

CBI response to the BEIS Committee Inquiry examining the outlook for future financing and investment in energy infrastructure in the UK.

The CBI welcomes the opportunity to contribute to this important inquiry from the BEIS Committee on the future of finance and investment in the UK's energy infrastructure. We are keen to highlight the importance of **Government and private sector collaboration on long-term, stable policy development and research and innovation to encourage finance and investment in a range of low-carbon technologies, reducing the overall cost of electricity and contributing to our domestic climate change targets.** The CBI is the UK's leading business organisation, speaking for some 190,000 businesses that together employ around a third of the private sector workforce. With offices across the UK as well as representation in Brussels, Washington, Beijing, and Delhi, the CBI communicates the British business voice around the world.

Response

How do recent investment decisions on nuclear and trends in low carbon investment affect the UK investment outlook for energy infrastructure?

- **Is there a case for changing the Government's current approach to delivering a low cost, low carbon energy system?**
- **How could the 'nuclear gap' be filled?**

1. The CBI welcomes the Government's continued commitment to decarbonising the power sector. Over the last decade, the Government's various policy frameworks have proved effective in bringing forward investment in new low-carbon generation using, for example the Contracts for Difference (CfD) framework both for renewable power and nuclear generation with Hinkley Point C. We believe that in order to provide a diverse, stable energy mix, the GB power system must continue to decarbonise using complementing sources of electricity including renewables, storage, interconnection and nuclear power.
2. The Government has made clear its support for new nuclear power, at the right cost, demonstrating it can be cost competitive with low-carbon alternatives and it has rightly identified an opportunity to reduce the cost of future new nuclear projects by implementing a different approach to nuclear financing. The CBI supports use of the Regulated Asset Base (RAB) model for future new nuclear project financing as it enables investment by a wider range of investors whilst still reducing the cost to consumers. We are also supportive of the funding being provided to new, innovative technologies such as Small Modular Reactors (SMRs) which have the potential to be cost-effective, innovative, Industrial Strategy-supporting technologies and we are keen to see the Government provide supportive policy frameworks to roll-out such technology in the UK.
3. Alongside renewable energy, the CBI believes new nuclear power is an important part of a low-carbon energy mix, helping to provide system stability as well as low-carbon generation, provided it can demonstrate cost-competitiveness with other low-carbon technologies. As such, we acknowledge the need to utilise diverse forms of low-carbon electricity generation to fill the 'nuclear gap'. For example the Offshore Wind Sector Deal has ambitions of 30GW by 2030,ⁱ but we do not believe this is sufficient to fill the gap alone or fully decarbonise the UK's electricity sector without other low-carbon generating capacity, including onshore wind, solar and electricity storage (battery, pumped hydro, hydrogen and others) which will have a particularly important role as we continue to pursue renewable technology at pace.
4. In addition to storage, gas-powered generation with Carbon Capture, Utilisation and Storage (CCUS) and hydrogen-based power have the ability to provide low-carbon baseload and fast-response power. The development of CCUS is also an important step towards the deployment of Negative Emissions Technologies (NETs) such as Bioenergy with Carbon Capture and Storage (BECCS) which is seen as vital to meeting climate targets agreed under the Paris Climate Accords.
5. The role of low-carbon gas fired electricity generation, as the demand for electricity increases, through to 2030 and perhaps thereafter likely needs a stable, attractive investment framework. Removal of state aid approval for the GB Capacity Market (CM) has increased risk and uncertainty in this market. As such, reinstating the CM as soon as possible must be a priority for the UK government. This is imperative for this coming winter but also for the coming decade as existing plant retires, to secure the energy transition.

6. Furthermore, as we decarbonise sectors such as transport and heat with increasingly electricity-based solutions, additional low-carbon generation will be required to meet any significant increase in domestic and business demand. The electricity grid will also need to continue to develop across the width and breadth of the UK to prepare for the demand of a fully decarbonised power system. The CBI welcomes the Committee on Climate Change (CCC) report on the decarbonisation of heat and is keen to see large-scale hydrogen trials as soon as the next two to three years in order to progress towards our long-term decarbonisation targets and prepare the electricity grid for change. On this subject, the UK requires substantial investment in energy efficiency to reach our goals. The National Infrastructure Commission's (NIC) National Infrastructure Assessment (NIA) also deemed energy efficiency a key factor in the successful delivery of a low-cost, low-carbon energy system which is why the CBI have called for a 10-year investment framework to encourage large-scale investment across domestic and business energy efficiency solutions.
7. In addition, there is a need to consider the effect of different technologies on system stability and bring forwards technologies which can contribute towards the stability of the electricity grid at both a regional and national level. These system needs include services such as frequency response, inertia, voltage control, and black start and have historically been provided by large thermal plant on the system. As we decarbonise, these system support services will become ever more important and valuable however they are currently not considered within the Government's framework for supporting energy infrastructure.
8. In this vein, it is important to note that the Government does not necessarily need to fundamentally change the way it approaches delivering a low-cost, low-carbon energy system, but rather it should review progress made to date to highlight gaps in certain policies and find viable solutions. For example, we have the Industrial Strategy which does not reference onshore wind or solar power. We have ambitious decarbonisation targets which have negatively impacted competition for some heavy industrial energy users. We have a suite of mechanisms in the form of Electricity Market Reform (EMR), which contains effective investment vehicles such as the CfD which, to date, have worked very well in delivering cost-competitive renewable technologies and the start of Hinkley Point C construction. We also have a reasonable degree of sighting of future CfD auctions which provides investor confidence and in particular encourages investment by supply chain companies in the UK.
9. Businesses do, however remain concerned that the short-term nature of some aspects of UK energy policy is having wide reaching impacts on prospective investment which can be seen in the small-scale Feed in Tariff (FIT) not yet being replaced. The CBI believes energy policy should be as long-term and consistent as possible with any changes driven by the needs of the changing market and development of technology rather than party politics. The same must be said regarding the current investment case for onshore wind and solar power in the UK. The CBI believes appropriately-sighted onshore wind must be provided with a route to market at the soonest opportunity not simply because it is the cheapest form of renewable generation, but because of the offering it provides to businesses within the supply chainⁱⁱ.
10. As such, whilst the Government's approach has worked in some areas, a review is necessary to ensure energy policies are long-term and remain fit for purpose moving forwards – for EMR, the 5-year review helped achieve this. Furthermore, the Government must consider how it creates a credible roadmap towards increased climate neutrality ambition towards mid-century and what the ultimate cost will be to the consumer in light of future policy decisions.

It is important to highlight further potential impacts on future investment ambition in the UK's energy sector as it relates to political risk. The CBI remains concerned that the Labour Party's nationalisation plans for several sectors including energy networks may further decrease investor confidence. The degree of risk associated with nationalisation has called into question whether investors can rely on UK based contracts, whether such decisions will damage the UK's equity market and whether investors have confidence that their investments will be respected in the UK. The CBI believes nationalisation is the wrong answer to the right question of how we ensure our utilities, railways and postal services continue to deliver for value for consumers, which should be reconsidered.

How attractive is the UK energy sector for investment compared to other countries?

- **Are there particular technologies which are more – or less – attractive to investors under current arrangements?**

11. It is difficult to carry out a linear comparison between the UK and other countries in terms of energy sector investment. There are numerous external factors across borders which impact whether or not large multi-national businesses or financial markets choose to invest in one territory or another. Fundamentally, however, economic and political environments have huge impacts on investment decisions across sectors, including energy and the availability of fiscal and policy support tends to also play a vital role.
12. In the energy context, UK attractiveness is mixed. On the one hand we have successful examples of policy consistency which have helped to deliver significant large-scale investments resulting in deployment and lower-costs such as offshore wind in the CfD, with an expected £40bn investment expected until 2030. As noted above, EMR as a whole has also had a positive impact on the industry generally, as well as on the supply chain. On the other hand, the Government's decision to cancel its Carbon Capture and Storage (CCS) project was a major setback not just to those involved in its creation, but to investors who singled the UK out as a first mover in this technology space.
13. Negative investor sentiment around policy cancellations and removals cannot be understated. In some areas, the lack of stability in Government thinking and policy decision-making has not provided assurances on risk or return for investors who are keen to invest millions in new UK based technologies. The RE100 Initiative led by the Climate Group and CDPⁱⁱⁱ in their 2018 Annual Report further reiterated the ever-growing renewable investment community. But this community prioritises countries with stable and attractive policies towards all forms of renewable energy. We remain concerned that the UK will become an unattractive hub for investment if the Government cannot provide strong, long-term policy support across a range of technologies and investment mechanisms.
14. CCUS in the UK, however has made significant progress over the last 18 months and with the introduction of the newly appointed CCUS Taskforce aiming to deliver on the Government's CCUS Action Plan, this technology has the capability to deliver substantial emissions reductions throughout the power and heavy industrial sectors. Progress must be maintained, and support provided by an investible policy framework, but given the developments made to date (on BECCS too) and the importance of CCUS in global warming scenarios as presented in the IPCC 1.5C Special Report^{iv}, the UK has retained its advantage as a progressive technology developer in the climate change space which will be encouraging for future investors.
15. A key question remains as to whether or not hydrogen technology in the UK can be used at scale at cost parity with similar solutions. Given the uncertain nature of energy policy in the UK we may see hydrogen investment taking off internationally but not necessarily in the UK. Whilst we are not picking winners, when it comes to decarbonising heat there will have to be a solution or perhaps a selection of solutions which, in all likelihood will include hydrogen alongside electrification. This is also potentially the case for transport, specifically Heavy Goods Vehicles (HGVs) and other similar sized vehicles. Hydrogen may prove to be a low-carbon solution in this space and investment must be secured to trial and ultimately reduce the cost of hydrogen technology in the UK if we are to meet our decarbonisation targets. This must start with a plan for large-scale trials of hydrogen usage followed by robust policy frameworks. As the NIC rightly highlights, we need R&D investment now and early stage deployment very soon of new technologies, whether that is SMRs, CCUS or electrolyzers.

How has Government policy improved the UK energy investment environment over the last three years?

16. In some respects the UK Government's policy strategy has improved. We have the Clean Growth Strategy, Resources and Waste strategy, Industrial Decarbonisation Missions, CCUS Action plan, BECCS trialling, support for biogases to the grid among many more. This has positive impacts on the likelihood of investment as the Government has made clear their support around the UK for a range of new products and technologies to thrive – first mover advantage in a lot of these areas of course plays a role. Having said this however and as already discussed, the CBI has ongoing concerns around the short-term, unstable nature of energy policy in the UK and the impact this has on the UK's investment attractiveness. For example, we do not have an investible policy framework for CCUS, hydrogen, or biogases as of yet which reiterates the uncertainty of energy policy in the UK. We also still do not have UK Government support for onshore wind which must be changed.

17. We believe effective policy requires open consideration of the opportunities and drawbacks of different energy sources. The most effective policies will be transparent, predictable, based on cost/benefit analysis, and should allow market prices and open competition to determine the solutions and investments necessary to achieve goals at the lowest cost. We also cannot forget that the most attractive environment for investment is one within which long-term clarity of the regulatory landscape is provided. The uncertain future of the Climate Change Levy is a good example of a policy that can have a detrimental impact on investor confidence. We also remain concerned about the pace of change and the influx of new regulatory changes from Ofgem over a short period of time, without a long-term strategic plan in line with the Government's visions.
18. The CBI have called for long-term policy frameworks over a range of areas in line with the low-carbon transition, including long-term sighting of the CfD auctions which we now have. We have called for a 10-year policy framework for domestic and business energy efficiency and policies to support the roll-out of robust charging infrastructure for low-carbon mobility. The Government must ensure it delivers on these policy asks if we are to make progress towards our mid-century domestic targets.

What types of investor can we expect to finance future UK energy infrastructure?

- **What are their criteria for investment, including on risks and returns?**
- **Does it matter if investors for specific technologies are largely from overseas?**

19. The infrastructure investor landscape displays a range of requirements on risk and return in infrastructure investment. However an important and deep pool of potential investment is provided by pension funds seeking infrastructure investments. Typically these investors require low risk and low volatility returns which are linked to inflation. They will also often require (or have a strong preference) that committed capital earns a yield for the duration of the investment (reducing appetite for assets that have long construction periods with no revenue stream).
20. Typically, these investors will seek a risk-allocation that does not expose them to risks that are beyond their influence (and exposing them to these risks will result in an inefficient pricing of those risks). For investments that exhibit remote probability but high impact risks, a form of targeted support that protects them from these tail risks can also be important. For certain projects (which can show a sufficiently low intrinsic risk profile), sharing risks between investors and end users and/or Government can also provide a more efficient financing arrangement as the reduction in investor risk leads to a significant reduction in the cost of finance and the benefit to end users of a reduction in prices more than offsets the small cost of increased risk.
21. We are aware of investors across a range of sectors including; oil and gas companies (important to consider given their future role in storing CO₂), gas transmission and distribution companies, power providers, aggregators, multi-national businesses, financial markets (if the risk is low) among others. It is important to note that whilst international investment is and will continue to be highly necessary in energy infrastructure, it will be vital to ensure a level of UK content in the supply chain. This will be important for job attractiveness and retention, local economic prosperity and the development of the UK Government's Industrial Strategy.

What role should the Government play in providing financial support and sharing risks for new energy infrastructure?

- **Are existing financing mechanisms, notably the Contracts for Difference, fit for purpose?**
- **Are there any practical issues, or potential unintended consequences, that could affect the feasibility of implementing alternative support models (such as a Regulated Asset Base)?**

22. As detailed above, we believe the allocation of infrastructure investment risks between the private sector, end users and with the Government should be determined depending on the project at hand. What remains fundamental is the need to determine what risk allocation provides optimal value for money for the end user and the Government should aim to develop financing frameworks to achieve this.
23. The RAB model for example could provide a more efficient financing solution for new nuclear investment by providing greater risk-sharing on construction (and other risks) and an allowance for revenue during construction. This financing model could enable pension funds to privately finance new nuclear power and drive a significant cost of capital reduction to the benefit of the end user through reduced prices.

24. The design of the framework should ensure that investors remain fully incentivised to deliver efficiently in both construction and operation. This could be possible with a RAB model, with the sharing of risk between consumers and investors meaning that investors retain an exposure to the risks they can influence and therefore an incentive to prevent the risks from materialising.
25. It is also important to reiterate the need for flexible finance options which suit a range of decarbonisation solutions from high capex, low opex generation to low capex, high opex generation. The Government, private sector end users must be prepared to support all variations and numerous technologies in order to maintain a low-carbon, secure, affordable supply of electricity and gas.

What further steps should the Government take to increase investor confidence in the UK energy sector?

26. To reiterate the main crux of our response, we believe the Government must consider reviewing the way in which it approaches introducing new energy policy in the UK. Short-term policies do not invite investor confidence and an unstable and uncertain political environment further stagnates investment. We urge the Government not to repeat their actions of 2015 and 2016 where CCS and the Zero Carbon Homes policies/funding (respectively) were cancelled at short notice.
27. In the forthcoming Energy White Paper we urge the Government to reaffirm its commitment to decarbonisation and to further encourage robust action on climate change via a positive response to the CCC's upcoming report on UK Net-Zero emissions. The Government must also demonstrate its commitment to facilitate and support further investment in a range of low-carbon solutions to decarbonise heat and roll-out low-carbon mobility options and to ensure the CfD regime continues on throughout the 2020s.

ⁱ BEIS, Industrial Strategy: Offshore Wind Sector Deal, March 2019

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786278/BEIS_Offshore_Wind_Single_Pages_web_optimised.pdf

ⁱⁱ BVG Associates; The Power of Onshore Wind, June 2018 <https://bvgassociates.com/the-power-of-onshore-wind/>

ⁱⁱⁱ RE100 Progress and Insights Annual Report, November 2018

https://www.theclimategroup.org/sites/default/files/downloads/re100_progress_and_insights_annual_report_november_2018.pdf

^{iv} IPCC Special Report Global Warming 1.5C, October 2018 <https://www.ipcc.ch/sr15/>