

# British Energy Security Strategy

## Briefing Note

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### Overview

The Government has published the British Energy Security Strategy (BESS) which builds on the Prime Minister's Net Zero Strategy: Build Back Green (November 2021) and The Ten Point Plan for a Green Industrial Revolution (November 2020).

The Strategy comes in light of the rising global energy prices and sets Britain's ambitions and plans to increase the level of cleaner and affordable energy to increase independence, security and prosperity. The Strategy focuses on increasing the level of renewable and low-carbon energy technologies as well as aiming significantly to boost nuclear energy generation and displacing the non-renewable energy sources, including oil and natural gas. It also seeks to encourage a hydrogen sector which to date contributes a very minor part of energy capacity.

In his foreword the Prime Minister has said:

*"...if we're going to get prices down and keep them there for the long term, we need a flow of energy that is affordable, clean and above all, secure. We need a power supply that's made in Britain, for Britain – and that's what this plan is all about"*

Whilst the volatility in the global markets has led to the Government prioritising provision of financial assistance to families and businesses struggling with their bills, any such support is seen as a short term solution as it will increase debt and is reliant on taxpayers.

The BESS is intended to provide a long term solution to address and reduce our dependence on oil and gas. Whilst this may mean giving a second lease of life to extract oil and gas from the North Sea in the short term, the aim is to make the transition away from this towards fully renewable energy sources – against the backdrop of increasing electricity demand as fossil fuels are phased out of other sectors such as transport.

The Government's Ten Point Plan for a Green Industrial Revolution, together with the Net Zero Strategy and the Energy Strategy, is expected to drive £100 billion of private sector investment by 2030 into new British industries. The Government envisages the BESS supporting around 480,000 clean energy jobs by the end of the decade. The Ten Point Plan is stated already to have generated 68,000 green jobs and £22 billion in private investment.

By 2030, the Government's aim is that 95% of British electricity should be low-carbon; and by 2035, that the electricity system will have been decarbonised. This objective is subject to security of supply. This is a transition which is intended to cut dependence on imported oil and gas whilst delivering cleaner, cheaper power, lower energy bills and thousands of high wage, high skilled new jobs.

It is clear that the measures contained in the BESS are intended as a long term strategy. It eschews short term 'fixes' that could deliver more renewable capacity in the near future – such as active intervention to incentivise domestic solar or provide positive planning signals encouraging onshore wind and field scale solar projects.

The tables integral to the BESS do not set out either an explicit estimate of demand at either 2030 or 2050; nor do they prescribe a target for capacity to meet that demand - reflective of the continuing presumption that applications for permission need not demonstrate demand. Nevertheless, whilst nuclear in all forms is intended to be increased to a quarter of Britain's total capacity and hydrogen whilst playing a part is not expected to make more than a modest 10GW contribution, the nation will clearly be reliant on wind and solar for the vast majority of its energy needs from 2030 onwards.

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## The 10 Point Plan

The Plan focuses on increasing ambition in the following areas:

1. advancing offshore wind
2. driving the growth of low carbon hydrogen
3. delivering new and advanced nuclear power
4. accelerating the shift to zero emission vehicles
5. green public transport, cycling and walking
6. 'jet zero' and green ships
7. greener buildings
8. investing in carbon capture, usage and storage
9. protecting our natural environment
10. green finance and innovation

## Energy Efficiency

Improving efficiency to our homes is expected to reduce the amount of energy bills by around 20% as well as reduce dependency on foreign gas. The Plan highlights that by 2025, around 700,000 homes will be upgraded, and by 2050 all our buildings should be energy efficient with low carbon heating.

The Government proposes to provide support and cut costs to consumers who want to make improvements by:

- Zero-rating VAT for the next five years on the installation of energy saving materials
- Launching a Boiler Upgrade Scheme providing up to £450m
- "Rebalancing" the costs placed on energy bills

## Oil and Gas

Key measures to reduce reliance on fossil fuels, are to make use of capacity in the North Sea oil and gas reserves to store captured CO<sub>2</sub>; develop the use of hydrogen as an alternative to natural gas; and use our offshore expertise to support the offshore wind sector.

The North Sea is seen as continuing to be the foundation of our energy security albeit we will have reduced our gas consumption by over 40% by 2030.

## Renewables

The transition from fossil fuels to renewables will critically depend on how quickly we can roll out renewable energy sources. The BESS however appears to focus on longer term renewables schemes rather than promoting short term fixes to address immediate needs and particularly cost pressures arising from imported fossil fuels.

### *Offshore Wind*

The Government's ambition is to deliver up to 50GW by 2030, relying on established expertise in the North Sea oil and gas sector as well as the off shore renewables projects constructed to date. Capacity is expected to include up to 5GW of floating wind – the first such scheme in the world has been delivered off the coast of Aberdeenshire.

This is argued to be more than enough wind capacity to power every home in Britain at current levels of consumption and is around 50% of the projected capacity needs at 2050.

To achieve its aims, the Government intends to cut the process time for new schemes including strengthening the Renewable National Policy Statements to reflect the importance of energy security and net zero and by establishing a fast-track consenting route for priority cases. This will mean amending the Planning Act 2008 so that the relevant Secretary of State can set shorter examination timescales.

### *Onshore Wind*

Onshore wind is acknowledged to be one of the cheapest forms of renewable energy. The UK already has over 14GW of onshore wind, with a strong pipeline of future projects in Scotland. Further development will be supported by the inclusion of onshore wind in the latest and future rounds of the Contracts for Difference – the means by which energy schemes can be funded.

The Government says that it will improve the national network infrastructure and, in England, support new projects where there is strong local backing. It recognises that onshore wind can be controversial locally and states that its plans will prioritise putting local communities in



control. It will consult this year on developing local partnerships for a limited number of supportive communities who wish to host new onshore wind infrastructure in return for local benefits, including lower energy bills.

### **Solar and Other Technologies**

There is currently 14GW of solar capacity in the UK – everything from large scale projects to small scale rooftop schemes. The cost of solar has fallen by around 85 per cent over the past decade, and can be installed in just one day on a domestic roof. The Government expects a five-fold increase in deployment by 2035.

The BESS puts forward no active proposals to support or encourage further increases in the rate of solar deployment other than the expectation of still greater price competitiveness. It has however stated that whilst it will consult on amending planning rules to strengthen policy in favour of development on non-protected land it will seek to ensure that communities continue to have a say and environmental protections remain in place.

### **Nuclear**

Nuclear currently supplies 15% of our electricity. It provides constant source energy which complements intermittent renewables. Nuclear is seen as the only form of reliable, low carbon electricity generation which is proven at scale: the Government argues that it generates more than a hundred times as much power as a solar site of the same size.

The Government’s aim is to increase the proportion of nuclear energy up to 25% of total demand by 2050. It is committed to taking one new project forward in the current Parliament and two in the next. This commitment includes Small Modular Reactor schemes.

To back this up, the Government indicates that it will:

- Develop an overall spatial strategy for the long term by reviewing the eight designated nuclear sites: Hinkley, Sizewell, Heysham, Hartlepool, Bradwell, Wylfa, Oldbury and Moorside
- Launch a £120m Future Enabling Fund (first announced in the Comprehensive Spending Review)

- Set up the Great British Nuclear Vehicle this year and provide it with backing to support projects to get investment ready and through the construction phase
- Streamline the consenting and licencing regime

### **Hydrogen**

The BESS commits towards a hydrogen sector which it acknowledges is virtually no-existent at present. The objective is to:

- Double UK hydrogen production to up to 10GW by 2030, with at least half of this from electrolytic hydrogen
- Ensure that it is price competitive by 2025
- Create a business model for transportation and storage infrastructure which presently does not exist

### **Networks, Storage and Flexibility**

The BESS recognises that in order to deliver the strategy the Government will also need to:

1. anticipate need because planning ahead minimises cost and public disruption
2. match supply and demand so that minimal energy is wasted – which it terms hyper-flexibility

It is expected that a more responsive and better planned approach to energy delivery could bring down costs by up to £10 billion a year by 2050.

### **International Delivery**

The Government is also committed to working with international partners to main stable energy markets and prices. Partly this is to:

- counter any reliance on Russian energy by reinforcing ties with other sources of supply
- reinforce the efficiency of electrical interconnectors with our neighbours
- double the nation’s commitment to International Climate Finance – to £11.6billion over 5 years to help support other countries to make the same transition to clean, affordable, secure energy