An introductory **guide** to the

GB energy industry

2018

CHAPTER 06

ENERGY POLICY

ENERGY INNOVATION CENTRE

CATAPULT Energy Systems

CORNWALL INSIGHT
CREATING CLARITY

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6.1 The role of government

The strategic direction of the UK energy sector is to a large extent set by government policy.

Department for Business, Energy & Industrial Strategy

The Department of Business, Energy and Industrial Strategy (BEIS) is the government department that works to make sure the UK has secure, clean, affordable energy supplies see next section. BEIS is responsible for setting energy policy and energy security. The department makes sure UK businesses and households have secure supplies of energy for light and power, heat and transport.

The department is comprised of different ranks of ministers with responsibility for different areas of energy policy.

Legislation passed through Parliament gives these ministers powers to set the framework in which the energy sector operates. For example, the Energy Act 2013 gave ministers the power to establish key mechanisms to ensure decarbonisation and energy security in the electricity sector by establishing the Capacity Market and Contracts for Difference regime.

Some other government departments hold responsibility over some policy areas that affect the energy sector. For example, the Treasury controls the spending priorities of the government more broadly, while emissions regulations (e.g. for power stations) are the remit of the Department for Environment Food & Rural Affairs (Defra). The enforcement of many of the rules and regulations that govern how the energy sector operates is the responsibility of a non-ministerial department, the Office of Gas and Electricity Markets (Ofgem) see section 2.

6.2 Historic role of the trilemma

Since the late 1990s energy policy has been framed as the pursuit of successfully meeting three policy objectives at once, in what is commonly termed in the industry as the trilemma.

The three elements are:

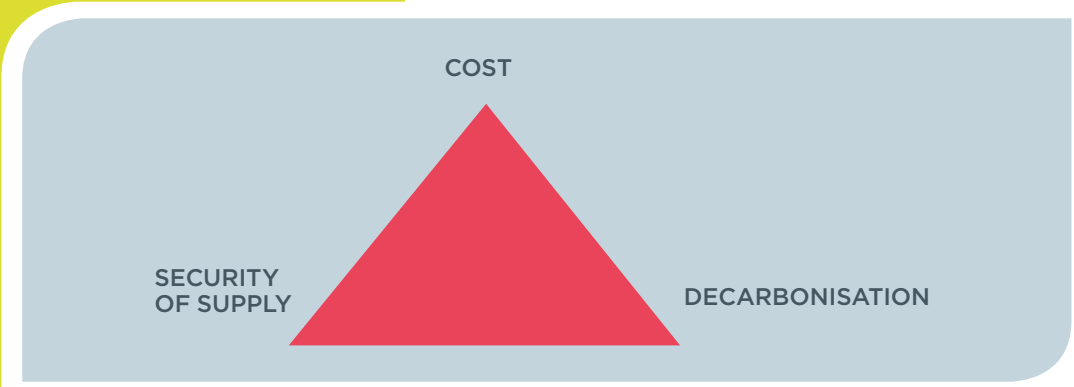
— **Security of supply:** it is essential that at all times the energy needs of homes and businesses are met. To that end the government will always look to guarantee energy security

— **Cost:** policy makers will always try to ensure that the cost of energy is affordable. This has been the case in recent years as price rises have seen energy bills become a key political battleground and the focus of intense media scrutiny

— **Decarbonisation:** the UK has binding emissions reduction targets, as set out in the Climate Change Act 2008, to combat climate change – including an 80% reduction on greenhouse gas emissions (from a 1990 baseline) by 2050. The independent Committee on Climate Change advises government of the most cost effective ways to meet this target, much of which flows through to energy policy.

Each policy choice can come with trade-offs. For example, paying old coal-fired power stations to remain available, as the government does through its Capacity Market (see below), may mean enhanced energy security, but adds a cost to consumer bills and could compromise decarbonisation objectives. As well as the traditional three objectives of the trilemma, policy makers have also recently focused on priorities like innovation and the economic benefits of energy sector investment.

FIGURE 11: STYLISED ENERGY TRILEMMA



6.3 Overview of subsidies and support

To achieve the objectives of the trilemma, UK government has created a range of schemes to incentivise low-carbon electricity and heat deployment and also initiatives to ensure energy security. Some of the key schemes are detailed below.

6.3.1 Large scale low carbon

Renewables Obligation (RO) – The RO came into effect in 2002 in England, Wales and Scotland, followed by Northern Ireland in 2005. It places an obligation on UK electricity suppliers to source an increasing proportion of the electricity they supply from renewable sources. Renewables Obligation Certificates (ROCs) are issued to operators of accredited renewable generating stations for the eligible renewable electricity they generate. Generators can trade ROCs with other parties. ROCs are ultimately used by suppliers to demonstrate that they have met their obligation. The RO closed to all new generating capacity on 31 March 2017. However, many of the solar farms and wind farms deployed under the scheme will continue to receive support for years to come. In 2016-17 ROCs issued represented 65.2.1TWh of renewable generation, equivalent to 22.2% of the total electricity supplied in the UK.

Contracts for Difference (CfD) – Replacing the RO is the CfD scheme. Prospective projects are categorised as "established" or "less established" and then bid into an auction to win a contract. CfDs require generators to sell energy into the broader energy market as usual but, to reduce exposure to changing electricity prices, CfDs provide a variable top-up from the market price to a pre-agreed "strike price". At times where the market price exceeds the strike price, the generator is required to pay back the difference. This is designed to give investors certainty, but also protect consumers from over-payment. Introducing competition has seen a marked fall in prices. In the first CfD auction in 2015, offshore wind projects won agreements at a strike price of around £140/MWh. In the latest auction in 2017, offshore wind projects secured CfDs for £57.50/MWh (all in 2011-12 prices). The government has indicated it will run further CfD auctions in coming years, allocating up to £557mn in support.

6.3.2 Small scale low carbon

Feed-in Tariffs (FiTs) – FiTs are designed to incentivise uptake of smaller renewables installations (sub-5MW), like a solar panel on a domestic roof. FiT payments are made quarterly (at least) for the electricity an installation has generated and exported. Payments are made based on the generation meter reading submitted to an energy supplier. Certain energy suppliers (also known as FiTs licensees) handle FiTs scheme applications and will make the FiTs payments. Energy suppliers with more than 250,000 customers are required by law to be FiTs licensees. The government has signalled it intends to close this scheme to new installations in March 2019.

Renewable Heat Incentive (RHI) – Opened in 2014, the RHI is a government financial incentive to promote the use of renewable heat. People who join the scheme and stick to its rules receive quarterly payments for seven years for the amount of clean, green renewable heat it's estimated their system produces. The scheme is operated for both homes and businesses.

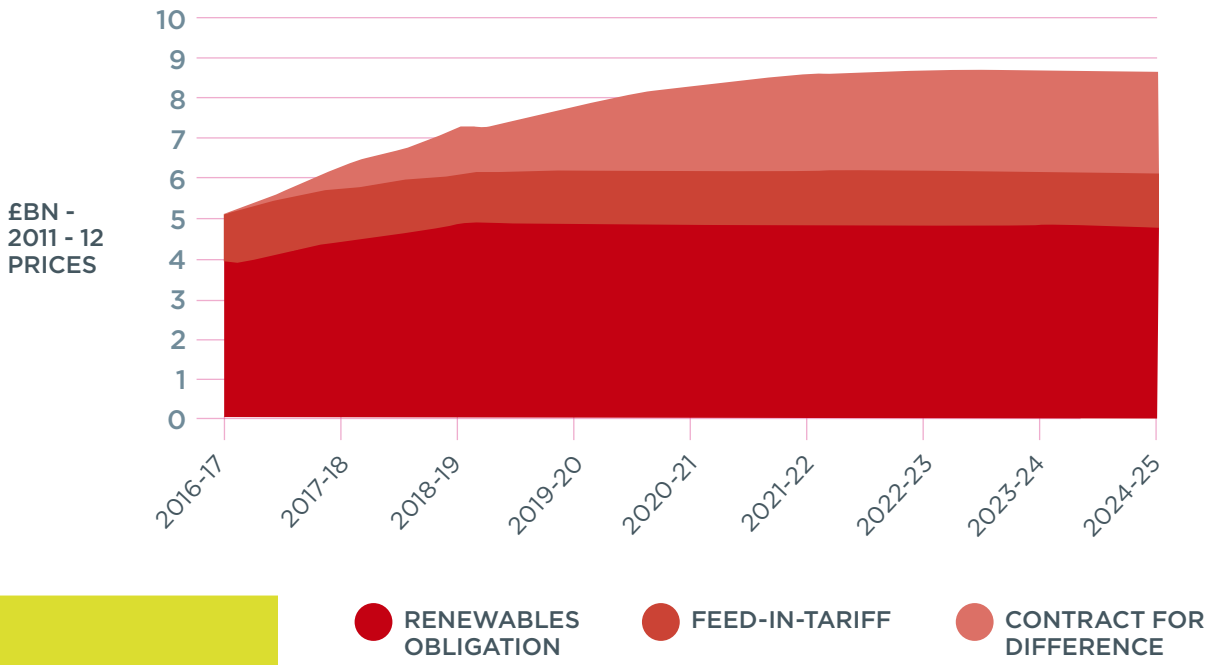
6.3.3 Low carbon cost controls

To balance the competing demands of decarbonisation and energy costs, the government introduced the Levy Control Framework (LCF) in 2011. The LCF sets an annual budget for projected costs of all BEIS's low carbon electricity levy-funded schemes until 2020-21, rising to £7.6bn in 2020-21 (2011-12 prices). The framework includes the costs of the RO, FiTs and CfDs. In July 2015 the Office of Budgetary Responsibility (OBR) published forecasts under the LCF to 2020-21 of £9.1 billion (2011-12 prices), showing that spend on renewable energy subsidy schemes was set to be higher than expected. Concerns over breaching the LCF prompted government to cut support levels or close several of the above schemes.

In the Autumn 2017 Budget the government announced its new Cost Control for low carbon spending. The Control sets out that there will be no new low carbon electricity levies until the burden of such costs is falling. On the basis of the current forecast, there will be no new low carbon electricity levies until 2025 (see Figure 12).

The new Control does not rule out future support for any technology. In addition, all existing contracts and commitments will be respected, including the commitment of up to £557 million for further CfD rounds.

FIGURE 12: LOW CARBON LEVIES FORECAST



Source: BEIS

6.4 Energy security

6.4.1 Capacity market

The capacity market is intended to ensure security of electricity supply by providing a payment for reliable sources of capacity, alongside their electricity revenues, to ensure they deliver energy when needed. This is intended to encourage the investment needed to replace older power stations and provide backup for more intermittent and inflexible low carbon generation sources. Potential capacity market participants can bid for contracts in auctions held every four years (so called T-4) ahead of the delivery date. Supplementary auctions are held a year ahead of delivery date (so called T-1). Longer term agreements (15 years) are available for new plant.

During the delivery year, capacity providers will receive monthly payments for their agreed obligation at the auction clearing price. Providers are expected to be available to respond with their agreed generation volumes or load reductions when called on by National Grid at times of system stress. The auction process is technology neutral and open to all generators and DSR providers not currently gaining subsidy i.e. both existing and new generators.

So far, auctions so far have seen variability in prices and in the providers coming forward. The success of gas and coal stations at auctions has received criticism on the grounds of decarbonisation aims and the subsidy of old plant. A number of smaller players have seen success in recent auctions including new build small scale gas engines, battery storage project and DSR providers. Many of these parties have used the 15-year contracts available as a basis for investment.

6.5 Current policy focus

The current government's policy focus for energy is encapsulated in its recent Clean Growth Strategy. This aims to ensure the UK is leading the world in cutting carbon emissions to combat climate change at the lowest possible cost, while also driving economic growth. Commitments in the strategy include:

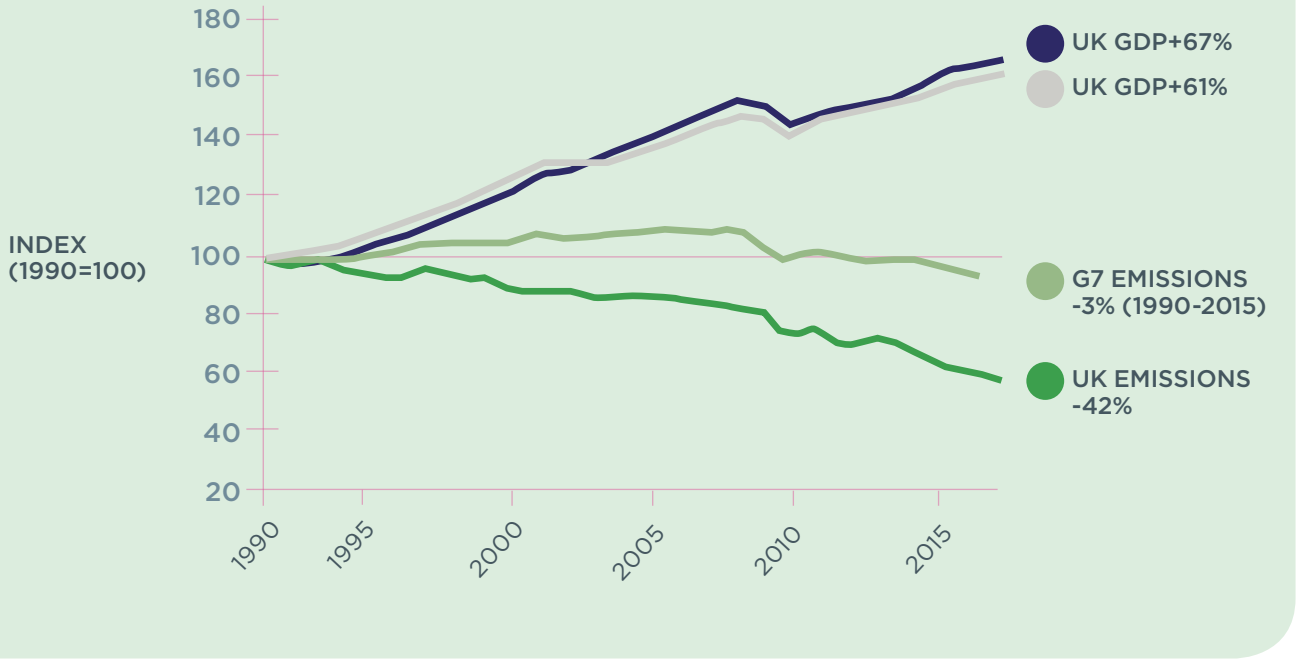
- **Support of around £3.6 billion of investment to upgrade the energy efficiency of around 1 million homes**
- **Up to £557 million for further Contract for Difference auctions**
- **Investment in low carbon heating by reforming the Renewable Heat Incentive, spending £4.5 billion to support innovative low carbon heat technologies in homes and businesses between 2016 and 2021, and**
- **Development of a package of measures to support businesses to improve their energy productivity, by at least 20% by 2030**

The policy focus is to continue the UK's success at decarbonising whilst maintaining economic growth (see Figure 13).

Through its Industrial Strategy the government has also placed a focus on innovations and technological development. A good example of this is its interest in electric vehicles (EVs). Through the Advanced Propulsion Centre government is investing £500 million over 10 years to 2023 to research, develop and industrialise new low carbon automotive technologies in the UK, with industry providing £500 million match funding for collaborative R&D projects. Legislation the government hasplaced before Parliament recently focuses on subjects as diverse as:

- **Extending its powers over the smart meter roll-out**
- **Ensuring a nuclear safeguarding regime remains in place post-Brexit**
- **Implementing a price cap in the domestic retail market, and**
- **Securing powers over the deployment of electric vehicle infrastructure.**

FIGURE 13: UK AND G7 ECONOMIC GROWTH AND EMISSIONS REDUCTION



Source: BEIS

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