EC.

⁵¹ Save where sufficiently robust, alternative measures to secure independent operation are in place. See Article 9 of each of Directive 2009/72/EC and 2009/73/EC for electricity and gas, respectively.

⁵² Article 37(1)(f) of Directive 2009/72 and Article 41(1)(f) of Directive 2009/73 for electricity and gas, respectively.

⁵³ See Articles 6 and 38 of Directive 2009/72/EC and Articles 7 and 42 of Directive 2009/73/EC. Additionally, EU Regulation 714/2009 of the third package established the ENTSOG. ENTSOG is required to formulate 12 binding network codes concerning cross-border network and market integration issues, including rules on capacity allocation, balancing, tariff structures and interoperability. Each network code is based on the framework guidelines provided by ACER.

order to satisfy the UK's obligation to implement the third package.⁵⁴ The main such measures included the following:

- (a) **Consumer protection.** A supply licence condition was added to require a three-week switching right for domestic customers.⁵⁵ Alongside this, whilst cooling-off periods were not required by the third package, they already existed in Great Britain, and the UK government decided to standardise them for domestic customers, in effect, to a maximum 14 days.⁵⁶
- (b) **Ofgem objectives and licence modification appeals.** Ofgem was designated as the National Regulatory Authority for Great Britain⁵⁷ and certain additional safeguards for independence and impartiality were also implemented.⁵⁸ Ofgem's principal objective was further amended pursuant to the Energy Act 2010 (EA10) by requiring Ofgem and the Secretary of State to consider the interests of future and existing consumers in (a) the achievement of sustainable development, and (b) security of supply, before promoting effective competition.⁵⁹

While Ofgem already carried out many of the duties placed on National Regulatory Authorities by the third package, certain further duties were given to it, such as monitoring the roles and responsibilities of TSOs and distribution system operators, together with accompanying information-gathering powers.⁶⁰

The regime for determining disputes about licence modifications was also altered, including (for the sake of a coherent and consistent regulatory regime) for licence modifications that do not arise from EU obligations.⁶¹

- (c) **Transmission and distribution networks.** The UK government provided for the possibility under the GA86 and EA89 of avoiding the need for full

⁵⁴ See the [Department of Energy and Climate Change \(DECC\) consultations in July 2010](#), DECC's [proposals for implementing](#) the requirements of the third package Directives, and its [response](#) published in January 2011. Certain minor and technical changes to legislation and standard licence conditions were required by the Directives to be made, on which DECC did not consult.

⁵⁵ Paragraph 1.10 *ibid* and supply standard licence condition 14A for gas and electricity (with effect from 10 November 2011).

⁵⁶ Paragraph 1.6 *ibid*. The 14-day cooling-off period was introduced by the Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013 (SI 2013/3134). This right is supported by electricity supply standard licence condition (SLC) 25, which obliges suppliers to contact customers within a specified period to ensure that they understand and are content with their contract.

⁵⁷ Regulation 22 of the Electricity and Gas (Internal Markets) Regulations 2011 (SI 2011/2704), amending section 3A UA00.

⁵⁸ Paragraph 2.5 of the [UK government response to the consultation on implementation of the third package](#).

⁵⁹ Sections 16 and 17 EA10, amending section 4AA GA86 and section 3A EA89, respectively.

⁶⁰ Paragraph 2.7 of the [UK government response to the consultation on implementation of the third package](#). See also Article 37 of Directive 2009/72/EC and Article 41 of Directive 2009/73/EC, implemented through the Electricity and Gas (Internal Markets) Regulations 2011 (SI 2011/2704), amending the EA89 and the GA86.

⁶¹ Regulations 41(7) and 43(8) of the Electricity and Gas (Internal Markets) Regulations 2011 (SI 2011/2704) amending the GA86 and EA89, respectively. See also paragraphs 2.15 to 2.17 of the [UK government response to the consultation on implementation of the third package](#).

ownership unbundling of transmission systems which were vertically integrated as at 3 September 2009⁶² (allowing instead for the possibility of designating an independent system operator, subject to certain safeguards as set out in the Directives of the third package).⁶³ This alternative, envisaged in the Directives, was implemented in the UK, and permitted the option of relying on the existence of sufficiently robust measures, already in place, which can be demonstrated to guarantee the independence of the operation of the transmission network.⁶⁴ This option has been applied to the Scottish transmission owners: Scottish Hydro-Electric Transmission Limited (formerly the North of Scotland Hydro-Electric Board; now owned by SSE), and SP Transmission Limited (formerly the South of Scotland Electricity Board; now owned by Scottish Power) have both been certified by Ofgem as exempt, having demonstrated that they have in place arrangements guaranteeing suitable independence. In addition, a system was established under which Ofgem certifies, on application, whether or not the unbundling requirements are met in any particular instance, and where relevant, monitors that they continue to be met. Ofgem has certified that NGG and NGET meet the unbundling requirement (as gas and electricity TSOs, respectively).

As regards distribution, the structural separation requirements were introduced in the standard licence conditions for electricity distributors and gas transporters.⁶⁵

In addition, certain minor changes were made to existing UK legislation concerning licence-exempt gas and electricity undertakings.

Current regulatory framework

Ofgem's principal objective and duties

32. As outlined above, Ofgem's principal objective and duties have changed on a number of occasions since it was created pursuant to the UA00. We have set out below an overview of Ofgem's current principal objective and duties.⁶⁶

⁶² Implementing Article 9(8)-9(9) of each of Directives 2009/72/EC and 2009/73/EC.

⁶³ Sections 8G(5) GA86 and 10E(5) EA89.

⁶⁴ Sections 8G(4) GA86 and 10E(4) EA89. A number of limited exceptions to the prohibition on having interests in both transmission, and in generation or supply have been provided for. At the same time, the government put in place certain safeguards to protect against a person who controls a transmission system operator from exercising rights in licensed generation, supply and production undertakings (and vice versa).

⁶⁵ Conditions 42 and 43, respectively.

⁶⁶ The domestic legislation must be interpreted (in relevant cases where activities envisaged in the EU legislation are in issue) in light of the provisions of the third package and any other relevant EU legislation, where an extensive description of regulators' objectives, powers and duties is set out.

33. Ofgem's principal objective, as set out in the GA86 and EA89, is to protect the interests of existing and future consumers in relation to gas and electricity supply. The interests of consumers are taken as a whole, including their interests in the reduction of greenhouse gasses and in the security of supply. Ofgem must also ensure the fulfilment of the objectives set out in the Directives of the third package concerning gas and electricity when Ofgem is carrying out its functions as the designated authority under the relevant Directive.⁶⁷
34. Ofgem is generally required to carry out its functions in the manner it considers best to further the principal objective, wherever appropriate by promoting effective competition between businesses engaged in, or engaged in commercial activities connected with, (a) gas shipping, transportation or supply⁶⁸; (b) electricity generation, transmission, distribution or supply;⁶⁹ or (c) the provision or use of electricity interconnectors.⁷⁰
35. However, before deciding to carry out its functions with a view to promoting competition, Ofgem must consider whether consumers' interests as a whole would be protected by the proposed manner of carrying out its functions, and whether there is any other manner (whether or not it would promote competition) which would better protect those interests.⁷¹ As noted above, Ofgem is also subject to a duty, when carrying out its principal objective, to have regard to the following:⁷²
- (a) The need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas are met.
 - (b) The need to secure that all reasonable demands for electricity are met.
 - (c) The need to secure that licence holders are able to finance their licensed activities.
 - (d) The need to contribute to the achievement of sustainable development.
 - (e) The interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.
36. Ofgem is, in addition, subject to duties to carry out its functions in the manner in which it considers is best calculated to further the principal objective.⁷³

⁶⁷ See footnote 10.

⁶⁸ Section 4AA(1B) GA86.

⁶⁹ Section 3A(1B) EA89.

⁷⁰ Ibid.

⁷¹ Sections 4AA(1C) GA86, 3A(1C) EA89.

⁷² Sections 4AA(2)(a)-(c) and 4AA(3) GA86 and sections 3A(2)(a)-(c) and 3A(3) EA89.

⁷³ Sections 4AA(5)(a)-(c) GA86, 3A(5)(a)-(c) EA89.

These include the duty: to (a) promote efficiency and economy by licensees and efficient use of the gas and electricity distribution and transmission systems; (b) protect the public; and (c) secure a viable and diverse long-term energy supply. Ofgem must also have regard to the principles of better regulation and the Secretary of State's guidance on social and environmental matters⁷⁴.

37. Ofgem has a further consideration to which it may have regard, which is the interest of consumers in relation to communications services and electronic communications apparatus, or to water or sewerage services.⁷⁵
38. As noted above, Ofgem has powers under the Competition Act 1998⁷⁶ to investigate suspected anti-competitive activity and take actions for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain. Pursuant to amendments made by the Enterprise and Regulatory Reform Act 2013, Ofgem must consider whether it would be more appropriate to bring enforcement action under its Competition Act 1998 powers before proceeding to bring enforcement action under its regulatory powers pursuant to the the GA86 or EA89.⁷⁷

Industry documentation

Licences

39. Under the GA86 and EA89, certain activities concerning gas and electricity can only be carried out with a licence (subject to receiving a relevant exemption or benefiting from an applicable exception).
40. As regards activities concerning electricity, separate licences are required to engage in the following activities:⁷⁸
 - (a) Generation. A generation licence allows a licensee to generate electricity for the purpose of supply to any premises or enabling supply.
 - (b) Transmission. A transmission licence allows a licensee to participate in the transmission of electricity (at high voltage) for the purpose of enabling supply.

⁷⁴ Sections 4AA(5A) GA86 and 3A(5A) EA89.

⁷⁵ Sections 4AA(4) GA86 and 3A(4) EA89.

⁷⁶ Section 54, Schedule 10 Competition Act 1998.

⁷⁷ Section 54, Schedule 10 Competition Act 1998.

⁷⁸ Section 4(1) EA89 contains the general prohibition against the unlicensed carrying out of any of the activities described within this paragraph.

- (c) Operation of an interconnector (ie a transmission line between Member States). An interconnector licence allows a licensee to coordinate and direct the flow of electricity into or through an electricity interconnector, and to make such an interconnector available for use for the conveyance of electricity.
 - (d) Distribution. A distribution licence allows a licensee to distribute electricity (through a lower voltage network of wires) for the purpose of enabling supply.
 - (e) Supply. A supply licence allows a licensee to supply electricity to premises, either to domestic and non-domestic premises, or to non-domestic premises only.
41. As regards gas, separate licences are required to engage in the following activities:⁷⁹
- (a) Shipping. A shipper licence allows a licensee to arrange with a gas transporter for gas to be introduced into, conveyed through, or taken out of a pipeline system operated by that gas transporter.
 - (b) Transporting. A transporter licence (the EU directives use the terms 'transmission' for high-pressure networks and 'distribution' for low-pressure networks) allows a licensee to convey gas through pipes to any premises within an authorised area, and to convey gas through pipes to any pipeline system operated by another gas transporter or other specified pipeline system.
 - (c) Operation of an interconnector. An interconnector licence allows a licensee to coordinate and direct the conveyance of gas into or through a gas interconnector, and to make such an interconnector available for use for the conveyance of gas.
 - (d) Supply. A supplier licence allows a licensee to supply gas to any premises through pipes, either to domestic and non-domestic premises, or non-domestic premises only.
42. In addition, a separate licence is required to engage in smart meter communications services regarding electricity or gas supply. In September 2013, DECC granted a new smart meter communication licence to Smart DCC Limited, as the Data Communications Company. Smart DCC Limited is responsible for providing the communications service to link smart meters in

⁷⁹ Section 5(1) GA86 contains the general prohibition against the unlicensed carrying out of any of the activities described within this paragraph.

homes and businesses with the systems of energy suppliers, network operators and energy service companies.

43. In general, all licensees for a particular activity are governed by SLCs⁸⁰ for that activity, as determined by Ofgem and/or the Secretary of State. Under the GA86⁸¹ and EA89,⁸² Ofgem has the power to sanction a licensee for the breach of any relevant licence condition or requirement by imposing a penalty deemed to be reasonable under the circumstances, and which may not exceed 10% of the turnover of the licensee. Ofgem also has powers to impose enforcement orders and, since 2014, consumer redress orders. Licences are the primary means by which Ofgem regulates, and enforces obligations placed on, the relevant operators in the gas and electricity sectors.

Industry codes

44. Licensees are required to maintain, become party to, or comply with certain industry codes, in accordance with the terms and conditions of their licences. In general, the industry codes define the terms under which the industry participants can access the electricity and gas networks, and the rules for operating in the relevant markets.
45. Originally codes were considered part of industry 'self-governance', with Ofgem playing only a subsidiary role of approving amendments to the various codes (as it did with the majority of them). As described in paragraph 50, following a code governance review, Ofgem set up in 2010 a 'Significant Code Review' process whereby it may initiate fundamental changes to the codes.
46. Most codes designate a private entity (which may or may not be a party to the code) as code administrator and set up a panel (or executive committee), composed of stakeholders' representatives (for instance industry participants, regulators, or consumer representative bodies), to carry out some key functions (eg keeping the code under review).⁸³ Amendments to a code can typically be suggested by various parties (such as generators, TSOs, distributors and/or suppliers, Ofgem,⁸⁴ and/or the relevant panels),⁸⁵ are subject to extensive industry consultation.

⁸⁰ The SLCs can be modified for individual licensees (called Amended Standard Licence Conditions). In addition, Special Conditions can apply to individual licensees. As regards gas transporters and transmission, certain Standard Special Conditions also apply.

⁸¹ Section 30A GA86.

⁸² Section 27A EA89.

⁸³ We note that certain parties attend panel meetings as observers without voting right (eg Ofgem).

⁸⁴ Within the context of a Significant Code Review or where Ofgem has powers in primary legislation, when it consider it is necessary to comply with, or implement, the 2009 Gas or Electricity Regulations or any relevant binding decision taken by the European Commission or ACER.

⁸⁵ This only applies to certain codes (eg the BSC),

47. As regards electricity, the principal industry codes include the following:

- (a) The Balancing and Settlement Code (BSC). As noted in paragraphs 130 to 137, it contains the rules and governance arrangements for the BM and settlement. Its overarching purpose is for security of supply. The BM provides a means by which NGET can buy or sell additional energy, close to real time, from generators, suppliers and/or distributors, to maintain an energy balance and deal with operational constraints on the national electricity transmission system. As noted in paragraph 131, Elexon administers the BSC.
- (b) The Connection and Use of System Code, which sets out the principal rights and obligations (including charging methodologies) concerning connection to and/or use of the national electricity transmission system by generators, suppliers and distributors. It is administered by NGET.
- (c) The Distribution and Connection Use of System Agreement (DCUSA), which sets out the principal terms (including charging methodologies) regarding connection to and use of the electricity distribution networks by generators, suppliers and distributors. It is administered by DCUSA Ltd, an industry joint venture between DCUSA signatories.
- (d) The Grid Code (GC), which specifies technical requirements for connection to, and use of, the national electricity transmission system by generators, suppliers and distributors. It is administered by NGET.
- (e) The Distribution Code, which covers the technical aspects and day-to-day procedures that govern the relationship between distributors and users of the distribution system. Its content overlaps to some extent with the DCUSA and the GC. It is administered by the Energy Networks Association. The System Operator/Transmission Code, which defines the relationship between NGET and transmission owners. It is administered by NGET.
- (f) The Master Registration Agreement (MRA), which sets out the terms for the provision of metering point administration services and the procedures relating to the change of supplier to any premises or metering point. Suppliers and distributors must comply with its terms. It is administered by the MRA Service Company, a joint venture owned by the signatories to the MRA.

48. As regards gas, the principal industry codes include the following:

- (a) The Uniform Network Code (UNC), which forms the basis of the commercial and operational arrangements between transporters, shippers

and all other network users, including storage operators. Its overarching objective is to ensure security of supply and system safety. NGG, as system operator, is required to balance the national transmission system. The UNC is administered by the Joint Office of Gas Transporters.

- (b) The Supply Point Administration Agreement, which governs supplier-to-supplier procedures considered important to affect efficient transfers of consumers between suppliers. Suppliers and transporters must comply with its terms. It is administered by ElectraLink Ltd.
49. The Independent Gas Transporter UNC, which is a streamlined and harmonised form of the network code arrangements in the UNC that applies to independent gas transporters. Shippers, independent transporters and other network users are signatories to the Independent Gas Transporter UNC. It is administered by Gemserv. In addition, gas and electricity suppliers and distributors, and Smart DCC Limited, as the Data Communications Company, must comply with the Smart Energy Code (SEC). The SEC defines the rights and obligations of energy suppliers, network operators and other relevant parties involved in the end-to-end management of smart metering in Great Britain. It is administered by Gemserv.
50. In 2010 Ofgem concluded a Code Governance Review⁸⁶ which sought to improve the governance arrangements of the energy industry codes, and in particular, it:
- (a) introduced the Significant Code Review process to allow Ofgem to lead reviews of complex cross-code and licence issues, whereby Ofgem rather than the industry may be the originator of change and direct relevant licence holders to develop and further promulgate code modification proposals in accordance with its directions;
 - (b) established the Code Administration Code of Practice (CACoP);
 - (c) introduced an alternative self-governance modification procedure; and
 - (d) incorporated charging methodologies into certain industry codes.
51. The CACoP sets out 12 high-level principles concerning general code administration⁸⁷ and the code modification process.⁸⁸ The administrators of

⁸⁶ Results of the Code Governance Review were published in March 2010.

⁸⁷ The first four principles place a duty on code administrators to share information, provide information in a clear and prompt manner, and periodically review the code of practice.

⁸⁸ The next seven principles provide high-level guidance for the improvement of the modification process, for instance setting a requirement that the relevant law be consulted upon prior to the approval of a modification (principle 9). For details, see [CACoP](#).

the industry codes must report on an annual basis against the key performance indicators set out in the CACoP.

EU and UK green measures

EU and UK climate change and energy efficiency targets

52. The European institutions were first given powers of shared competence over EU environmental action in 1987 through the Single European Act, and 'sustainable growth respecting the environment' became an EU policy of its own right in 1993.⁸⁹ Sustainable development became a fundamental objective of the EU in 1999 through the Treaty of Amsterdam. Since 1993, the EU may adopt legislation in accordance with the ordinary legislative procedure⁹⁰ in order to achieve its environmental objectives, including preserving, protecting and improving the quality of the environment; and promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.
53. The first agreement between EU Member States (and certain non-EU countries) to mandate country-by-country reductions in greenhouse gas emissions was the Kyoto Protocol in 1997,⁹¹ at which the EU (including the UK) committed to emission reduction targets of 8% by 2012.
54. In 2001 the European Parliament introduced Directive 2001/80/EC (the Large Combustion Plants Directive),⁹² which set 'emission limit values' for the quantity of sulphur dioxide, nitrogen oxides and dust that may be discharged into the air by combustion plants with a rated thermal input equal to or greater than 50MW (irrespective of the type of fuel used).⁹³ The Large Combustion Plant Directive also encouraged the co-generation of heat and electricity by generation plants. In practice, the impact of the Large Combustion Plant Directive has largely been on coal-fired generation.
55. Subsequently, the European Council agreed in 2007⁹⁴ on the 20-20-20 climate and energy targets for 2020, which have been implemented through

⁸⁹ Introduced by the Treaty of Maastricht. Now Articles 191 and 192 of the TFEU (previously Articles 174 and 175 of the Treaty on the European Community).

⁹⁰ ie by a majority in the European Parliament and by a qualified majority in the European Council. By way of exception, decisions that are primarily of a fiscal nature, even if they pursue environmental objectives, require unanimous decision of the European Council.

⁹¹ The Kyoto Protocol to United Nations Framework Convention on Climate Change is an international agreement adopted on 11 December 1997.

⁹² Directive [2001/80/EC](#) of the European Parliament and of the European Council of 23 October 2001.

⁹³ Derogation to the emission limits can be granted by Member States to certain plants that burn specific types of fuel or that operate for a limited period of time and which will close by 31 December 2015. Nine plants were granted a derogation in the UK.

⁹⁴ Communication from the Commission to the European Council and the European Parliament of 10 January 2007, 'An energy policy for Europe' [COM(2007) 1]; Commission Communication of 10 January 2007:

various EU directives (mainly in 2009, through directives collectively known as the '2020 Climate and Energy Package').⁹⁵ These targets were to:

- (a) reduce by 20% greenhouse gas emissions from 1990 levels;
- (b) increase to 20% the share of renewable energy consumed in the EU; and
- (c) make a 20% improvement in energy efficiency.⁹⁶

56. The European Council also endorsed in 2011 a long-term objective of reducing carbon emissions by 80 to 95% by 2050⁹⁷ and, on 23 October 2014, agreed a new policy framework for 2030 aimed at ensuring that the EU stays on track for its 2050 target.⁹⁸
57. The green objectives are in line with the EU commitments under the Kyoto Protocol, and sit within the broader EU strategy for sustainable, competitive and secure energy (which includes the EU strategy for the liberalisation of the energy markets and the economic stimulation of innovation in the energy sector). Further details of the green objectives, and the principal measures implemented at EU and UK level that are aimed at achieving, and/or are otherwise related to, the green objectives, are set out below.

Decarbonisation targets: reduction by 20% of greenhouse gas emissions

58. The first limb of the 20-20-20 Climate and Energy Package was an EU commitment to reduce greenhouse gas (primarily carbon) emissions by at least 20% by 2020 (from levels in 1990).⁹⁹ At the heart of this objective was

'Renewable Energy Road Map. Renewable energies in the 21st century: building a more sustainable future' [COM(2006) 848 final].

⁹⁵ Which includes (a) Directive 2009/29/EC of 23 April 2009, amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community; (b) Decision 406/2009/EC of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020; (c) Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC; and (d) and Directive 2009/31/EC of 23 April 2009 on the geological storage of CO₂.

⁹⁶ This target was not included in the 2020 Climate and Energy Package but in Directive 2012/27/EU of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (the 'Energy Efficiency Directive').

⁹⁷ Communication from the Commission to the European Council and the European Parliament of 8 March 2011: *'Roadmap for moving to a competitive low carbon economy in 2050'* [COM(2011)112 final]. This objective was based on the view that a worldwide reduction of carbon emissions by at least 50% (compared with 1990 levels) was necessary to prevent an increase of global average temperature above pre-industrial levels by more than 2°C.

⁹⁸ The various EU level and UK targets are collectively referred to in this working paper as the 'green objectives'.

⁹⁹ Moreover, Article 8 of Decision 406/2009/EC provided that if other major economies in the developed and developing worlds commit to undertake their fair share of a global emissions reduction effort, the EU would consider a 30% reduction by 2020.

the reduction of carbon emissions from the energy sector, which accounts for approximately 80% of all greenhouse gas emissions in the EU.¹⁰⁰

59. In order to share the effort, individual targets were allocated to each individual Member State¹⁰¹ (in relation to the level of 2005 greenhouse emissions).¹⁰²
60. For the UK, the 2020 target is a reduction of 16% greenhouse gas emissions compared to 2005 levels (ie approximately a 35% reduction from 1990).

Renewable targets: increase the share of renewable energy by 20%

61. The second limb of the 20-20-20 strategy was to increase to 20% (with individual Member State's targets set according to their 2005 baseline percentage) the proportion of energy generated from renewable sources (ie from wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases).
62. For this purpose, binding national targets, ranging from 10% for Malta to 49% for Sweden,¹⁰³ were set taking into account Member States' different starting points and potential for increasing renewable energy generation.¹⁰⁴ Each Member State is responsible for implementing a strategy to achieve its targets.¹⁰⁵ The 2020 target for the UK is 15%.

Energy efficiency targets: 20% improvement in energy efficiency

63. The third limb of the EU targets for 2020 was the reduction of energy consumption by 20% (from levels in 2007). A common framework to achieve this objective was set out in the Energy Efficiency Directive, which related to energy efficiency measures, but did not set out national targets. Instead, Member States were required to set indicative national energy efficiency

¹⁰⁰ Source: European Environment Agency, EN01 Energy and non-energy-related greenhouse gas emissions, 2011. This figure, included in the 2007 version of this report was cited in Communication from the Commission to the European Council and the European Parliament of 10 January 2007: 'An energy policy for Europe' [COM(2007) 1].

¹⁰¹ Annex II of Decision 406/2009/EC of 23 April 2009.

¹⁰² Article 3 of Decision 406/2009/EC.

¹⁰³ Article 3 and Annex I of Directive 2009/28/EC.

¹⁰⁴ The Directive also included a 10% target for energy from renewable sources consumed in transport for each Member State.

¹⁰⁵ For this purpose, each Member State submitted to the European Commission a national action plan setting out their proposed strategy, including the indicative trajectory to achieve their national target by 2020; when a Member State falls under the indicative trajectory, it must submit an amended national plan; where a Member State considers that, due to force majeure, it is impossible for it to meet its target, it must inform the European Commission as soon as possible. See Article 4 of Directive [2009/28/EC](#).

targets, schemes and programmes, taking into account national circumstances affecting primary energy consumption.¹⁰⁶

64. The common framework created by the Energy Efficiency Directive included, among other things,¹⁰⁷ provisions relating to:
- (a) improvements to the efficiency of the production, transport and distribution of heating and electricity;¹⁰⁸
 - (b) building renovation;¹⁰⁹
 - (c) energy audits;¹¹⁰
 - (d) 80% roll out of smart meters by 2020;¹¹¹
 - (e) increased levels of billing information available to consumers;¹¹² and
 - (f) adoption by Member States of measures to promote energy efficiency on both the supply and demand side, for instance by making financing facilities available for energy efficiency projects.¹¹³
65. The UK's energy efficiency target, determined by DECC, amounts to an 18% reduction from the UK's 2007 'business as usual' projection for 2020.

The 2030 policy framework

66. On 23 October 2014, the European Council agreed on a new policy framework for 2030, aimed at ensuring that the EU stays on track for its 2050 target. The European Council endorsed the following objectives to be achieved by 2030:
- (a) A binding target to reduce EU greenhouse gas emissions by at least 40% from 1990 levels.

¹⁰⁶ Recital 13 of the Energy Efficiency Directive. Such circumstances include (a) remaining cost-effective energy-saving potential, (b) changes in energy imports and exports, and (c) development of all sources of renewable energies, nuclear energy, carbon capture and storage.

¹⁰⁷ Other measures relate, for instance, to savings in the transport sector, the development of minimum efficiency requirements for energy-using appliances, awareness-raising among consumers about energy use and improving the energy performance of buildings.

¹⁰⁸ Article 15 of the Energy Efficiency Directive.

¹⁰⁹ Articles 4 and 5 of Energy Efficiency Directive.

¹¹⁰ Article 8 of Energy Efficiency Directive.

¹¹¹ See Annex I of Directive 2009/72/EC of 13 July 2009 concerning common rules for the internal market in electricity.

¹¹² Articles 9 to 12 of Energy Efficiency Directive.

¹¹³ Examples of such measures in the UK are the Green Deal to promote investment in building renewals (see further below) and increased information requirements in the electricity supply SLCs 14, 23, 31, 31A, 32, 41 and 42.

- (b) A binding target to increase to at least 27% the share of renewable energy consumed in the EU.
 - (c) An indicative target (to be reviewed in 2020) to improve energy savings by at least 27%.
67. It is expected that these targets will be implemented across the EU by strengthening the existing green policies (such as the EU ETS regime described in paragraphs 76 to 84) and by calculating individual targets for each Member State (as per the 2020 Climate and Energy Package).

UK's target for 2050

68. In addition to the national climate change and energy efficiency targets imposed by EU legislation, the Climate Change Act 2008 (CCA08) sets out the UK's strategy for achieving the 2050 goals endorsed by the European Council in 2011 and has committed the UK to reducing emissions by at least 80% in 2050 from 1990 levels.¹¹⁴ However, the Secretary of State may order an amendment to this target if there have been significant developments in scientific knowledge about climate change, or European or international law or policy.¹¹⁵
69. CCA08 requires¹¹⁶ the UK government to set legally binding 'carbon budgets',¹¹⁷ which it may amend if there have been significant changes affecting the basis on which the budget was determined,¹¹⁸ as well as policies for meeting the carbon budgets.¹¹⁹ The UK government annually reports to Parliament on the level of UK emissions.¹²⁰
70. The Committee on Climate Change was set up to advise the UK government on emissions targets, and reports to Parliament on progress made in reducing greenhouse gas emissions.¹²¹

¹¹⁴ Section 1 CCA08.

¹¹⁵ Section 2 CCA08.

¹¹⁶ Sections 4 to 10 CCA08.

¹¹⁷ A carbon budget is a cap on the amount of greenhouse gases emitted in the UK over a five-year period (starting with the period from 2008 to 2012). The Committee on Climate Change provides advice on the appropriate level of each carbon budget which are designed to reflect a cost-effective path to achieving the long-term objectives. The first four carbon budgets have been put into legislation and run up to 2027. Under the current (second) carbon budget, 2013 to 2017, carbon emissions must be reduced to 2,782 million metric tons of CO₂ equivalent, ie 29% reduction compared with 1990 levels.

¹¹⁸ Sections 21 to 23 CCA08.

¹¹⁹ Sections 13 to 15 CCA08.

¹²⁰ Sections 16 to 20 CCA08.

¹²¹ Sections 32 to 43 CCA08.

A summary of the principal EU and UK measures relating to the green objectives

71. There have been various measures implemented at EU and/or UK¹²² level that have been aimed at achieving, and/or are otherwise related to, the green objectives, falling within the following three main categories of financial measures:
- (a) Measures to internalise the cost of carbon emissions, with a view to encouraging investment to cut emissions from traditional plants and supporting indirectly low carbon technologies; these measures include the EU ETS and the UK CCL (including, since 2013, the CPF) (see paragraphs 75 to 92).
 - (b) Measures directly supporting renewable and low carbon energy generation by guaranteeing sufficient and steady returns on investments; these include support to large-scale generation (eg the RO) and Contracts for Difference (CfDs)) and to small-scale generation (eg Feed-in Tariffs and the RHI)¹²³ (see paragraphs 93 to 114).
 - (c) Measures supporting investments to increase energy efficiency (eg the Green Deal, the ECO and smart meters) (see paragraphs 115 to 120).
72. The first two categories of measure, increasing the costs of traditional generators, or subsidising the costs of renewable technologies, reflect the fact that renewable technologies are typically more expensive than traditional generators.
73. Set out at the end of this section (see paragraphs 121 to 124), for completeness, are certain other financial and non-financial measures that have been implemented at EU and UK level aimed at achieving and/or otherwise related to the green objectives, including Renewable Energy Guarantees of Origin, the CCL and the Green Investment Bank.¹²⁴

¹²² Energy policy, including relating to generation, transmission, distribution and supply of electricity, as well as to oil and gas, are matters that have been reserved to the UK government, subject to some limited exceptions such as generation of heat from renewable sources (see Scotland Act 1998 and Government of Wales Act 1998). However, in relation to certain policies, Scottish and/or Welsh governments have been appointed by UK legislation as relevant authorities for carrying out specific functions in Scotland and Wales, respectively (such as regards planning). Unless stated otherwise, measures adopted by the UK Parliament and UK government applies to Great-Britain and Northern Ireland. However, the implementation and enforcement of these measures in Northern Ireland are not discussed in this working paper.

¹²³ We note however that these schemes may also benefit non-domestic customers without cap on support available.

¹²⁴ In addition, the UK government has introduced certain measures targeted at (energy intensive) businesses, such as the CRC Energy Efficiency Scheme to improve energy efficiency and cut emissions in large public and private sector organisations; and the Enhanced Capital Allowances fiscal incentive for businesses to invest in

74. To the extent that any of the measures implementing the green objectives have required direct support from or intervention by the UK government, they may have qualified as 'state aid'.¹²⁵ Although the TFEU contains a general prohibition on state aid, in certain circumstances state aid is considered compatible with EU rules when it is necessary in order to pursue particular policy objectives, including environmental objectives.¹²⁶ The UK has previously notified state aid (and obtained approval) in relation to a number of policy instruments, including compensation schemes associated with the EU ETS, exemptions to the UK CCL, the RO, Feed-in Tariffs, CfDs and RHI schemes, and the Green Investment Bank, as well as for a number of specific projects (eg off-shore wind projects and Hinkley Point C nuclear plant).¹²⁷

Measures to internalise the cost of carbon emissions

75. These measures have as their objective to incorporate the social and environmental costs of carbon emissions in the cost structure of electricity generation or energy use, (pursuant to the 'polluter pays' principle).

The EU Emissions Trading System

76. The EU ETS was introduced by Directive 2003/87/EC (the Emissions Trading Directive)¹²⁸ and transposed into UK law in 2005.¹²⁹ Its principal objective was to cut industrial greenhouse gas emissions in the EU in the most cost-effective way.
77. The EU ETS works on a 'cap and trade' basis. A limit, which from 2013 is to be reduced each year by 1.74%¹³⁰ (by 2.2% from 2021¹³¹), is put on overall carbon emissions across the EU from high-emitting industry sectors, a wide

energy-saving plants and machinery, low carbon cars and water conservation plants. These measures are not described in further detail in this working paper.

¹²⁵ Ie an intervention by the state or through state resources which can take a variety of forms (eg a contract on favourable terms, tax break), which gives the recipient an advantage on a selective basis (for example renewable energies), resulting in an actual or potential distortion of competition, and with likely effects on trade between Member States.

¹²⁶ See [Guidelines on State aid for environmental protection and energy 2014-2020](#) and recitals 58 to 68 of the [State aid General Block Exemption Regulation \(GBER\)](#).

¹²⁷ Normally support schemes that meet the criteria of state aid must be notified to the European Commission. However, support to small-scale renewable projects may benefit from an exemption from the notification obligation. See Articles 36 to 49 of GBER.

¹²⁸ The Emissions Trading Directive 2003/87/EC of 13 October 2003 established a scheme for greenhouse gas emissions allowance trading within the European Economic Community and amending Directive 96/61/EC. It has been amended by Directive 2004/101/EC of 27 October 2004, [Directive 2008/101/EC of 19 November 2008, Regulation \(EC\) No 219/2009 of 11 March 2009 and Directive 2009/29/EC of 23 April 2009](#).

¹²⁹ The Greenhouse Gas Emissions Trading Scheme Regulations 2005, which was replaced by the Greenhouse Gas Emissions Trading Scheme Regulations 2012 (implementing Directive 2009/29/EC).

¹³⁰ The reduction rate of 1.74% each year was chosen so that by 2020 EU emissions will be 21% below the 2005 level.

¹³¹ See paragraph 2.3 of the Conclusions adopted by the European Council on 23 and 24 October 2014, EUCO 169/14.

range of energy-intensive industry sectors and commercial airlines. These include more than 11,000 power stations and industrial plants across the EU with around 1,000 of these in the UK. Other sectors covered by the EU ETS are, among others, oil refineries, offshore platforms and industries that produce iron and steel, cement and lime, paper, glass, ceramics and chemicals and aviation operators. Power plants represent nearly half of the emissions covered by the EU ETS.

78. The EU cap on overall emissions across the EU is converted into tradable emissions allowances, which gives the holder of an emissions allowance the right to emit one tonne of CO₂ (or other greenhouse gas) in the specified period.¹³² 88% of the allowances to be auctioned are allocated to the Member States based on their verified emissions in 2005.¹³³ For the first seven years the vast majority of emissions allowances were given away for free by governments.¹³⁴ However, since 2013, auctioning has been the main method of allocating emissions allowances across the EU.¹³⁵ In addition, allowances may not be allocated for free to power stations.
79. The Environment Agency is the UK registry administrator for the EU ETS¹³⁶ and the regulator of the scheme in England. The Scottish Environment Protection Agency and National Resources Wales are the scheme regulators for Scotland and Wales respectively.
80. Auctions are held on exchanges operated by companies appointed by national governments, in accordance with the rules set out in the Regulation (EU) 1031/2010 (the 'Auctioning Regulation').¹³⁷ There is a common EU auction platform available to Member States' governments, which the UK government opted out from and instead appointed ICE Futures Europe (ICEFE) to conduct auctions of EU ETS on behalf of DECC from November 2012. The UK's auctions are open to buyers from anywhere in the European Economic Area – European Free Trade Association that fulfil the criteria set out in the relevant EU legislation and ICEFE's membership requirements.

¹³² Article 13 of the Emissions Trading Directive (as amended) provides that allowances issued after 1 January 2013 will be valid for periods of eight years.

¹³³ The remainder of the allowances are shared among certain Member States on the basis of certain other criteria which do not operate to the benefit of the UK.

¹³⁴ The period 2005 to 2007 was a trial period used for the scheme. The period 2008 to 2012 provided for a reduced number of allowances by 6.5%, however, due to the economic downturn, demand for electricity and, therefore, demand for allowances, decreased, leading to a surplus of unused allowances and a reduction in the carbon price (from a peak of nearly £30 to ca. £6).

¹³⁵ The Emissions Trading Directive sets the goal of phasing out free allocation completely by 2027.

¹³⁶ It registers all allowances issued from 1 January 2012 to be held in a union registry on accounts managed by the Member States.

¹³⁷ Regulation (EC) No 1031/2010 of 12 November 2010, amended by Commission Regulation EU No 176/2014, Commission Regulation (EU) 1143/2013, Commission Regulation (EU) 1042/2012 of 7 November 2012, and Commission Regulation (EU) 784/2012 of 30 August 2012, and Commission Regulation (EU) 1210/2011 of 23 November 2011.

81. Bidding in auctions for emissions allowances is a financial activity regulated by the Financial Conduct Authority.¹³⁸
82. Once allowances have been awarded, participants who are likely to emit more or less CO₂ (or other greenhouse gas) than their emissions allowances can buy and sell emissions allowances as needed on a secondary market, which is accessible through multiple routes:
- (a) Trading directly with other companies included in the EU ETS.
 - (b) Trading with intermediaries, eg banks and specialist traders.
 - (c) Using the services of a broker.
 - (d) Joining one of the several exchanges that list emissions allowance products in the secondary market.
83. At the end of each calendar year, businesses report their EU ETS emissions and have their emissions reports checked by an independent verifier and approved by an EU ETS regulator.¹³⁹ Participants must surrender a sufficient quantity of emissions allowances to cover their total emissions by 30 April of the following year. If a business fails to do so, it is obligated to buy allowances to make up the shortfall (at the carbon price), it is 'named and shamed' through publication by the regulator,¹⁴⁰ and must pay a fine for each excess tonne of greenhouse gas emitted.¹⁴¹
84. The fine in 2013 was €100 per tonne of CO₂ (or equivalent gas) in excess of the emissions allowance.¹⁴² Other fines are set out by the Greenhouse Gas Emissions Trading Scheme Regulations 2012 for other procedural breaches.

UK climate change levy and carbon price floor

85. The UK introduced on 1 April 2001 the CCL as a tax on UK businesses' energy use (ie consumption of electricity, gas, liquid petroleum gas and solid fuel), charged at the time of supply as part of the overall retail price. Certain tax exemptions and tax reductions are available for consumers of electricity generated from certain renewable sources and combined heat and power,

¹³⁸ See Schedule 3 of the Financial Services and Markets Act 2000 and the [FCA Handbook](#).

¹³⁹ In accordance with Regulation (EU) 600/2012 of 21 June 2012 (the 'Accreditation and Verification Regulation') and Regulation (EU) 601/2012 of 21 June 2012. See also the European Commission's Guidance on the Accreditation and Verification Regulation.

¹⁴⁰ The relevant regulator is determined by the location of the registered office of the business in breach. The Environment Agency regulates those businesses that do not have a registered office. For details see section 27 of the Greenhouse Gas Emissions Trading Scheme Regulations 2012.

¹⁴¹ Article 16 of the Emissions Trading Directive.

¹⁴² Section 54 of the Greenhouse Gas Emissions Trading Scheme Regulations 2012.

and energy intensive businesses that have entered into a climate change agreement with the Environment Agency.

86. The UK CCL was also broadly in line¹⁴³ with Directive 2003/96/EC which came into force on 1 January 2004 and set out a minimum framework for the taxation (excluding value added tax) of energy products and electricity, including minimum EU tax.¹⁴⁴ This tax was aimed at reducing energy demand by businesses.¹⁴⁵ As with the CCL, certain total or partial exemptions from the tax, or reductions in levels of the tax, apply to certain energy products such as electricity from low carbon generators.¹⁴⁶
87. In common with several other EU Member States, certain exemptions are also available for energy intensive businesses¹⁴⁷ and for businesses that have invested in reducing their energy use.
88. As part of the 2011 CPF reform,¹⁴⁸ which came into force on 1 April 2013,¹⁴⁹ a second set of rates was included by the UK government in the CCL, namely, the Carbon Price Support (CPS) rates. In contrast to the CCL tax rates (which are charged at the time and as part of the price of supply), the CPS rates are paid by owners and operators of power plants using fossil fuels (excluding certain small generators and low emissions generators that have obtained a levy exception certificate from Ofgem) and therefore are paid for by both domestic and non-domestic users.
89. The CPF is calculated as the sum of (a) the market spot price of CO₂ from the EU ETS and (b) the CPS rates which is the UK-controlled part of the CPF. In practice, the UK government sets a notional target price per tonne of CO₂ as the CPF and, in order to achieve that target CPF, calculates the spread between the EU ETS carbon price (which is determined by market forces, through auctions and trading) and the target CPF. This spread is then converted into actual CPS rates for each of the taxable commodities, ie the fossil fuels used to generate electricity. These rates are expressed in kilowatt (electricity), kilogram (liquefied petroleum gas), or gigajoule (coal) per hour.¹⁵⁰

¹⁴³ Mainly under section 30 of and Schedule 6 to the Finance Act 2000.

¹⁴⁴ Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity, as amended by Directive 2004/74 and Directive 2004/75. Directive 2003/96/EC was adopted by unanimous decision in accordance with Article 113 of the TFEU.

¹⁴⁵ Article 14 of Directive 2003/96/EC.

¹⁴⁶ Article 15 of Directive 2003/96/EC. The energy products include, among other things, energy products used under fiscal control in the field of pilot projects for the technological development of more environmentally friendly products or in relation to fuels from renewable sources; forms of energy which are of solar, wind, tidal or geothermal origin, or from biomass or waste.

¹⁴⁷ Eligible energy-intensive sectors to receive up to a 90% reduction in the CCL if they sign up to stretching energy efficiency targets agreed with the UK government.

¹⁴⁸ Announced in the UK government budget for 2011.

¹⁴⁹ Through the Finance Act 2011, as amended by the Finance Acts 2012, 2013 and 2014.

¹⁵⁰ This conversion is operated by multiplying the target carbon price by the standard carbon emission factor for the relevant fuel.

This regime is designed to maintain a clear price for carbon emissions from fossil fuels used to generate electricity with a view to supporting low carbon emission technologies and reinforcing the ‘polluter pays’ principle.

90. The original intention behind the CPF reform in 2011 was to increase the CPF steadily over the years (ie through annual gradual rises to the CPS) in order to increase the UK government support to low carbon energy, and to meet the UK’s carbon and emissions obligations. The UK government set in 2011 a target price trajectory intended to raise the floor price from £16 to £30 per tonne of CO₂ by 2020. However, the fall of EU ETS carbon prices¹⁵¹ has meant that EU ETS carbon prices are now substantially lower than was expected when the CPF was introduced in 2011. If the target price trajectory set in 2011 had been kept in place, it would have caused a large and increasing gap between the carbon prices faced by UK energy generators and those faced in other Member States, leading to higher energy bills for UK households and firms. As a result, the difference between the EU ETS allowance price and the CPF (ie by capping the CPS element of the CPF) has been capped in the Finance Act 2014 at £18 per tonne of CO₂ for the period from 2016 to 2020, effectively linking the CPF to the EU ETS allowance price.

Emissions Performance Standard

91. The Emissions Performance Standard, introduced in 2013 as part of the government’s Electricity Market Reform (EMR),¹⁵² is a duty on operators of any newly built fossil fuel plant¹⁵³ to ensure that it does not exceed a pre-determined emissions limit of tonnes of CO₂ in any year. This limit is determined on the basis of the plant’s capacity and as such is effectively an ‘efficiency’ standard.
92. Compliance with the Emissions Performance Standard in England is monitored by the UK government (and in Scotland and Wales by the devolved governments in Scotland and Wales, respectively). Exemptions are provided for generators that introduce carbon capture and storage systems.¹⁵⁴

Direct support to low carbon generation

93. In order to comply with its obligations relating to climate change and carbon targets, the UK government has introduced various regimes to support large-

¹⁵¹ At the time of the announcement of the CPF reform in early 2011, the EU ETS price was around £15. By January 2013, it had fallen to under £4.

¹⁵² Implemented through Part 2 of the EA13, which contains a number of measures pursuing green objectives (eg CfDs (see paragraphs 101 to 107) and security of supply (the Capacity Market (see paragraphs 1388 to 1422)).

¹⁵³ For these purposes, a new plant is a plant built after 18 February 2014.

¹⁵⁴ Section 58 EA13.

scale and small-scale renewable and low carbon emissions generation. The RO regime, which came into force in 2002, was until the EMR in 2013, the key policy instrument in the UK to support large-scale renewable energy by way of an obligation on suppliers of electricity to trade (buy) certificates granted to renewable generators (or to source their energy from renewable generators from which they would obtain the relevant certificates). In many respects, the RO scheme can be seen to operate on a similar basis to the EU ETS. The UK government decided in 2009 progressively to replace the RO regime with the CfDs scheme (see paragraph 101), which extended the UK government's support to low carbon non-renewable technologies to include nuclear. Support for smaller-scale generation has been implemented through the Feed-In Tariff scheme (see paragraphs 108 and 109).

Renewables Obligation

94. The RO scheme came into force in 2002¹⁵⁵ and replaced the Non Fossil Fuel Obligation and the former Scottish RO regimes, which had been in place since the EA89.¹⁵⁶ Exercise of legislative powers relating to the RO scheme are exercised as regards England and Wales by DECC and as regards Scotland by the Scottish government,¹⁵⁷ with delegation of the day-to-day operation of the scheme (accreditation, assessment of eligibility, collection and payment of funds) to Ofgem.
95. The RO scheme places an obligation on UK electricity suppliers to present at the end of each year a certain number of Renewables Obligation Certificates (ROCs), which depends on the amount of electricity they supply in the UK. Suppliers can meet their obligation by:
 - (a) presenting ROCs to Ofgem at the end of the year;
 - (b) making a payment to Ofgem's ROC buy-out fund to cover any shortfall in the number of ROCs presented at the end of the year (set at £43.30 per ROC for 2014/15); or
 - (c) a combination of both.

¹⁵⁵ By virtue of amendments to sections 32 to 32.Z.2 of the EA89 and, for England and Wales, the Renewables Obligation Order 2009 (as amended by the Renewables Obligation (Amendment) Order 2010 (S.I. 2010/1107), the Renewables Obligation (Amendment) Order 2011 (S.I. 2011/984), paragraph 29 of Schedule 4 to S.I. 2011/988, the Renewables Obligation (Amendment) Order 2013 (S.I. 2013/768) and the Renewables Obligation (Amendment) Order 2014 (S.I. 2014/893). For Scotland, see the Renewables Obligation (Scotland) Order 2009 (SSI 2009/140), as amended.

¹⁵⁶ These two schemes are no longer open to new generators, and existing contracts will continue until the last of them expires in 2019.

¹⁵⁷ Scotland Act 1998 (Transfer of Functions to the Scottish Ministers) (No3) Order 2006 (SI 2006/3258).

96. The annual obligation on electricity suppliers to present ROCs is published on 1 October for the following year, based on the forecasted generation from renewable energy (but not other forms of low carbon generation, such as nuclear). The level of these obligations is set by DECC for England and Wales and by the Scottish government for Scotland (subject to the overall budget constraints that are set centrally by DECC).¹⁵⁸ DECC (and the Scottish government) applies a 10% headroom to the amount of forecasted eligible generation (which determines the number of ROCs generated) which sets the aggregate maximum demand for ROCs by suppliers. This is intended to ensure that there is sufficient demand for ROCs each year. ROCs concerning generation in England and Wales, as well as in Scotland, are allocated for free by Ofgem to eligible generators of renewable electricity¹⁵⁹ in proportion to the renewable electricity that they each generate.¹⁶⁰ ROCs are then traded with electricity suppliers (and other independent traders) at a negotiated price. In principle, ROCs are not issued to generators for more than 20 years.¹⁶¹
97. The administration costs of the scheme are recovered by Ofgem from the buy-out fund. The balance of the buy-out fund is distributed back to suppliers in proportion to the number of ROCs they have presented in respect of their individual obligation.¹⁶²
98. As part of EMR, the UK government decided to phase out the RO scheme across Great Britain, which will remain available to new generators (except solar generators) until 31 March 2017.¹⁶³ However, electricity generators that are accredited under the RO scheme before 31 March 2017 will continue to receive support until the scheme closes in 2037.

Investment contracts

99. Investment contracts, introduced as a transitional support mechanism within the context of the EMR,¹⁶⁴ were an early form of the CfDs scheme that came into force on 1 April 2014 as a transitional measure.

¹⁵⁸ Sections 5 to 13 of, and Schedule 1 to, the [Renewables Obligation Order 2009 \(as amended\)](#). A similar process is followed by the Scottish government pursuant to the Renewables Obligation (Scotland) Order 2009, (SSI 2009/140).

¹⁵⁹ A non-legislative cap on eligible generation from new dedicated biomass plants has been set at 400MW, (see Renewables Obligation Banding Review for the period 1 April 2013 to 31 March 2017: Government response to further consultations on solar PV support, biomass affordability and retaining the minimum calorific value requirement in the RO, 18 December 2012).

¹⁶⁰ Generators of renewable energy report the amount of renewable electricity they generate on a monthly basis to Ofgem.

¹⁶¹ See Section 17A of the [Renewables Obligation Order 2009 \(as amended\)](#). However, if additional capacity has been installed, ROCs may be issued in relation to this additional capacity until the 20th anniversary of installation.

¹⁶² See Part 8 of the Renewables Obligation Order 2009 and Part 8 of the Renewables Obligation (Scotland) Order 2009.

¹⁶³ See the Renewables Obligation Closure Order 2014.

¹⁶⁴ Schedule 2 to the EA13 sets out the provisions which give effect to investment contracts.

100. Eight renewables projects were awarded investment contracts in April 2014.¹⁶⁵ These projects included biomass conversion, dedicated biomass with combined heat and power, and offshore wind. These investments contracts will be transferred to the CfDs scheme in the course of 2015.¹⁶⁶

Contracts for Difference

101. The CfDs scheme was introduced as part of the EMR¹⁶⁷ to become the new key support mechanism for low carbon electricity generation. As from 31 March 2017, the CfDs scheme will be the only available support mechanism for new eligible generation capacity.¹⁶⁸
102. One major objective of the CfDs scheme was to reduce low carbon generators' exposure to volatile wholesale prices which affect both the generation market and the market-based RO system. Under the scheme, a generator who enters into a CfD (a private law contract) with a UK government owned company. The Low Carbon Contracts Company (LCCC), is then contractually obliged to pay the difference between the 'strike price' (a price for electricity reflecting the higher cost of investing in the relevant low carbon technology for the generator counterparty) and the 'reference price' (a measure of the average market price for wholesale electricity in the Great Britain market at a particular time) when the strike price exceeds the reference price.
103. Conversely, when the reference price (ie the market price) is above the agreed strike price (anticipated to be the less common position), payments are made by the generator to the LCCC to reflect the difference. The combination of these two flows of payments is intended to ensure that a generator receives a steady income equal to the strike price, namely the price calculated as that necessary to achieve the income required to support and encourage investment in the particular low carbon generation technology benefitting from the CfDs.
104. The CfDs scheme was implemented by a combination of secondary legislation, an allocation framework, a budget notice and the standard terms notices set by DECC.¹⁶⁹ These lay down, among other things the standard

¹⁶⁵ See the [Final Investment Decision Enabling for Renewables process](#).

¹⁶⁶ See Part 4 of Schedule 2 EA13.

¹⁶⁷ See sections 6 to 26 EA13.

¹⁶⁸ The UK government set out its overarching policy on RO transition in the White Paper 'Planning our electricity future' July 2011.

¹⁶⁹ Chapter II of the EA13 (sections 6 to 26); Contracts for Difference (Allocation) Regulations 2014; Contracts for Difference (Definition of Eligible Generator) Regulations 2014; Contracts for Difference (Standard Terms) Regulations 2014; Contracts for Difference (Electricity Supplier Obligations) Regulations 2014; Electricity Market Reform (General) Regulations 2014; Contract for Difference: Final Allocation Framework for the October 2014

terms of CfDs. However, when the standard terms of a CfD are not suited to a particular type of generation, the CfDs standard terms can be amended through negotiations between generators and the LCCC.

105. CfDs are long-term private law contracts intended to ensure sufficient investor certainty at the lowest level of subsidy sufficient to ensure investment.
106. The 'EMR Delivery Plan', which is published every five years,¹⁷⁰ sets out the maximum strike price that can be included in CfDs, which therefore determines the maximum level of support for low carbon technologies. The CfDs 'budget' (which, as noted below, is included within the Levy Control Framework) is divided between certain established technologies (eg relating to onshore wind, solar photovoltaic, combined heat and power, or hydro), certain less established technologies (eg offshore wind, wave, tidal stream, or advanced conversion technologies), and biomass generation.
107. For most projects,¹⁷¹ the budget is established by the UK government under an 'allocation round'. If there is an insufficient budget to satisfy all bids in an allocation round, National Grid runs an auction in which generators are invited to submit sealed bids. However, in exceptional cases (for instance where the standard terms of a CfD might not be suited and will need to be tailored to the circumstances of the project, the UK government will allocate¹⁷² CfDs to individual projects which have been individually negotiated.

Feed-in Tariffs

108. The Feed-in Tariff (FIT) scheme is a UK government programme designed to promote the uptake of a range of renewable and low carbon electricity generation technologies (typically up to 5 MW capacity). It was introduced by the EA08¹⁷³ and was implemented by secondary legislation which came into force on 1 April 2010.¹⁷⁴ In outline, it is a cross-subsidy regime whereby eligible and accredited generators are paid a pre-determined amount (per unit of energy) for generating using eligible low carbon technologies. The cost is

Allocation Round of 1 September 2014; [Budget Notice for CFD Allocation Round 1 of 2 October 2014](#); [CfDs Standard Terms and Conditions 29 August 2014](#).

¹⁷⁰ The current EMR Delivery Plan relates to the period from 2014/2015 to 2018/2019.

¹⁷¹ See the [Contracts for Difference \(Allocation\) Regulations 2014](#).

¹⁷² See section 10 EA13, Explanatory Notes to the EA13, and part 10 of the Contracts for Difference (Allocation) Regulations 2014. Where the UK government has individually negotiated a CfD, it will then direct the LCCC to offer such contracts.

¹⁷³ Sections 41 to 43 EA13.

¹⁷⁴ See the Specified Maximum Capacity and Functions Order 2010, the Feed-In Tariffs Order 2012 and the Modifications to Standard Conditions 33 and 34 of the Supply Licence Conditions.

'spread' across all relevant (larger)¹⁷⁵ electricity suppliers and ultimately assumed to be passed on to consumers.

109. The estimated average impact of the FIT scheme on household energy bills in 2014 was £9.¹⁷⁶

Levy Control Framework

110. The Levy Control Framework is a cap set by the UK government (namely the Treasury)¹⁷⁷ which limits the maximum amount of spending in a given period to support certain government energy schemes (typically involving cross-subsidies ultimately paid for by consumers) in Great Britain which would not otherwise be measured as taxation.¹⁷⁸ The annual cap began at £3.3 billion for the period 2014/15 and will rise to £7.6 billion for the period 2020/21.¹⁷⁹
111. The schemes which are covered by the Levy Control Framework include the RO, Feed-in Tariffs, investments contracts and CfDs. In addition, any public funding allocated to the Capacity Market (see paragraphs 138 to 142) will be included in the Levy Control Framework as of 2021.
112. The annual cap for Great Britain is divided by DECC into a series of annual limits on the overall cost of each scheme, which effectively sets the budgets available for each scheme. Budgets are, in turn, shared between different types of generation within the scheme (as regards England and Wales, and Scotland). This approach ensures that the UK government can balance its support to different generation technologies and manage the transition between different schemes (eg from the RO to the CfDs schemes).

Renewable heat incentive

113. The RHI is a financial incentive scheme designed to facilitate and encourage the uptake by domestic and non-domestic customers of systems that generate and use renewable energy to heat their homes or business premises.¹⁸⁰ The RHI pays a fixed tariff per unit of heat generated for a period of seven years to domestic consumers generating heat through a heat pump, biomass boiler, biomass stove or solar thermal panel.

¹⁷⁵ Suppliers with over 250,000 customers.

¹⁷⁶ DECC, *Estimated impacts of energy and climate change policies on energy prices and bill*, November 2014.

¹⁷⁷ HM Treasury, *Control framework for DECC levy-funded spending*, March 2011.

¹⁷⁸ As noted above, government projects supporting low carbon generation must also, in general, comply with State aid rules.

¹⁷⁹ National Audit Office, *The Levy Control Framework*, 27 November 2013.

¹⁸⁰ The scheme for non-domestic customers also covers production of biomethane for injection into the network.

114. The scheme was introduced in Great Britain by the UK government¹⁸¹ in 2011 for non-domestic consumers¹⁸² and in 2014 for domestic users.¹⁸³

Measures aiming at promoting efficiency

115. The Energy Act 2011 (EA11) contains enabling powers for the UK government to adopt measures promoting efficiency. The two main strategies set out in the EA11 are the Green Deal and the ECO schemes. The EA11, together with powers set out in the EA08, have also been used by the UK government to support the roll-out of smart meters.

Green Deal

116. The Green Deal¹⁸⁴ provides a means of finance to all occupiers or owners of properties who undertake qualifying energy efficiency improvements to their property. It is designed to help users make energy efficiency improvements to buildings by allowing them to pay for the costs of such improvements, which are incurred by a 'green deal installer',¹⁸⁵ effectively on credit for the consumer, through their energy bills rather than upfront. The Secretary of State established the scheme through various orders and regulations.¹⁸⁶

Energy Companies Obligation

117. The ECO is an energy efficiency programme that was introduced in Great Britain at the beginning of 2013.¹⁸⁷ It replaced two previous schemes, the Carbon Emissions Reduction Target and the Community Energy Saving Programme which were obligations imposed on large energy suppliers (and in the latter case, electricity generators) to reduce carbon emissions within domestic homes (and in particular low-income households) primarily through installing energy-efficiency measures¹⁸⁸.

¹⁸¹ In exercise of the powers conferred by sections 100(1) and (2) and 104(2) of the EA08. Separate schemes were introduced in Northern Ireland by the Department of Enterprise, Trade and Investment.

¹⁸² The Renewable Heat Incentive Scheme Regulations 2011, as amended in 2012, 2013 and 2014.

¹⁸³ The Domestic Renewable Heat Incentive Scheme Regulations 2014.

¹⁸⁴ Implemented by sections 1 to 41 of the EA11. These sections include various provisions relating to the amendment of supply licences and consumer credit legislation.

¹⁸⁵ ie a person authorised by virtue of the framework regulations to act as a green deal installer (see section 7 of the EA11).

¹⁸⁶ See in particular the Green Deal Framework (Disclosure, Acknowledgment, Redress etc.) Regulations 2012, the Green Deal (Energy Efficiency Improvements) Order 2012 and DECC's Green Deal Code of Practice (2014).

¹⁸⁷ The Electricity and Gas (Energy Companies Obligation) Order 2012 (as amended); and the Electricity and Gas (Energy Company Obligation) Order 2014.

¹⁸⁸ The Carbon Emissions Reduction Target (requiring certain gas and electricity suppliers to achieve targets for reducing carbon emissions within domestic properties) and the Community Energy Saving Programme (requiring gas and electricity suppliers and electricity generators to deliver energy saving measures to domestic consumers in specific low income areas of Great Britain) entered into force on 1 April 2008 and 1 September 2009 respectively and ran until 31 December 2012.

118. ECO places a legal obligation¹⁸⁹ on the larger energy suppliers (ie which supplied either gas or electricity to more than 250,000 domestic customers on 31 December of the previous year and supplied either 400 GWh or 2,000 GWh of electricity to domestic customers in that same year)¹⁹⁰ to deliver energy efficiency measures to domestic energy users such as improvements to the insulation of domestic (including glazing), connection to a district heating system, inefficient boiler repairs or replacements. DECC assessed in 2013 that ECO would have a total cost of £1.35 billion per year.¹⁹¹ ECO operates alongside the Green Deal, with a particular focus on domestic energy users living in an area of low income¹⁹² and hard-to-treat homes.¹⁹³

Smart meters

119. The roll-out of smart meters to all domestic users of gas and/or electricity in Great Britain was initially started in 2012¹⁹⁴ and is intended to be completed by 2020.
120. The target has been supported by eight separate ‘tranches’ of changes to the regulatory framework, as follows:
- (a) From 30 November 2012, the mandated roll-out of smart meters by energy suppliers and the introduction of the Smart Meter Installation Code of Practice.¹⁹⁵
 - (b) From 4 March 2013, various changes were made by the Secretary of State to gas and electricity supply SLCs, electricity distribution SLCs and gas transporters’ SLCs, including regarding consumer engagement, data access, reporting, and security risk assessments and audits.¹⁹⁶

¹⁸⁹ Ofgem may impose penalties if it is satisfied that the supplier has contravened its obligation (see section 24 of the Electricity and Gas (Energy Companies Obligation) Order 2012 in conjunction with section 27A of the EA89).

¹⁹⁰ Section 4 of [The Electricity and Gas \(Energy Companies Obligation\) Order 2012](#) (as amended).

¹⁹¹ DECC, [Energy Company Obligation \(ECO\) delivery costs](#), 2013.

¹⁹² See section 13 of The Electricity and Gas (Energy Company Obligation) Order 2012.

¹⁹³ As defined in sections 2 and 14 of The Electricity and Gas (Energy Companies Obligation) Order 2012.

¹⁹⁴ The Government introduced a new licensable activity of providing smart meter communication services (see The Electricity and Gas (Smart Meters Licensable Activity) Order 2012 (SI 2012/2400). The Electricity and Gas (Competitive Tenders for Smart Meter Communication Licences) Regulations 2012 (SI 2012/2414) sets out the competitive application process to award new licences, including to the Data Communications Company, Smart Data Limited (owned by Capita plc).

¹⁹⁵ Introduced as gas supply SLCs 33, 35 and 36 and electricity supply SLCs 39, 41 and 42.

¹⁹⁶ Implemented by amending: gas supply SLCs 37, 38, 39, 40 and 41; electricity supply SLCs 43, 44, 45, 46 and 47; gas transporter SLCs 15 and 26; and by introducing SLCs 6A and 10A into the electricity distribution licence.

- (c) From 14 July 2013, incorporation by the Secretary of State of the SEC into gas and electricity supply SLCs, electricity distribution SLCs and gas transporters SLCs.¹⁹⁷
- (d) From 4 June 2014, an obligation on suppliers to provide consumers with accounts billing information.¹⁹⁸
- (e) From 31 July 2014, data protection.¹⁹⁹
- (f) From 31 July 2014, pre-testing.
- (g) Tranches 7 and 8, yet to be launched, involve final product testing.²⁰⁰

Other measures implementing the green objectives

Renewable Energy Guarantees of Origin

121. All EU Member States²⁰¹ are under a duty to develop a certification scheme to guarantee the origin of electricity produced from renewable energy sources. This obligation was transposed into UK law in 2003²⁰² through the Renewable Energy Guarantees of Origin (REGOs) scheme. A REGO is therefore a guarantee of origin issued by Ofgem which enables producers, traders and suppliers to demonstrate that the electricity they sell has been generated in the UK from renewable energy sources. It is therefore a necessary corollary of the EU ETS.
122. Ofgem administers the scheme and issues REGOs to operators of eligible generating stations (or their agent). Once issued REGOs can be traded²⁰³ across the EU with or without the electricity to which it was issued.
123. The main use of REGOs is as evidence for Fuel Mix Disclosure purposes.²⁰⁴ REGOs are also relevant to tariffs marketed as green (eg tariffs that meet the

¹⁹⁷ Implemented through the introduction of new gas supply SLC 48, electricity supply SLC 42, gas transporter SLC 10 and electricity distribution SLC 21A.

¹⁹⁸ Introduced as new gas supply SLC 45 and electricity supply SLC 51.

¹⁹⁹ Implemented through the introduction of section L into the SEC.

²⁰⁰ DECC concluded its consultation on these measures by publishing its response on 17 November 2014. See [DECC Smart Metering Implementation Programme – Government response to consultation on Stage 4 SEC](#).

²⁰¹ Article 5 of Directive 2001/77/EC, replaced by Article 15 of Directive 2009/28/EC.

²⁰² Electricity (Guarantees of Origin of Electricity Produced from Renewable Energy Sources) Regulations 2003 The Electricity (Guarantees of Origin of Electricity Produced from Renewable Energy Sources) (Amendment) Regulations 2010. See also Ofgem guidance on this matter. Separate measures were adopted in Northern Ireland.

²⁰³ We note that REGOs have no cash value and, therefore, are usually traded with the energy and/or ROCs attached.

²⁰⁴ Fuel Mix Disclosure is an obligation on electricity suppliers to provide existing customers (on their bill) and prospective customers with details of the mix of fuels – coal, gas, nuclear, renewable and other – used to produce the electricity supplied to them along with certain environmental information. Introduced into UK law on 18 March 2005 as a new standard licence condition in electricity supply licences by The Electricity (Fuel Mix

requirement of Ofgem's 'Green Supply Guidelines' of February 2009) and for companies reporting their carbon emissions.²⁰⁵

UK Green Investment Bank

124. The Enterprise and Regulatory Reform Act 2013 created the UK Green Investment Bank,²⁰⁶ with an initial £3.8 billion of capital to invest into renewable energy projects, on commercial terms, across the UK. Its objective is to support capital intensive and difficult projects, with a view to de-risking new sectors and helping to lower the cost of capital for green projects so as to mobilise private investments. To date, it has invested in 41 projects and six funds in over 200 locations around the UK, directly committing £1.8 billion and helping to mobilise other private investments, for an aggregate amount of £5.9 billion invested into the UK's green economy.²⁰⁷

Measures relating to security of supply

125. Security of supply is normally understood to mean two distinct (interrelated) matters: (a) ensuring that the national electricity and gas systems (and every part of them) are kept in 'balance' as regards supply and demand at any point in time (eg avoiding temporary blackouts); and (b) ensuring that over the medium/longer term there is sufficient supply to meet demand.
126. In theory, provided in each case the 'market' provides the right incentives, one would expect to see investment sufficient to ensure demand is met. However, in Great Britain, various regulatory measures have been taken to prevent possible market failure which would affect security of supply. Justifications for these measures have included: the importance of energy supply to the economy; the geopolitical risks inherent in the sector; and the consequence of supporting renewable energy in order to meet carbon targets.
127. This section does not deal with all the steps that may be taken in the event of an emergency, but rather with the key steps taken to ensure demand is met (the system kept in 'balance') over the short and longer term.

Disclosure) Regulations 2005 (SI 2005/391), implementing Article 3(6) of Directive 2003/54/EC concerning common rules for the internal market in electricity.

²⁰⁵ For instance, the Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013 requires quoted companies to report on carbon emissions for which they are responsible. Purchase of energy backed by REGO, see Defra/DECC '[Guidance on how to measure and report greenhouse gas emissions](#)', published in October 2009.

²⁰⁶ Part 1 of the Enterprise and Regulatory Reform Act 2013.

²⁰⁷ See the Green Investment Bank's [website](#) (accessed on 3 December 2014).

Electricity

128. Where more electricity is generated than consumed, or vice versa, it can result in system frequency falling or rising to an unmanageable degree (an imbalance). This can be the consequence of an unforeseen peak or an unexpected fall in supply or demand (eg due to weather conditions or technical failures in the system or by particular power plants). In order to prevent, so far as possible, such imbalances and to secure the supply of electricity to British consumers, the UK government has developed several policies which include:
- (a) The BM, which allows National Grid to buy or sell energy close to real time and/or to impose financial penalties on generators and suppliers who caused or contributed to an imbalance (National Grid also provides balancing services in order to balance demand and supply on a minute-by-minute basis and to ensure the security and quality of electricity supply across the GB Transmission System) (see paragraphs 130 to 137).
 - (b) The Capacity Market, under which the UK government is seeking to create an incentive for generators to invest in flexible generation²⁰⁸ that will act as a backup in case of an imbalance (see paragraphs 138 to 142).
 - (c) Measures supporting interconnection investments (see paragraphs 144 to 146).
129. These policies are further described below.

Balancing mechanism and balancing services

130. The BM is designed to maintain an energy balance on the electricity transmission network, in real time. Set out in detail in the BSC²⁰⁹, it provides National Grid with tools to accept bids and offers to buy and sell electricity at short notice in case of imbalance.²¹⁰ It also creates incentives for generators and suppliers to contribute to the balancing of the system (for instance, it penalises those causing an imbalance).
131. The current BM, was introduced by Ofgem in 2001 as part of the NETA reforms, via amendments to electricity generation and supply SLCs. The

²⁰⁸ Flexible generation includes for instance gas-fired power stations and other forms of generation that can be called into operation (or stopped) at short notice. They may be contrasted with both nuclear generation (which takes a substantial period of time to begin generating, and generally operates as 'baseload' plant, or intermittent generation: for instance wind turbines will be unable to produce electricity unless there is sufficient wind.

²⁰⁹ Standard generation, supply and transmission licences require licensees (ie generators, suppliers and NGET) to enter into and comply with the BSC. See paragraph 131.

²¹⁰ Section Q of the BSC.

scope of the BSC was subsequently extended to Scotland in April 2005 under the BETTA reforms.²¹¹ Elexon is the code administrator for the BSC,²¹² and provides services necessary to operate the BSC arrangements efficiently.

132. Under the BM, National Grid (NGET), as the electricity transmission system operator, collects information ('Physical Notifications') from generators²¹³ and suppliers to forecast levels of generation (forecasted delivery) and consumption (forecasted offtake) of electricity across Great Britain for any half-hour period (a 'Settlement Period'). Physical Notifications may be amended up to 1 hour before any Settlement Period (ie until 'gate closure'), when they become 'Final Physical Notifications'. Generators and suppliers must also notify before gate closure their contracted delivery and offtake of electricity ('Energy Contract Volume Notifications'),²¹⁴ which will be used to calculate imbalance prices (see below). National Grid will assess on this basis whether the system is at risk of imbalance and will accept offers or bids to sell or buy electricity to the system if it predicts a discrepancy between the amount of electricity generated (delivery or import) and consumed (offtake or export) during a certain Settlement Period.²¹⁵
133. In these circumstances, National Grid will accept, as necessary to balance the transmission system, the lowest offers to sell electricity (by increasing generation or decreasing consumption), or the highest bids to buy electricity (by decreasing generation or increasing consumption), received from generators and suppliers.²¹⁶
134. Any generators and suppliers who contributed to an imbalance (eg through a failure to comply with their contracted delivery of offtake) are then charged an imbalance price in proportion to their contribution. These financial settlements are calculated by subtracting the contracted energy amount (contracted delivery or offtake), plus any bids/offers, from the actual metered volume

²¹¹ See footnote 39.

²¹² The principal role of Elexon (referred to in the BSC as the Balancing and Settlement Code Company or as the 'BSCCo') is to provide and procure facilities, resources and services required for the proper, effective and efficient implementation of the BSC. It has the powers set out in Article 3 of section C of the BSC and is governed by a board of directors appointed pursuant to the principles set out in Article 4 of section C of the BSC. NGET is the registered owner of all Elexon's issued shares (Article 2.2.1. of section C of the BSC). Elexon also supports the activities of the BSC panel, which has the functions, powers and responsibilities listed in Article 3 of section B of the BSC, which includes the implementation, or supervision of the implementation, of procedures for modification of the BSC. The BSC panel is composed of a chairman and representatives of trading parties (up to five), Citizen Advice (two), the transmission company (one) and two independent members appointed by the chairman.

²¹³ Generators must inform NGET pursuant to Conditions BC1 to BC5 of the GC (the GC sets out the operating procedures and principles governing the relationship between NGET and all users of the national electricity transmission system). Generators must comply with the GC pursuant to electricity generation SLC 5.

²¹⁴ Section P of the BSC.

²¹⁵ For example, this can be as a consequence of an erroneous forecast, the failure by a party to comply with its commitment, a transmission issue or a combination of these factors.

²¹⁶ See sections P and Q of the BSC.

delivered or taken off. This calculated volume, multiplied by the 'imbalance' or 'cash-out' price, then gives the final financial settlement. If a party has under-generated or over-consumed compared to its contracted volume it will be charged for that shortfall of energy at 'System Buy Price'; if a party has over-generated or under-consumed compared to its contracted volume it will have to sell that extra energy at 'System Sell Price'. These imbalance prices are derived largely from the weighted average prices of the offers and bids accepted by National Grid through the BM.²¹⁷

135. NGET also has a number of additional tools to maintain an energy balance on the electricity transmission network. This includes a short term operating reserve (STOR) from four hours ahead of time to real time, to take account of demand forecast errors, plant losses and system imbalance. For this purpose, NGET enters into agreements with STOR service providers²¹⁸ whereby the latter undertake to deliver a contracted level of power when instructed²¹⁹ by NGET, within pre-agreed parameters.²²⁰ STOR is procured via a competitive tender process with three tender rounds per year. NGET pays STOR service providers for making their unit/site available to provide STOR and in case of actual delivery.
136. In 2012 Ofgem launched the Electricity Balancing Significant Code Review, following which Ofgem adopted several decisions directing National Grid and the BSC panel to consult on two modification proposals relating to a reform of cash-out prices, to be implemented through the following package of measures:²²¹
- (a) Make the cash-out price more 'marginal'.
 - (b) Include a 'cost for disconnections' in the imbalance prices.
 - (c) Improve the way reserve costs are priced by introducing a 'Reserve Scarcity Pricing' function.
 - (d) Move to a single cash-out price for each settlement period.
137. It is envisaged that the bulk of the Electricity Balancing Significant Code Review reforms will be in place by winter 2015/16, with the final steps to be

²¹⁷ See section T of the BSC, in particular Article 4.4.

²¹⁸ The STOR service can be provided by both BM participants (eg a generating unit at a power plant) and non-BM participants (eg a demand reducer). Utilisation of the service from BM participants is via the BM. Non-BM participants deliver the service through a required bespoke monitoring and despatch system, known as STOR Despatch.

²¹⁹ Once instructed, the response time to reach the expected level of delivery is 240 minutes.

²²⁰ The minimum contracted capability for a STOR service provider is 3MW. Contracted MW must be deliverable for at least 2 hours.

²²¹ Ofgem's Electricity Balancing Significant Code Review – Final Policy Decision, 15 May 2014.

completed by winter 2018/19. The BSC panel has also recommended to Ofgem certain additional reforms, for instance to amend certain collateral requirements.²²² Any amendment to the BSC by the BSC panel requires approval by Ofgem, except for minor amendments.²²³

Capacity Market

138. In addition to the aspects of the EMR that were introduced to achieve the green objectives (see further paragraphs 91, 99 and 101), the UK government also recently introduced the Capacity Market with the objective to support investment in the overall level of reliable capacity needed to provide secure electricity supplies. The Capacity Market was designed with a view to providing back-up for more intermittent and inflexible low carbon generation sources (such as wind and nuclear) such that the 'energy mix' as a whole is able to meet system requirements even during periods of peak demand. It operates by inviting eligible capacity providers to bid for Capacity Market contracts by way of 'capacity auctions'. National Grid is responsible for running the auction and for triggering capacity obligations at times of system stress.²²⁴ Ofgem has the power to make and amend the Capacity Market rRules and regulates National Grid.²²⁵
139. Capacity providers are paid under this scheme the share of their fixed costs not otherwise recoverable through trading on the 'wholesale electricity market' in exchange for their commitment to contribute to the rebalancing of supply and demand for electricity at times of system stress. This can be achieved by generators committing to increase generation (ie increasing supply of electricity), or by consumers committing to reduce demand from the grid (ie reducing demand of electricity), when the system is under stress.²²⁶ The legal framework came into force in August 2014.²²⁷
140. Under the Capacity Market Regulations, National Grid prepares an annual report containing, among other things, forecasts of future peak electricity supply and demand (in compliance with the directions and methodology set

²²² See Elexon's [website](#) (accessed on 4 December 2014).

²²³ See paragraph 13A of transmission SLC C3.

²²⁴ Rule 8.4 of the Capacity Market Rules 2014.

²²⁵ Sections 44 to 49 of the Electricity Capacity Regulations 2014.

²²⁶ The Capacity Market is also open to electricity storage companies or companies acting under the Demand-Side Response scheme (whereby electricity users vary demand due to changes in the balance between supply and demand, usually in response to prices), under which a capacity provider (in this case, a consumer of electricity) is required to meet its contractual obligation by reducing its demand below a baseline at times of system stress. This may be achieved for instance through embedded generation and smaller storage.

²²⁷ The main provisions are set out in the Electricity Capacity Regulations 2014 and the Capacity Market Rules 2014 (as amended). Supplier Payment Regulations are currently before Parliament and a draft Statutory Instrument was published on 11 November 2014.

out by the UK government).²²⁸ The UK government uses these reports to determine if, and what level of, reliable capacity is needed to ensure security of supply in a future period. If such back-up capacity is needed, the UK government may decide to hold an auction (run by National Grid) in order to enter into agreements offering a guaranteed and certain revenue stream, in the form of certain and regular payments, over and above any other revenues that capacity providers receive through the electricity market (such as through the wholesale market and the BM).²²⁹ These agreements will normally be awarded for a one-year period either one year or four years ahead of delivery. Longer-term contracts are also available on a four-year-ahead basis for refurbishing plant and new prospective generators who face high capital expenditures,²³⁰ and subsequently the UK government may award further contracts on a one-year basis in order to refine the level of capacity available.

141. Under the terms of these agreements, capacity providers that fail to provide the capacity when it is needed face penalties equal to 1/24th of the relevant contract's clearing price.²³¹
142. Capacity obligations are also tradable by capacity providers on a secondary market in the period from a year ahead of the start of the year the capacity must be delivered until the end of that year (under the supervision of National Grid).

Electricity demand reduction pilot

143. The electricity demand reduction pilot scheme, for which a budget of more than £20 million has been made available by the UK government, is designed to reduce demand for electricity at peak times, by providing organisations with financial support to install efficient electrical equipment.²³² A first electricity demand reduction pilot auction, which will be held in January 2015, will allocate up to £10 million of financial support to successful demand reduction projects.²³³ It may be followed by another auction depending on the outcome.

²²⁸ Sections 7 to 10 of the Electricity Capacity Regulations 2014.

²²⁹ Low carbon generation capacity that is already in receipt of other forms of support is not eligible for the Capacity Market, such as for generation plants that are a party to a CfD, RO or FIT will not be eligible to participate in the Capacity Market. Generation capacity that is participating in the electricity demand reduction pilot (see further below) is not eligible for the 2014 Capacity Market auction, but may become eligible at a later date.

²³⁰ See definition of Maximum Obligation Year in the Capacity Market Rules 2014.

²³¹ It is currently envisaged by DECC to cap at 200% of the capacity provider's monthly revenues from contracted capacity, subject to an overarching annual cap of 100% of the capacity provider's total annual revenues from contracted capacity. See [DECC's Consultation on Capacity Market supplementary design proposals and Transitional Arrangements](#), September 2014.

²³² The electricity demand reduction pilot was included in the Electricity Market Reform (see sections of the EA13).

²³³ Electricity Demand Reduction Pilot Scheme – participant handbook.

Interconnection

144. EU legislation requires Member States to co-operate in order to enable an adequate level of cross-border interconnector capacity, including through new interconnection.
145. Within this context, Ofgem has introduced the cap and floor regime aimed at supporting merchant interconnector investments and to guarantee to developers a regulated return on investment (see for instance the cap and floor regime for near term interconnector investment,²³⁴ first developed in 2014 for project NEMO as the proposed interconnector between Belgium and Great Britain), and the possibility for Ofgem to grant exemptions from certain regulatory requirements allowing developers to increase the safeguards for their investment.
146. Great Britain's electricity market currently has 4GW of interconnector capacity (2GW to France, 1GW to the Netherlands, 500MW to Northern Ireland and 500MW to the Republic of Ireland). Further interconnector capacity is currently under development.

Gas

147. As with electricity, certain mechanisms are in place in order to prevent imbalances on the gas network system and to promote security of supply and safety. These include (a) imbalance charges that incentivise shippers to balance supply and demand, and to deliver secure supplies; (b) NGG's powers (through its transmission arm, National Grid Gas Transmission) to take actions to balance the market, as operator of the national transmission system (NTS); and (c) access to a range of flexible sources of gas, including flexible import capacity with other EU countries and the global liquefied natural gas (LNG) market. In addition, unlike electricity, gas can be physically stored to provide an additional source of supply in times of high demand (such as in winter).

Balancing actions

148. As transmission system operator, NGG is responsible for ensuring the stability of the NTS.²³⁵ The UNC industry code²³⁶ defines the rights and

²³⁴ See Ofgem's decision to roll out a cap and floor regime to near-term electricity interconnectors, 6 August 2014.

²³⁵ UNC Transportation Principal Document, section D. Balance within the NTS is also furthered through secondary obligations placed upon NGG to sell capacity at each of the system's entry points and to administer the 'capacity trading' process (the buying and selling of rights to move gas through the pipelines of a gas transporter).

²³⁶ See paragraph 48.

responsibilities for users of the NTS, including the obligation on transporters, shippers and suppliers to inform NGG of the forecasted quantities of gas for delivery to, and offtake from, the NTS each day, so as to enable shippers and National Grid Gas Transmission to plan and carry out appropriate balancing actions.

149. NGG has a variety of balancing tools at its disposal, including the following:
- (a) Buying or selling gas on a commodity market. NGG and users of the NTS may trade gas via an electronic trading system (currently operated by ICE Endex)²³⁷ in order to maintain the stability of the system. Balancing actions taken by NGG-set imbalance charges. Shippers who are out of balance face the marginal cost of NGG's actions, and so are incentivised to balance their position in the wholesale market.
 - (b) Use of its operating margins. The UNC obligates NGG as transmission system operator to maintain an operating margin in the event of an operating incident such as a large change in demand forecast, a sudden loss of offshore suppliers, or a compressor breakdown.²³⁸ In doing so, NGG must enter into 'Operating Margins Capacity Arrangements' and 'Operating Margins Gas Delivery Arrangements'. Under these arrangements, NGG may withdraw capacity from a storage facility (see paragraphs 152 to 154) or may require shippers or suppliers of non-domestic customers²³⁹ to increase delivery or reduce offtake pursuant to the arrangements made with users of the NTS.
 - (c) Local action within the NTS. NGG may take local actions such as interrupting the provision of gas to large industrial customers that are 'interruptible supply points'²⁴⁰ or using LNG storage facilities designated for transmission support.
 - (d) Recourse to 'Emergency Steps'.²⁴¹ When circumstances have resulted in, or give rise to a significant risk of, a loss of pressure in the system, NGG must take action pursuant to the UNC²⁴² and the Network Emergency Co-ordinator's Safety Case.²⁴³ Ofgem recently concluded a Significant Code

²³⁷ ICE Endex's trading platform was adopted pursuant to Standard Special Condition A11 and Special Condition C6 of NGG's gas transporter licence.

²³⁸ See section K of the Transportation Principal Document of the UNC.

²³⁹ Gas supply SLC 16.

²⁴⁰ Section G of the Transportation Principal Document of the UNC.

²⁴¹ As defined by section Q, paragraph 1.5.1 of the Transportation Principal Document of the UNC.

²⁴² Section Q of the Transportation Principal Document of the UNC. Gas transporters and shippers are also obligated by the same section to take specified remedial action.

²⁴³ Prepared by National Grid pursuant to section 3 of the Gas Safety (Management) Regulations 1996.

Review of the UNC with the aim of sharpening balancing incentives for shippers to enhance security of supply.²⁴⁴

Interconnection

150. To increase connection between Great Britain and the rest of the internal market, an obligation has been placed by Ofgem on NGG within its gas transporter licence to 'build sufficient cross-border capacity to integrate European transmission infrastructure'.²⁴⁵
151. Import capacity has risen considerably over the past 15 years. The current main sources of gas imports into Great Britain are the gas interconnectors (linking to Belgium and the Netherlands) and pipelines (linking to Norway) that connect the NTS to Continental Europe. Alternatively, LNG arrives into Great Britain through four terminals. Ofgem regulates gas interconnectors under the Gas Interconnectors SLCs.²⁴⁶ LNG facilities operate under a regulated third party access regime, as set out under the third package.²⁴⁷ As regards pipelines other than the interconnectors with Belgium and the Netherlands, these are governed principally by the UK/Norway Framework Agreement.

Physical storage

152. Physical storage of gas is subject to requirements for legal and operational independence (from any gas transporter companies within the same corporate group)²⁴⁸ and allowing for third party access.²⁴⁹

²⁴⁴ See Ofgem Gas Security of Supply Significant Code Review conclusions dated 23 September 2014. The major conclusions of the Supply Significant Code Review were a reform of the emergency cash-out arrangements (intended to be implemented through changes to section Q of the UNC, the introduction of new gas supply SLC 19D and gas shipper SLC 15A) and new Special Condition 8I in NGG's transporter licence requiring NGG to develop a 'demand-side response mechanism.'

²⁴⁵ Standard Special Condition B3.

²⁴⁶ Including mandated third party access (Standard Condition 11) and a prohibition on discrimination and cross-subsidies (Standard Condition 20). See also section 5 of GA86.

²⁴⁷ However, all four terminals (Isle of Grain, South Hook, Dragon and Teeside Gasport) are exempt from regulated third party access requirements, as permitted under the Gas Act and the Gas Directive.

²⁴⁸ Section 8R(4) GA86 (introduced by Directive 2009/73/EC, Article 15) mandates that companies which operate storage facilities in Great Britain refrain from arranging with gas transporters to transport gas through their networks as well as from producing, supplying, or selling gas, unless a minor facilities exception applies. Parent companies who own subsidiaries that operate storage facilities must permit those subsidiaries to operate independently.

²⁴⁹ Sections 19B(8), (11) and (12) of the GA86 (introduced by EC Regulation 715/2009, Articles 15 and 19) require storage facilities to publish their commercial conditions annually and to ensure that those conditions do not discriminate between customers. In the event that Ofgem determines a storage facility owner has discriminated against a customer it has the power to dictate the commercial terms upon which the storage facility owner must provide storage services to that customer. In addition, in August 2003 the Competition Commission subjected Centrica's 2003 acquisition of the Rough Storage Facility (the largest in the UK) to a series of strict undertakings that were slightly revised upon review in 2012. The UNC governs the usage of the National Grid LNG storage facility (UNC Transportation Principal Document, section Z).

153. In general, the NTS is connected to three types of storage facility, which together form the Great Britain gas storage system: (a) LNG storage facilities, (b) salt cavities, and (c) depleted gas fields.²⁵⁰
154. In general, gas storage has three principal functions: (a) to help gas shippers better match supply to demand throughout the year;²⁵¹ (b) to provide NGG with an operating margin as per its regulatory obligation;²⁵² and (c) to support the NTS in the supply of gas to high-demand areas.²⁵³ This, in turn, enables gas transporters to fulfil the obligation placed on them by the UNC to ensure that their respective networks can cope with the so-called 1-in-20 peak day.²⁵⁴ As a further prudential measure, NGG publishes daily information on storage stocks to help gas shippers understand and take any responsive action that may be requested. Storage competes through the wholesale market with other sources of flexibility to meet system needs for balancing supply and demand.

Other key legislative and regulatory changes since 2009

155. In addition to the legislative and regulatory measures that have been introduced principally to achieve liberalisation, environmental and climate change targets, and/or security of supply objectives outlined above, the UK government and Ofgem have introduced the following other key legislative and regulatory changes since 2009:
- (a) Following the Energy Supply Probe in 2008/09, Ofgem introduced a number of conditions into domestic suppliers' standard licences, including a general prohibition on discriminatory pricing, with a view to addressing aspects of the energy supply markets that were identified as not working well for domestic customers.
 - (b) The EA10, which introduced new powers for the Secretary of State to introduce certain licence conditions, pursuant to which the Secretary of State introduced the transmission constraint licence condition.

²⁵⁰ National Grid LNG Storage, a subsidiary of National Grid, operates the LNG storage facilities according to terms set by the UNC. The salt fields and depleted gas fields are run by independent third parties.

²⁵¹ This is significant as a gas shipper who is short of gas on a peak day will be exposed to potentially very high 'cash-out' prices.

²⁵² See above.

²⁵³ The UNC designates one LNG facility, Avonmouth LNG, for this purpose. The UNC requires that the storage stock at this facility is kept at sufficient levels for it to operate in the transmission support role throughout the winter.

²⁵⁴ This concept represents the peak demand that can be expected on a single day in twenty years and is a 'Supply Standard' set by Article 8 of EU Regulation 994/2010. See section O of UNC Transportation Principal Document.

- (c) The RMR commenced by Ofgem in late 2010, following which Ofgem introduced (largely in 2013) further changes to energy suppliers' licences, including limits on the number of tariffs that suppliers can offer to domestic customers, with a view to improving the transparency and fairness of suppliers' dealings with customers.
- (d) Certain measures introduced by the UK government to achieve social objectives.
- (e) Liquidity reforms to the electricity market by Ofgem, including a mandatory market-making obligation on certain generation companies, with a view to increasing liquidity.
- (f) The Energy Act 2013 (EA13), which gave further powers to the Secretary of State to make changes to licence conditions and industry codes.
- (g) The Enterprise and Regulatory Reform Act 2013, which requires Ofgem to consider taking enforcement action under the Competition Act 1998 before taking enforcement action under the GA86 or EA89.

156. Further details concerning the above changes are set out below.

Energy Supply Probe

157. In 2008, Ofgem conducted its first comprehensive review of the retail energy sector since liberalisation due to its concerns over the status of consumers given the trend of sharply rising energy prices worldwide.²⁵⁵
158. Following its review of whether the energy markets in Great Britain were working well, through the Energy Supply Probe in 2008, Ofgem introduced in 2009 the following new conditions into domestic supply SLCs²⁵⁶ that were aimed at addressing concerns over unjustified price differentials or to promote competition and consumer engagement. These were implemented between September 2009 and July 2010 and require domestic suppliers:
- (a) to make any difference in the terms and conditions offered to domestic customers in respect of different payment methods to be cost reflective;²⁵⁷

²⁵⁵ As support for these concerns. Ofgem cited record increases in typical household energy bills and consequent increases in average consumer debt levels and disconnection rates as well as rising prices across the economy. Ofgem Energy Supply Probe – Initial Findings Report, 1.1.

²⁵⁶ The Energy Supply Probe introduced supply SLCs 7A, 19A, 25A and 31A, and amended supply SLCs 14, 23, 25 and 27 for gas and electricity.

²⁵⁷ Gas and electricity supply SLC 27.2A.

- (b) not to unduly discriminate in any terms and conditions offered to domestic customers;²⁵⁸
- (c) to notify microbusinesses, in plain and intelligible language, of their contractual and renewal terms (including a termination notice period of no longer than 90 days);²⁵⁹
- (d) to provide domestic customers with certain contractual information and minimum notice periods with respect to adverse unilateral variations to their contracts and contract termination following price increases;²⁶⁰
- (e) to abide by an overarching consumer protection objective when conducting their sales and marketing activities to domestic consumers, in addition to certain requirements with respect to face-to-face marketing (including doorstep sales);²⁶¹
- (f) to publish annual consolidated segmental statements that provide further information relating to the revenues, costs and profits of their supply and generation activities;²⁶²
- (g) not to prevent domestic customers switching without first offering customers debt, tariff and energy efficiency advice, in addition to other limitations;²⁶³ and
- (h) to provide domestic customers with tariff and annual consumption information, including 12-month projections, on each bill or statement of account, as well as an annual statement with further specified information concerning tariff options.²⁶⁴

²⁵⁸ Gas and electricity supply SLC 25A. This prohibition was included in gas and electricity supply SLCs until 31 July 2012 and applied only to suppliers with more than 50,000 domestic customers. Having consulted on extending gas and electricity supply SLC 25A in July 2012, Ofgem decided on 26 October 2012 not to re-insert SLC 25A on the basis that whilst 'this condition has been successful in significantly reducing the difference between 'in-area' and 'out-of-area' prices' from over £30 to around £13 in January 2011, per customer, per year, '[Ofgem's] RMR package, if implemented, would provide greater protection for incumbent customers [than SLC 25A]'. See Ofgem's letter to holders of gas and electricity supply licences, 26 October 2012, which noted that Ofgem 'would therefore expect suppliers to continue to have regard to the spirit of our [Energy Supply Probe and Retail Market Review] proposals and their own individual voluntary commitments when considering price strategies, particularly where they may differ between out-of-area and in-area customers'. Ofgem circulated a subsequent letter to all domestic suppliers, consumer representatives and other interested parties on 18 December 2014 noting that its RMR (see below) proposals make the market simpler, clearer and fairer, and emphasising that (a) SLC 25A is no longer in effect, and (b) Ofgem is not considering reintroducing it.

²⁵⁹ Gas and electricity supply SLC 7A.

²⁶⁰ Gas and electricity supply SLC 23.

²⁶¹ Gas and electricity supply SLC 25. Since its implementation, Ofgem has taken enforcement action and imposed fines on EDF, SSE, Scottish Power and E.ON in relation to doorstep selling. Ofgem has also taken enforcement action and agreed a settlement payment with RWE npower and British Gas regarding doorstep selling or other face-to-face marketing.

²⁶² Gas and electricity supply SLC 19A.

²⁶³ Gas and electricity supply SLC 14.

²⁶⁴ Gas and electricity supply SLC 31A.

Energy Act 2010

159. In addition to the measures that were introduced through the EA10 to achieve the objectives set out in the two Directives of the third package (see paragraph 29), the EA10²⁶⁵ also gave new powers to the Secretary of State. These powers included, among other things, powers to: (a) adjust charges for energy which disadvantage one group of customers compared to another,²⁶⁶ and (b) modify electricity generation licences, codes, and other industry documentation in order to prevent generators from exploiting periods of transmission constraint²⁶⁷ (this power was complementary to applicable competition laws and the subsequent laws preventing the manipulation of the wholesale electricity market²⁶⁸).²⁶⁹

Retail Market Review

160. In 2010 and 2011 Ofgem carried out a further review of whether the ‘retail market’ for the supply of energy was working effectively for consumers (RMR), following which it introduced certain additional changes intended to make the retail energy market clearer and fairer for consumers. These changes included the following:

- (a) With effect from August 2013, new standards of conduct²⁷⁰ for suppliers when dealing with consumers, requiring them to behave in a fair, honest, transparent, appropriate and professional manner, provide full and

²⁶⁵ The two principal thrusts of the EA10 were to make provision for carbon capture and storage and decarbonisation (Part 1 of the Act) and to reduce fuel poverty, with new powers for the Secretary of State to introduce relevant schemes (Part 2 of the Act) (under which powers were subsequently made the Warm Home Discount Regulations 2011 (SI 2011/1033).

²⁶⁶ Section 26 EA10. By section 25 EA10, the Secretary of State was also afforded the power to modify licence conditions for the purpose of making requirements as to notice and other information to be given by suppliers to domestic customers about unilateral changes to their charges or terms and conditions of supply. This power was subject to a three-year sunset clause, which expired on 6 June 2013.

²⁶⁷ The power and any modifications made under it are subject to a five-year sunset clause, which expires on 15 July 2017. It was exercised to introduce generation SLC 20, the Transmission Constraint Licence Condition. This is a licence condition to limit the behaviour of electricity generators during periods when there is insufficient capacity to transmit electricity from where it is generated to where the demand is. The introduction of the Transmission Constraint Licence Condition followed an investigation in April 2008 by Ofgem under the Competition Act 1998 into Scottish Power and SSE regarding alleged market manipulation and exploitation of market conditions arising from constraints between Scotland, and England and Wales. The investigation was closed in March 2009.

²⁶⁸ Regulation (EU) No 1227/2011 on Energy Market Integrity and Transparency which introduced a consistent EU-wide framework for prohibiting market manipulation, attempted market manipulation and insider trading in wholesale energy markets; monitoring wholesale energy; and providing for enforcement and sanctioning of breaches by national regulators, including Ofgem. Other European measures designed to prevent market manipulation and which may apply to trades related to wholesale energy electricity and gas products include the European Market Infrastructure Regulation, Regulation (EU) No 648/2012, the Markets in Financial Instruments Regulation, Regulation (EU) No 600/2014, and the anticipated second Markets in Financial Instruments Directive, COM (2011) 656.

²⁶⁹ See page 6 of the [Government response to the consultation on the Transmission Constraint Licence Condition](#).

²⁷⁰ Introduced as supply SLC 25C.

accurate information in plain language and operate straight forward, prompt, comprehensive and transparent processes.

- (b) With effect from October 2013, new consumer protection rules concerning fixed-term contracts and 'dead tariffs'.²⁷¹
- (c) With effect from December 2013, restrictions on the number and complexity of tariffs that can be offered to consumers (the four tariff rule)²⁷² and a general prohibition on granting discounts to customers.²⁷³
- (d) With effect from March 2014, requirements on clearer information to be provided to consumers regularly concerning the cheapest tariff offered by the relevant supplier.²⁷⁴
- (e) With effect from June 2014, requiring consumers on dead tariffs to be switched to the relevant supplier's cheapest variable rate.²⁷⁵

Measures relating to fuel poverty

161. In order to reduce fuel poverty, the UK government has set up two electricity rebate programmes under which suppliers must provide direct or indirect support to eligible customers. Ofgem administers these on behalf of DECC.
162. The two programmes are:
- (a) the Warm Home Discount, which came into force on 1 April 2011 and is currently scheduled to operate until 31 March 2016,²⁷⁶ requires large domestic electricity suppliers (ie which have more than 250,000 domestic customers on 31 December of the previous year)²⁷⁷ to provide approximately £1.13 billion of direct and indirect support arrangements to 'fuel-poor' customers over the first four years.²⁷⁸ The UK government decided during the 2013 Spending Round to extend the scheme until 2016, and is

²⁷¹ Evergreen tariffs that are no longer available to new consumers. Gas and electricity supply SLCs 22C and 22D.

²⁷² Gas and electricity supply SLCs 22A and 22B.

²⁷³ In this context, discounts are broadly defined to include any form of payment, saving, rebate, benefit or reward (financial or otherwise) to customers. Narrow exceptions permit suppliers to offer, for example, a dual-fuel discount or an online account management discount. Ofgem has also granted five derogations to the general prohibition.

²⁷⁴ Gas and electricity supply SLCs 31A, 31B and 31E.

²⁷⁵ Gas and electricity supply SLC 22D.

²⁷⁶ [The Warm Home Discount Regulations 2011](#), adopted on the basis of Part 2 and section 31 EA10 for the period 2011-2014.

²⁷⁷ Section 5 of [the Warm Home Discount Regulations 2011](#).

²⁷⁸ DECC has identified 'fuel poor' customers as including a core group of eligible customers among domestic customers who receive, or are the partner of someone who receives, a state pension credit, and who are in or at risk of fuel poverty (Part 3, sections 6(2)(a) and (b)) of the Warm Home Discount Regulations 2011). In addition, certain further categories of 'non-core' customers qualify as fuel-poor (Part 4 of the Warm Home Discount Regulations 2011).

currently proposing to set a target of £320 million support for the period 2015/16; and

- (b) the Government Electricity Rebate, implemented through a licence modification,²⁷⁹ is a partial refund on the cost of the UK government's environmental policies to domestic electricity customers. From 3 October 2014, it obligates suppliers to rebate annually £12 on electricity bills for the next two years, worth a total of £620 million. The UK government will reimburse suppliers for the Government Electricity Rebate's they deliver to their eligible customers (namely, each single domestic household).

Electricity market liquidity reforms

163. In January 2014, Ofgem issued a decision letter on its wholesale power market liquidity reforms.²⁸⁰ As part of those reforms, in March 2014, Ofgem introduced a new special condition²⁸¹ (the Secure and Promote licence condition) into the generation licences of the eight largest electricity generating companies.²⁸² The special licence condition was intended to improve access to the wholesale electricity market.
164. One of the three elements of the Secure and Promote condition was the requirement imposed on the eight generating companies to comply with Supplier Market Access rules,²⁸³ which operate as minimum standards when such companies negotiate electricity trading agreements. These rules include (a) responding to trading requests from any 'eligible supplier'; (b) ensuring that any credit and collateral requirements offered to small suppliers are transparent and proportionately reflect the risks of trading with such counterparties; (c) limiting the 'clip size' (the contract volume) that can be traded to a maximum of 10MW, and requiring small clip sizes to be offered; and (d) offering fair and transparent prices that reflect those available in the wholesale market.
165. A second element of the Secure and Promote licence condition was the introduction of a market-making obligation (requiring the making of offers to buy and sell up to a net volume of 30MW for a particular product (eg baseload

²⁷⁹ [Decision to modify the standard conditions of the electricity supply licence in order to enable the delivery of the Government Electricity Rebate.](#)

²⁸⁰ Ofgem, [Wholesale power market liquidity: decision letter](#), 23 January 2014.

²⁸¹ Generation Special Licence Condition AA.

²⁸² Centrica, Drax, EDF, E.ON, GDF Suez, RWE npower, SSE and Scottish Power.

²⁸³ See section 3 of Ofgem's [Consultation on the Secure and Promote Condition](#).

or peak) on Centrica, EDF, E.ON, RWE npower, SSE and Scottish Power for two hour-long windows each day.²⁸⁴

166. The third key element consisted of reporting requirements, obliging licensees subject to the Secure and Promote condition to provide regular reports to Ofgem.²⁸⁵

Energy Act 2013

167. The EA13 created the legislative framework under which the government's EMR could be implemented.²⁸⁶ As well as measures directly providing for the establishment and operation of CfDs, the Capacity Market and the Emissions Performance Standard, powers were afforded to the Secretary of State to amend electricity generation, transmission, distribution and supply licence conditions and related documents and agreements (ie industry codes) for specific purposes.²⁸⁷
168. The EA13 also introduced further consumer protection measures.

Enterprise and Regulatory Reform Act 2013

169. As part of an increased focus on the concurrent exercise of investigation powers under the Competition Act 1998, the Enterprise and Regulatory Reform Act 2013 required Ofgem to consider taking action pursuant to its concurrent powers under the Competition Act 1998 before exercising taking action pursuant to its enforcement powers under the GA86 or EA89 (therefore reinforcing the existing obligations in the GA86 and EA89 not to impose a penalty for breach of a licence condition if it is more appropriate to proceed under the Competition Act 1998).

²⁸⁴ See section 4 of the Secure and Promote consultation – *ibid.*

²⁸⁵ See section 5 of the Secure and Promote consultation – *ibid.*

²⁸⁶ See further below.

²⁸⁷ By virtue of section 64 of the EA13, any modifications under these powers are subject to the negative resolution procedure in Parliament, under which draft measures are laid before Parliament and, unless within 40 days either the House of Commons or the House of Lords resolves not to approve the draft, the Secretary of State may proceed with the modifications. The modification power in respect of CfDs is also subject to an explicit duty on the Secretary of State to consult Scottish and Welsh ministers. See section 26(4) of the EA13.