

# Energy UK Response – Contracts for Difference (CfD): amendments to the scheme 2020

29<sup>th</sup> May 2020

## About Energy UK

Energy UK is the trade association for the energy industry with over 100 members spanning every aspect of the energy sector – from established FTSE 100 companies right through to new, growing suppliers and generators, which now make up over half of our membership.

We represent the diverse nature of the UK's energy industry with our members delivering almost all (90%) of both the UK's power generation and energy supply for over 27 million UK homes as well as businesses.

The energy industry invests over £13.1bn annually, delivers around £85.6bn in economic activity through its supply chain and interaction with other sectors, and supports over 764,000 jobs in every corner of the country.

## Executive Summary

### A Success Story

Energy UK welcomes the opportunity to respond to the BEIS consultation on Contracts for Difference (CfD): proposed amendments to the scheme 2020. The two-way pay-as-clear CfD scheme is widely recognised as having been a successful tool for attracting investment in low-carbon electricity generation capacity and driving cost reduction in low-carbon technologies.

The third allocation round of CfDs saw record low prices for offshore wind in the UK, with the 5.5GW of capacity procured at £39.65/MWh and £41.61/MWh for projects that will commission around 2023 to 2025. These prices represent a 65% reduction in the cost of offshore wind since the first allocation round in 2015. This is a rate of price discovery that has far surpassed the expectations of forecasts from the first half of the decade, with the most ambitious pre-CfD predictions suggesting an offshore wind cost of £95/MWh by the early to mid-2020s<sup>1 2</sup>.

The AR3 prices were so low in fact that BEIS reported zero impact on the Monetary Budget due to the fact that the strike prices are below the forecast power market prices<sup>3</sup>. As a result, when the AR3 projects become operational, and if power prices develop in line with government forecasts, consumers can expect to pay up to £250m less per year than if the contracts had not been awarded.

### Fine-tuning CfDs

Energy UK welcomes a number of the proposals within the consultation. First and foremost, we firmly support the decision to reintroduce Pot 1 technologies for Allocation Round 4 (AR4). It is clear that these technologies will play a crucial role in decarbonising the power sector as part of the net zero

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<sup>1</sup> <https://bvgassociates.com/wp-content/uploads/2016/07/BVGA-RUK-Costs-and-benefits-1106-1.pdf>

<sup>2</sup> <https://spiral.imperial.ac.uk/bitstream/10044/1/12649/6/Great%20Expectations%20-%20The%20cost%20of%20offshore%20wind%20in%20UK%20waters.pdf>

<sup>3</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/838914/cfd-ar3-results-corrected-111019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/838914/cfd-ar3-results-corrected-111019.pdf)

challenge and deployment rates in recent years have shown that CfD support is needed to achieve the volumes required to satisfy the net zero target.

Work from the Committee on Climate Change and Vivid Economics has identified that the most cost-effective pathway to net zero emissions by 2050 would require up to 35GW of onshore wind<sup>45</sup>. In order to achieve this most cost effective pathway, then a minimum 4GW capacity cap will be required for AR4, or 2-3GW if auction frequency was to increase. We would also note that omission from AR2 and AR3 has not incentivised the level of offtake solutions, PPAs or fully merchant, to meet the required levels of build-out for net zero.

We also welcome the move from government to introduce floating offshore wind as a new technology for Allocation Round 4 (AR4). The proposal to define this technology separately from fixed-bottom offshore wind is key to enabling the price discovery of floating wind. We further support the move to create a dedicated pot for offshore wind that will not only help manage a technology with unique characteristics, but also bring welcome focus to conventional offshore wind as industry works towards the goal of 40GW by 2030.

A general theme of our response is the call for government to offer as much transparency and forward clarity as possible. On a number of occasions we call for the government to publish an overall procurement strategy for the CfD scheme, at least out to 2030. This strategy or roadmap would provide welcome clarity to investors and developers on the frequency of auctions, the amount of capacity that will need to be procured to satisfy a net zero pathway and the integration of CfD Units into the wider electricity system. In addition to this, we call for greater auction frequency to deliver a host of benefits that are outlined in our response to Q7.

Energy UK is aware that there is an upcoming Call for Evidence (CfE) on the CfD scheme that will look at the longer-term development of the scheme. We welcome this CfE and encourage government to ensure the content gives further consideration longer-term impacts of CfD policy on wholesale market liquidity and system flexibility.

#### Economic Recovery by Maintaining Momentum

The certainty given by the CfD scheme has been a key factor underpinning the cost reductions achieved by the UK offshore wind industry in recent years. To maintain momentum in offshore wind deployment and retain investor confidence, it is important that the scheme is maintained through the 2020s.

The fact that the results of AR3 had zero impact on the Monetary Budget implies that the contracted capacity is expected to be brought forward at zero cost to consumers. Given the impact that the COVID-19 pandemic has had on the UK economy, the opportunity to bring forward further low carbon capacity at zero cost to consumers is one that must be taken. Energy UK urges government to implement auction parameters that will deliver the maximum possible capacity in AR4 to stimulate regional job growth, local economies and foreign investment, all whilst maintaining progress against climate targets.

In the longer term, it is likely that both renewable support schemes and electricity market design will need to evolve. Changes should be developed in consultation with all stakeholders with as much advance notice as possible. This will enable both developers and investors to prepare for the changes while ensuring continuity in offshore wind deployment in the meantime.

Should you have any questions regarding this consultation response then please do not hesitate to get in touch via the details below.

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<sup>4</sup> <https://www.theccc.org.uk/publication/net-zero-technical-report/>

<sup>5</sup> [https://www.vivideconomics.com/wp-content/uploads/2019/08/Quantifying\\_the\\_Benefits\\_of-report-pdf](https://www.vivideconomics.com/wp-content/uploads/2019/08/Quantifying_the_Benefits_of-report-pdf)

## Response to Questions

### Community Support

1. How can the government better ensure that the local impacts and benefits of renewable energy developments are taken into account across the whole of GB?

Energy UK firmly believes that local communities should experience a net benefit from the installation of new energy infrastructure and we are keen to highlight all the different ways that renewable projects, in particular, provide to communities both local and distant. We agree that it is more important than ever to engage with and support local communities in the transition to net zero, and we therefore welcome the move from government to update existing community benefits and engagement guidance for onshore wind, jointly with developers and local communities.

Energy UK believes there is a need for a consistent approach to community benefit across Great Britain (GB). Our members also note that local environmental impacts are already addressed by the planning system and therefore should not be considered as part a community benefit assessment. Recent changes to the planning systems in Scotland and Northern Ireland for all types of developments exhibit best practice in terms of guidance for engagement with communities.

There should be a platform or opportunity for the local impacts and benefits of renewable energy developments to be shared nationally so that best practice, experience and guidance can be shared amongst the sector. As the energy sector continues to interact with other sectors, including that of transport, buildings, construction, heavy industry, there will be shared learnings for these sectors too.

2. What exemplifies 'best practice' when it comes to engaging with and supporting local communities on renewable energy developments? Examples of specific projects and/or developers would be welcomed.

To date, the policy focus for engagement with local communities has focused on onshore wind developments. Energy UK believes that consideration should be given to all new energy developments when promoting engagement with local communities and that the expectations for each technology should be proportionate to the scale of the local impacts.

3. How should the government update the existing community benefits and engagement guidance for onshore wind to reflect developments in best practice for engagement between developers and local communities?

Energy UK again calls for consistency in community benefits and engagement guidance for onshore wind across the UK. We do, however, acknowledge that different local circumstances can impact the appropriateness of certain guidance and therefore call for devolved administrations to be given flexibility to take account of such circumstances. We believe taking this approach will allow for wider deployment of technologies from wind to solar. Recent changes to the planning systems in Scotland and Northern Ireland for all types of developments exhibit best practice in terms of guidance for engagement with communities<sup>6</sup>.

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<sup>6</sup> <https://www.gov.scot/publications/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments/pages/4/>

4. Should the government consider creating a register of renewable energy developments in England that list available projects and associated community benefits?

Devolved administrations already track new renewable energy developments through voluntary registers. Industry has found the process of updating these registers workable to date, and therefore it would make sense to extend the practice to England. Energy UK believes that any national register should be simple and straightforward to ensure industry engagement. We believe that the principle use of the register should be to communicate the full range of options for community benefits that have been deployed. The register should not be used as a checklist of expectations for a new renewable energy development, as each will need a site-specific approach to community benefits.

The register should cover all technology categories, so that it includes all terrestrial renewable energy developments in England. The register should not be restricted to onshore wind alone.

### **Pot Structure**

5. The government welcomes views on whether, compared to maintaining the existing two pot structure, the proposed option of introducing a new Pot 3 for offshore wind is an effective means of ensuring value for money and achieving our decarbonisation and other objectives in the long term. We welcome the submission of supplementary evidence to support views on this.

Energy UK has no objection to a dedicated pot for offshore wind as it would bring a more welcome focus on the technology that is required to help industry reach the target of 40GW installed capacity by 2030. Offshore wind has a number of unique characteristics that are not shared by any other renewable technology and, as a result, it is appropriate to manage offshore wind separately in the auction pot structure. The move to introduce a Pot 3 for offshore wind would also allow Pot 2 to return to its original focus on innovation and allow other technologies the opportunity to experience a similar price discovery to that seen in offshore wind.

We believe that any capacity caps limit deployment and if applied to future auctions should be directly linked to carbon budgets and updated on an annual basis depending on what is required. Some of the positive outcomes from this approach include: ensuring that the volume of low-carbon power that is procured is compatible with the net zero target, and moving away from the current incentive for developers to generate at all times, even when it is detrimental to the wider system needs.

Energy UK has long-called for the reintroduction of CfD auctions for Pot 1 technologies and therefore we welcome the proposal to include Pot 1 (containing onshore wind and solar) in Auction Round 4. We believe that the proposed three pot structure will be the most effective approach to Auction Round 4. We also consider that the proposed allocation of technologies to each pot will be most effective.

6. The government welcomes views on whether the proposed options are an effective means of bringing forward a greater diversity of low carbon electricity generation.

Energy UK broadly agrees with the proposed arrangement of the three pots and believe that it will be an effective means of bringing forward a diverse mix of low carbon electricity generation. However, we would also highlight that the subsequent selection of budgets for each pot and other auction parameters will be as significant as the headline decisions on technology allocation to pots, set out in the current proposals. We therefore encourage government to share details on such parameters at the earliest possible opportunity so that industry can make an informed decision on the appropriateness of the proposed framework.

Energy UK acknowledges that the rationale behind the pot structure is to allow technologies of similar cost profiles to compete and reveal the cheapest form of new generation. However, in order to enable

progress in innovation and cost reduction across the different technologies, the auction design should avoid a similar outcome to AR3 whereby the auction was dominated by a single technology.

It appears unlikely that significant volumes of floating offshore wind will bid into AR4 given the ScotWind leasing timeline – the main avenue through which floating wind projects will come forward. It therefore seems that any floating wind projects that are ready for AR4 will be on the ‘test-centre’ scale. If floating offshore wind is included in AR4, and technology minima/maxima are applied, we urge BEIS to be mindful that only demonstration projects are likely to come forward for floating wind, and therefore, avoid allocating a significant amount of the budget/capacity to the technology.

7. The government welcomes views on whether there are alternative approaches to be considered in light of net zero.

Whilst Energy UK is supportive of the CfD framework, greater forward visibility in terms of auction parameters would be a further improvement. We would encourage government to set out future auction parameters as part of roadmap setting out the approach to procuring the low-carbon generation needed to satisfy a net zero target. To date the CfD framework has been somewhat undermined by the absence of a procurement strategy and the influence of politics. A clear procurement strategy would instil confidence in investors, the supply chain and reduce the likelihood of political disruption. All of which would increase the UK’s chances of reaching its low-carbon targets.

Whilst not subject to consultation, we call on the Government’s wider powers to increase auction frequency. We note that during Electricity Market Reform, auctions were envisaged on a six-monthly or annual basis; a two-year schedule is the divergence, not the other way around. Benefits of increased auction frequency include:

- Materially easing the pressure on the Statutory Nature Conservation Bodies and Planning Authorities by smoothing the development pipeline, as projects will no longer have to rush consent applications in order to fit the bi-annual cycle;
- Reducing the risk of consented projects being sterilised, if a project was unsuccessful in an auction and the consent or lease expires before next auction 2 years later;
- De-risking projects by increasing developers’ confidence, so they would be more willing to commit development expenditure; this would create a pipeline of more established and better evaluated projects entering auctions which both reduces the risk of non-delivery and aids cost reduction;
- Benefits to the supply chain by smoothing out delivery profile; under the current system unsuccessful projects and their associated supply chains face a two year hiatus, which increases the risk of losing capability to other countries; the supply chain could instead plan, make provision for new capacity and parts can be ordered in bulk, allowing cost reduction via economies of scale;
- A similar smoothing effect on the skilled labour required, reducing the need to employ foreign nationals for specialist jobs.

There is sufficient liquidity in the market to enable annual auctions; government can use proportionate capacity caps when required to retain competitive tension but at sub-£40/MWh, prices are reaching a point where cost reduction will be less relevant than the need to deliver the maximum capacity required to meet the UK’s net-zero targets and place the necessary focus on supply chain growth.

We note there is a perceived Government administrative burden (e.g. consultation processes) and would therefore welcome evidence as to why this burden cannot be efficiently deployed across multiple

auctions. With regards to evidence on annual auctions, we point the Government to the analysis<sup>7</sup> from Oxford University's Institute for Energy Studies which shows annual auction modelling:-

*"enables bidders to generate information on prices from previous rounds (competition level, total capacity auctioned) as well as on technology cost developments. Basically, we can see that the updated information on technology costs becoming available in each year leads to lower overall bid prices when it can be directly incorporated into participants' bids.*

Energy UK also encourages government to reassess the pot structure following the results of AR4. At that time it may become apparent that a dedicated floating wind pot is needed. Floating offshore wind is recognised as having the potential to add significant capacity to the UK grid and play a key role in the net zero challenge. Therefore a dedicated pot, similar to the one proposed of fixed-bottom wind may be needed to ensure cost reduction and deployment levels consistent with a net zero pathway.

### **Floating Offshore Wind**

8. The government welcomes views on whether the proposed approach is an effective means of supporting floating offshore wind.

Energy UK is strongly supportive of introducing a separate definition and Administrative Strike Price (ASP) for floating offshore wind. Whilst it appears unlikely that significant volumes of floating offshore wind will bid into AR4 given the ScotWind leasing timeline, it is important that any projects that do participate in AR4 are separately defined from fixed-bottom offshore wind due to the different maturity of the two technologies.

Floating offshore wind is an emerging technology that has not had the time to develop and reduce costs in the same way that fixed-bottom wind has. Therefore, if both technologies were included under the same definition and ASP, it stands to reason that fixed-bottom projects would be awarded all of the contracts available due to its lower cost. Creating a separate definition and ASP for floating wind is crucial in allowing the technologies to experience a similar price discovery to fixed-bottom wind and commercialising a technology that will be key to the long-term development of low-carbon power in the UK towards the 2050 net zero target.

9. The government welcomes views on whether the proposed definition is a suitable definition of floating offshore wind projects, which should be distinguished from fixed bottom offshore wind, and what evidence prospective generators should be asked to supply in order to demonstrate that they have the required characteristics.

Energy UK recognises the eventual need for an appropriate floating offshore wind definition to prevent gaming by developers, however, we do not see a material risk of gaming in the near term due to the relevant immaturity of the floating wind pipeline. We note that gaming could occur if a developer, who had originally planned to bid for a fixed-bottom offshore wind project, decided to adjust its bid to target floating wind to benefit from higher Administrative Strike Prices and potential ring-fenced budget/capacity. Under such a scenario, consumers will pay a premium for a project that could otherwise be supported by a less expensive 'offshore wind' category. Moreover, projects that can only be floating may be displaced.

Introducing a depth limit now would restrict the ability for demonstration projects to access CfD support. These projects are typically positioned in shallower waters to demonstrate technological readiness ahead of commercial scale rollout in deeper sites. Therefore placing a limit on depth now may inadvertently slow the pace of development of floating wind technology.

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<sup>7</sup> <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/02/Auctions-for-allocation-of-offshore-wind-contracts-for-difference-in-the-UK-EL-33.pdf>

Furthermore, Energy UK is aware that there are waters off the coast of the UK where the depth is <60m but a fixed-bottom project would not be appropriate given the subsurface geology. Floating wind installations could access these waters and ensure that the potential resource for offshore wind in the UK is maximised. At a time when industry is working with government to remove barriers to offshore wind deployment through the Offshore Wind Sector Deal, it would be counter-productive to introduce an unnecessary barrier to floating wind deployment.

There are valid arguments for and against including a depth limit in the floating offshore wind definition, however, given the fact that we do not anticipate any opportunity for gaming in the near term, we recommend that government proceeds without a depth limit for AR4. We note that there is an upcoming CfE on the CfD scheme that will look at the longer-term development of the scheme. We welcome this CfE and encourage government to ensure the content gives further consideration to a floating wind definition. An enduring definition should ensure that there is no opportunity for gaming but avoid restricting the potential resource. The CfE should also consider the framework that would be required to allow hybrid sites containing both fixed bottom and floating offshore wind.

Whilst an enduring definition for floating offshore wind is developed, Energy UK recommends the following definition as included in the Renewables Obligation (Scotland) Order 2009 as amended:

*A floating offshore wind CfD Unit means a CfD Unit which generates electricity by the use of wind and which –*

- (a) Is a floating structure, meaning a turbine that is fixed or connected to the seabed by means of a chain, tension leg or other flexible mooring and not by any other means.*

In addition, with respect to the note in the definition that "...It may be electrically connected to an offshore substation irrespective of whether floating or not...." we recommend that it is made clear in the definition that a floating offshore wind CfD unit can also connect directly to an onshore substation.

10. The government welcomes views and evidence on any potential wider benefits or disadvantages that floating offshore wind may bring to the UK, in particular in respect of wider system impacts.

Floating offshore wind has the potential to open areas of the seabed which are not suitable for fixed foundation turbines. As well as areas with deeper waters, this also includes large areas of shallower waters where the underlying geology means that fixed foundations are not feasible. The latest resource estimates by the CCC, Vivid Economics and Imperial College suggest a technical potential of up to 350 GW for floating offshore wind<sup>8</sup>. The geographical diversity of this resource can create opportunities for supply chains in new areas. Floating offshore wind has development potential in areas that have not so far been able to progress fixed foundation offshore wind, such as Cornwall and South Wales.

There is also a major opportunity for the UK to develop an export market for this technology, building on the success of the UK fixed foundation offshore wind industry. The greatest export opportunities are likely to be in the development and application of novel technology and techniques that are specific to floating offshore wind, rather than in the components that use established engineering capabilities already in use in other sectors.

Looking at the patterns of seabed depth globally, floating offshore wind has the greater potential for global deployment, as few coastlines have the same large areas of shallower waters as the UK, where fixed foundation wind can be deployed. Floating offshore wind is at a relatively early stage and an international supply chain has not yet developed. The UK has an opportunity to move early and establish itself as the global leader in floating offshore wind development, and enjoy the associated benefits from exporting expertise to the significant global demand that is likely to come forward.

<sup>8</sup> <https://www.theccc.org.uk/wp-content/uploads/2019/05/CCC-Accelerated-Electrification-Vivid-Economics-Imperial-1.pdf>

11. The government welcomes views on the need to deploy floating offshore wind at scale through the 2030s to meet net zero, and what trajectories for deployment and cost reduction are realistic and feasible, both globally and in the UK.

Fixed foundation offshore wind has substantial potential to deliver further low carbon generation at low-cost. However, as scenarios for net-zero have indicated, there needs to be a quadrupling of low-carbon generation from current levels, so all available sources of low-cost, low-carbon generation will have a role to play in delivering net-zero.

Floating offshore wind has the potential to deploy at large-scale as referred to in our answer to Q.10. It also stands to reason that floating wind can experience a similar price discovery to fixed-bottom wind if it is supported in a similar way by government. To get maximum value from the floating offshore wind resource, Energy UK believes that deployment should start as soon as possible, with the aim of initial large-scale commercial deployment by the late 2020s and mass rollout through the 2030s.

Deployment of floating offshore wind would benefit from a clear government deployment strategy developed in collaboration with industry, the Crown Estates, the LCCC, and Ofgem. This strategy should consider the changes that would be required to seabed leasing rounds and grid infrastructure planning to support the mass deployment of floating wind, in a complimentary manner to other technologies and the wider system, towards the 2050 net zero target.

12. What further amendments to the CfD allocation process could be necessary to facilitate floating offshore wind technologies?

Energy UK is keen to emphasise that the selection of budgets for each pot and other auction parameters will be as significant as the headline decisions on technology allocation to pots, set out in the current proposals. We therefore encourage government to publish the auction parameters for AR4 at the earliest possible opportunity.

Certain auction parameters may need to be considered through the lens of a floating wind developer to ensure that they do not introduce unnecessary risk for floating projects. For example, as mentioned in our response to Q40, different technologies have different project timelines and therefore the deadlines set out in the CfD contract should look to satisfy the most cost-efficient outcome for each technology.

To enable progress in innovation and cost reduction in all technologies, the auction design must ensure that there is a viable minimum level of further deployment of each pot of technologies from Auction Round 4. As previously mentioned, Pot 2 contains a wide range of technologies, at varying degrees of commercial readiness, therefore, to ensure a tranche of floating wind projects are successful in near-term allocation rounds, we recommend that a minima or separate pot is specified for this technology post-AR4.

13. Are there additional measures to support pre-commercial deployment and cost reduction which would be more effective than the CfD, or which could enhance the effectiveness of the measures under the CfD?

Energy UK welcomes the move from BEIS to introduce floating offshore wind for AR4 and believes the most appropriate route to market for the technology is through the CfD mechanism. The next step in the development of the technology would be to introduce a target for floating wind, similar to the existing target for fixed-bottom wind.

Energy UK is keen to see that there is clarity and a long enough lead time for any additional measures that may be brought forward. We are concerned that measures to support pre-commercial deployment can sometimes be done with less oversight and lead time, which can limit the success of innovative solutions that industry/government would want to see emerge. Successful parties in such exploratory schemes tend to be those that were able to mobilise within the short lead time, rather than those that offer the most innovative solutions.

**Extending Delivery Years**

14. Should the government amend the Contracts for Difference (Allocation) Regulations 2014 in order to extend the delivery years specified in those regulations to the 31st March 2030?

Compared to the status quo, Energy UK supports the proposal in the consultation to extend the delivery years specified in the CfD Regulations 2014. This is an administrative change that is required to allow CfD auctions to continue through the 2020s. However, Energy UK believes that the extension should go further, ideally to 31<sup>st</sup> March 2036. In her speech from July 2018, then BEIS Minister, Claire Perry, committed to CfD auctions every 2 years in the 2020s<sup>9</sup>. An extension of the delivery years to 2036 would be needed to satisfy this commitment.

Extending the delivery years to 2036 would better reflect the long lead-time for the offshore wind pipeline. For example, we note that the ability to phase projects over 3 years would create issues for phased projects in AR5 with the proposed extension to 2030. Extending the delivery years to 2036 is a no-regret 'low-hanging fruit' for government with regards to strengthening investor confidence in the UK, which is essential for any economic recovery.

We note the Government's wider intent not to notify with respect to State Aid and its view that a longer extension may not prove compatible with existing clearance given the original transitional purpose. We would urge that Government to discuss this precise point with the relevant State Aid Authority before deciding on an extension date.

An extension to 2035 not only appears logical but would also provide welcome forward clarity to investors/developers that government will maintain a market mechanism for bringing capacity forward. Building on this, we would encourage government to announce the number of auctions that will occur in the intervening period at the point when the extension is applied and commit to a review on the option of an extension beyond 2035.

Providing clarity on auctions frequency could come as part of a wider procurement strategy that would improve investor confidence, create a more sustainable supply chain and give clarity on wider system issues such as grid connections. We would also welcome a government commitment to review the delivery years in 2025 when there is greater clarity on the speed of deployment and progress against the 40GW by 2030 target.

**Supply Chain Plans**

15. The government welcomes views on whether the Supply Chain Plan process for all technologies should be more closely aligned with the Industrial Strategy, for example with criteria headings to reflect a focus on competition, innovation, people and skills, infrastructure and regional growth, and within this what other measures the government could adopt and consider to support its objectives, for example, in the Offshore Wind Sector Deal.

Supply Chain Plans have been prepared for offshore wind projects for each of the previous CfD allocation rounds and have contributed to the development of low carbon electricity generation supply chains in the UK.

In principle, Supply Chain Plans can continue to be a useful tool to achieve policy objectives. However, the Supply Chain Plan process can only ever be one component of a wider set of actions to enable offshore wind and other renewable technologies to deliver. This will include actions by each of Government, developers and supply chain companies.

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<sup>9</sup> <https://www.gov.uk/government/news/energy-minister-claire-perry-hails-success-story-of-offshore-wind-in-newcastle-today>

In developing actions to expand and enhance the supply chain, it is essential to have a clear set of objectives and priorities. However, it is not clear from this consultation what Government's latest thinking is on what those objectives should be.

Possible objectives could include some or all of the following, amongst others:-

- Demonstrate continued downward pressure on prices.
- Provide confidence on project delivery, linked to the CfD Non-Delivery Disincentive.
- Encourage the development of skills, infrastructure, capacity and competitiveness in the UK supply chain.

Encourage higher UK content in CfD projects.

Each of these objectives would require a particular set of targeted actions and the role for Supply Chain Plans would be specific for each objective.

Energy UK recommends that the policy objectives for the supply chains for renewable generation are reviewed and the roles of Supply Chain Plans are confirmed, before Government reviews the Supply Chain Plan process itself.

Beyond Supply Chain Plans, the Government will need to develop a wider strategic policy approach. Such a strategic approach should, amongst other issues, consider:

- The economic value to individual regions from securing investment, in addition to overall UK value
- A more active role in delivering the enabling infrastructure needed to generate greater investment
- Active signposting of existing infrastructure funding routes available to unlock investment
- Joining up existing local, regional and national initiatives
- Providing direct investment in critical areas, such as port infrastructure without which the UK may have too few ports large enough for the next generation of turbines

Targeted R&D support, for instance focused on the application of new technologies, advanced manufacturing and O&M innovation

The Supply Chain Plan can only ever be one component of a wider set of actions by Government, developers and the supply chain to enable offshore wind and other renewable technologies to deliver the Industrial Strategy as effectively as possible.

- A key factor is that developers cannot bring forward a supply chain in isolation.
- It is equally or more important for the supply chain companies themselves to recognise the opportunities and take action to offer competitive options for developers.

Government also has a key enabling role to play in this iterative process.

Within this overall context, restructuring the Supply Chain Plan criteria to reflect the priorities of the Industrial Strategy could assist all stakeholders to make the most effective use of the Supply Chain Plan process. However, it is equally important to clarify and confirm the overarching policy objectives for the supply chain.

More generally, Energy UK considers that the issues raised by Supply Chain Plans are complex and multi-faceted and any changes to the existing SCP process warrant a dedicated work stream that brings together all stakeholders for a thorough assessment of the issues and options.

Energy UK recommends that BEIS establishes a work stream on the SCP process as soon as possible. The scope should include the specific issues on the SCP process that are raised in consultation questions 16 to 20.

16. The government welcomes views on strengthening the powers to fail SCPs on the basis that the Applicant has not demonstrated compliance with a past SCP.

Given the highly competitive results in the previous CfD auction, it is important that there is consistent application of the Supply Chain Requirements by all applicants and that each is committed to delivery of their Supply Chain Plan commitments.

In this context, Energy UK would support a review of the need and options available for the strengthening of powers to fail SCPs. However, the assessment of SCPs must be sufficiently flexible to recognise the wide range of options to deliver supply chain benefits. Failing an SCP on a technicality would undermine developer confidence and increase their assessment of the risks associated with SCP delivery.

As noted in our response to Question 15, Energy UK recommends that BEIS establishes a work stream on the SCP process as soon as possible and the scope should include the power to fail SCPs.

17. The government welcomes views on whether requiring an updated SCP at a later stage after a CfD is awarded, for example at FID or after MDD, when major contracts would have been awarded, would deliver more focused and deliverable commitments.

It is possible that a later update of a SCP could deliver more focused commitments. However, to ensure a consistent preparation of bids for the CfD auctions, it is important that SCP obligations made prior to the CfD auction are comparable.

18. The government welcomes views on the current compliance process for SCPs for failure to implement an approved SCP. Is it sufficient and if not, what other potential compliance options could be considered, for example by linking non-compliance to CfD payments?

Energy UK is not aware of any compelling evidence that the current SCP compliance process is not sufficient. Before considering other compliance options it is essential that there is a clear definition of the shortfalls in the current compliance arrangements, with evidence.

If it was concluded that the current compliance process for SCPs was not sufficient, then linking non-compliance to CfD payments might be an effective way to incentivise compliance. However, many details would need further consideration in developing other compliance options, including:-

- What would be the “failure criteria” by which the SCP delivery would be assessed?
- Would tighter compliance measures require tighter specification of the SCP obligations by BEIS and the LCCC?
- Developers have very limited control over what is available in the supply chain for many projects elements, both in the UK and globally. How would this lack of control be taken into account in assessing compliance?
- How would a CfD payment penalty be applied? Would it be a reduction of (say) £1/MWh or further increments in CfD payments? Would there be a scale depending on level of non-delivery of the SCP commitments?

These points would need to be fully addressed in any new compliance requirements.

Energy UK considers that the issues raised by Supply Chain Plans are complex and multi-faceted and any changes to the existing SCP process warrant a dedicated work stream that brings together all stakeholders for a thorough assessment of the issues and options.

As noted in our response to Question 15, Energy UK recommends that BEIS establishes a work stream on the SCP process as soon as possible and the scope should include the current compliance process.

19. The government welcomes views on any impact of reducing the threshold limit for the submission of a Supply Chain Plan to capture offshore wind extension projects (which were not envisaged when the policy was first drafted) and to reflect that projects below 300MW will also have a material impact on supply chains and if so, what the limit should be.

Energy UK believes that the existing threshold limit for a Supply Chain Plan of 300 MW remains appropriate for all technologies and categories. For projects at a smaller scale than this, the supply chain arrangements are at a correspondingly smaller scale and it would not be appropriate to apply the same requirements as the larger projects.

For projects of capacity less than 300MW but above a new, lower, threshold for a Supply Chain Plan, it is likely that the majority would be onshore wind projects. This is because most projects using solar or other technologies are of a size that is clearly too small to justify a Supply Chain Plan (there are of course exceptions, but this is the overall pattern).

Our assessment is that the supply chain for onshore wind already has sufficient maturity, capacity and flexibility to deliver the projects likely to proceed in the UK over the delivery horizon for CfD Auction Round 4. There is already a high level of UK content in onshore wind projects. As a result, there is limited scope for Supply Chain Plans for onshore wind projects to secure further optimisation of the supply chain, or to add significant value in any other respects.

In addition, supply chain decisions for onshore technologies are often made at a company level for the whole development portfolio, rather than decisions being made on a project by project basis. This reflects the smaller scale of individual projects compared to offshore wind. As a result, Supply Chain Plans for onshore wind projects are likely to be generic in nature.

Given this context, extending the Supply Chain Plan requirement to project below 300 MW would not deliver additional value, but would impose an additional burden on both developers and government, increasing the ultimate cost to the consumer.

Another relevant consideration is that a formal Supply Chain Plan for an individual project is only meaningful if it links to a long term vision and route map for the whole of that technology. We have highlighted in our answer to Question 15 the need for Government to set out clear objectives for actions on the supply chain for renewable technologies. The question of whether to extend the Supply Chain Plans to smaller projects cannot be assessed until it is clear what the overarching objectives are.

We recognise the issue of a distorted playing field whereby the requirement for SCPs inherently falls on offshore wind projects due to their larger size. However, the range of commitments in the Offshore Wind Sector Deal by both the Government and developers enables both developers and supply chain companies to take the necessary long-term perspective needed to put forward Supply Chain Plans. Other technologies do not have a sector deal and are generally of a smaller scale. Without the accompanying combination of Government and developer commitments, it is more challenging to put forward supply chain commitments. An SCP is only viable in the context of a long term vision and route map for a technology.

Developers cannot bring forward a supply chain in isolation; it is equally or more important for the supply chain companies themselves to recognise the opportunities and take action to offer competitive options for developers. Government has a key enabling role to play in this iterative process. The aim should be to avoid imposing a premium on developers for sourcing locally.

The interaction of projects using other technologies with local and regional communities and industry are of a different nature to offshore wind. For example, onshore wind has a direct relationship with local communities, with local community engagement and local community benefits forming a key part of project preparation. A SCP requirement could be an obstacle rather than an enabler.

It is not clear from the consultation what specific outcomes could be delivered by an extended SCP requirement that existing arrangements and commitments could not deliver. There are many other options available to promote local and regional supply chains than an SCP.

As noted in our response to Question 15, Energy UK recommends that BEIS establishes a work stream on the SCP process as soon as possible and the scope should include the threshold for Supply Chain Plans. To inform this work stream, BEIS could utilise the upcoming CfE on the CfD scheme to gather views on what the overarching objectives of the SCP process should be.

20. The government is committed to achieving net zero by 2050 and encouraging the growth of sustainable, efficient supply chains through the consideration of the carbon footprint of supply chains. We welcome views on how industry takes account of the carbon footprint of their supply chains. What methodologies are being used or could be developed to take greater account of the carbon intensity of supply chains when considering Supply Chain Plans.

Energy UK recognises the importance of driving reductions in the carbon intensity of supply chains. With respect to methodologies, an immediate challenge is that there is no universally accepted methodology for assessing the carbon intensity of supply chains. A very useful first step in considering how SCPs could assist would be the development of a common methodology which could form the basis for the promotion of carbon intensity reductions in the supply chain. A number of best practice standards and policies exist that provide approaches and methodologies for accounting and reporting of supply chain GHG emissions, such as:

- The GHG protocol Corporate Standard/Scope 3 Standard
- ISO 14065
- The Renewables Obligation
- Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast)

The Greenhouse Gas Protocol is one of the most widely used of the suite of existing methodologies and this could form a starting point for further development. For developments on peatlands, the Scottish Government Carbon Calculator for wind farms on Scottish peatlands has been used since 2008 where applicable.

However, even with a well-defined and common methodology, there are a number of challenges to a developer-led drive on the carbon footprint of SCPs. For many of the components of renewable generation projects, the sector has a minor share of the total customer demand. As a result, there is limited influence from the sector with the extended global supply chains. While customer pressure can help to motivate the supply chain, the carbon intensity of different manufacturing sectors is most effectively assessed and reduced by the sectors themselves, not by isolated campaigns by subsets of customers.

Given these factors, Energy UK does not consider that SCPs are the most appropriate mechanism for addressing the carbon intensity of supply chains. Implementing any methodology formally through the SCPs is likely to take up significant resource but is unlikely to deliver significant change in the supply chain, compared to other options. We do, however, support the development of a standardised methodology for assessing the carbon footprint of supply chains which the energy sector could use.

Where a renewable technology uses a fuel (for example, biomass) the life-cycle carbon intensity of the fuel is a critical factor. Any initiative on supply chain carbon intensity should include fuels within scope.

It is vital that any approach to supply chain guidance allows for accurate, consistent, reliable and ultimately meaningful comparisons with alternative supply chains to demonstrate the extent to which climate benefits are afforded and to decide where any necessary regulatory thresholds should be set. For instance, current GHG thresholds for new biomass plant under the CfDs (29kgCO<sub>2</sub>eq/MWh) are prohibitively low for most biomass supply chains and are set far lower than typical supply chain emissions for either coal (153kgCO<sub>2</sub>eq/MWh) or gas (57kgCO<sub>2</sub>eq/MWh). This means that sustainable biomass supply chains delivering both a direct GHG benefit (by only releasing carbon sequestered as part of the natural carbon cycle) and an indirect GHG benefit (by producing lower CO<sub>2</sub> emissions throughout the supply chain than fossil comparators) could still be treated as ineligible fuels under CfDs.

**Coal-to-Biomass Conversions**

21. Views are welcomed on the proposal to exclude new biomass conversions from future CfD allocation rounds, on the likely impact of this approach, and on any alternative approaches.

Energy UK understands and supports the rationale behind excluding new coal-to-biomass conversions from future CfD allocation rounds. We do not envisage this action to have too far-reaching impacts on the sector. However, we disagree with the government's view that biomass is a transitional technology. It is clear from a number of leading future UK electricity system scenarios that biomass will play a key role in reaching net zero emissions by 2050<sup>10</sup>. Therefore, we would like to see the government's position updated to reflect this.

We are also keen that steps are taken by government to ensure that the change to the regulations to exclude new coal-to-biomass conversions does not lead to unintended consequences on the development and scale up of certain Negative Emission Technologies (NETs) which require biomass, such as BECCS.

We agree with the CCC's view that NETs will play a crucial role in the UK's wider strategy to reach net-zero emissions by 2050, and that BECCS in particular will play a significant role<sup>11</sup>. We encourage the Government to ensure any decision making now does not hinder the deliverability of this technology in the near future.

**Decommissioning Plans**

22. The government welcomes views on how best to link the OREI decommissioning regime with the CfD scheme to ensure that offshore renewable projects that are party to a CfD fully comply with their obligations under the Energy Act 2004.

Energy UK recognises the importance of the planning regime and considering project end-of-life at the outset, however, we do not agree that the OREI decommissioning regime should be linked to the CfD scheme.

We believe that the existing requirements for a developer to consider decommissioning from the very first stage in project development are effective and robust. We note that the existing guidance already protects the bill payers and we are not aware of any shortcomings in the existing arrangements that requires or justifies any further action. Further to this, we note that the Offshore Wind Sector Deal includes the following specific wording:-

- "The sector will continue to collaborate to ensure the highest health and safety standards during development, construction, operation, and decommissioning."
- "By the late 2020s, the sector will be addressing issues such as life extension, repowering and decommissioning. The government will work with the sector as this develops, to ensure that the UK maximises the economic value of such work and provides value to consumers."

If it was decided that further action were required now, we believe that this would be best addressed through the process for consenting an offshore renewable project and not through a link to the CfD scheme. The latter option would simply add unnecessary complexity to the CfD scheme, which would in turn lead to an increase in costs to consumers. In addition to this, there is an issue around the disparity between the lifetime of a CfD (15 years) and the lifetime of projects (20+ years). As the life-cycle of a project is, in some cases significantly, longer than the duration of the CfD contract, we believe it would not be logical to tie decommissioning to the CfD scheme.

<sup>10</sup> <https://www.nic.org.uk/publications/net-zero-opportunities-for-the-power-sector/>

<sup>11</sup> <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-Technical-report-CCC.pdf>

**Administrative Strike Prices**

23. The government welcomes views on how we might change our approach to administrative strike prices to ensure value for money in future.

Energy UK accepts that ASPs have been set at a level that has not necessarily reflected the scale of deployment and cost reduction potential of certain technologies in the past. However, we do not identify a material issue that has transpired as a result of ASPs having been set too high.

We understand that applying a stringent approach in the same way across a diverse range of technologies can lead to setting ASPs at a level that may not reflect the scale of deployment and cost reduction potential of different technologies. However, given the marked reductions in the clearing prices achieved from all three auctions to date, Energy UK believes that the current methodology works very well. We would therefore urge strong caution with any move to arbitrary or fixed price regression, given LCoEs will be impacted by offshore wind sites moving further from shore, higher cost of capital risk and low power prices on the 10-year merchant tail, to name but a few.

The key issue for reserve pricing is ensuring auction liquidity. Reserve prices only become important when an auction is undersupplied, which has happened in other markets but not in the UK. There is a perceived risk that increased auction frequency may result in undersupply, but the Government can simply set lower capacity caps. Moreover, an additional benefit resulting from increased auction frequency is more accurate price discovery, which will provide a more robust ASP setting methodology.

**Non-Delivery Disincentive**

24. The government welcomes views on extending the exclusion period for sites excluded under the Non-Delivery Disincentive, including on whether 36 months is a suitable period, or a longer period is needed.

Under the status quo, Energy UK agrees with the proposal from BEIS to change the exclusion period for sites excluded under the Non-Delivery Disincentive (NDD). However, rather than continue with an arbitrary period of time, we would suggest that the period of exclusion is redefined as a site that falls under the necessary conditions being excluded “from the next CfD allocation round”.

This issue should not be considered in isolation of the proposal to introduce bid bonds. As mentioned above, Energy UK supports the move to change the exclusion period under the status quo, however, if bid bonds were introduced, this would need to be reconsidered. This is because the loss of a bid bond, as well as exclusion from the following CfD round, would constitute a double punishment to the developer and potentially risk impacting the size of the project pipeline.

25. The government welcomes views on whether different forms of disincentive are needed for technologies at different levels of development and on what basis such differentiation might work most effectively.

Energy UK acknowledges that there are working examples of other forms of disincentive such as the use of bid bonds in the Capacity Market scheme. We would accept bid bonds being introduced in a technology neutral manner regardless of the fact that non-delivery is most prevalent in certain technologies. Our support of introducing bid bonds is also conditional on the design of the mechanism. We are keen to see that the introduction of bid bonds would not deter certain projects that would normally have bid for a CfD, and would provide valuable new low-carbon capacity.

We firmly believe that speculative bidding by any project at any scale can significantly distort the outcome of the CfD auction, and that all applicants should therefore have a strong disincentive to submit

speculative bids and instead ensure that they put forward a viable bid that is sufficient to enable their project to proceed if successful.

26. The government welcomes views on the advantages and disadvantages of introducing a new requirement for a bid bond where applicants provide a deposit, either by cash payment, bank guarantee or letter of credit.

The AR1, AR2 and AR3 results demonstrate that the current auction protection is inadequate to sufficiently deter price taking behaviour. In order to ensure CfD price volatility and non-delivery risks are minimised, further auction protection must be implemented.

The use of bid bonds is well established in a wide range of auction applications. Energy UK understands that a significant timing resource would be required to implement bid bonds from a legislative perspective. We therefore urge BEIS to ensure that resourcing is efficiently allocated to the areas where it is needed most before looking to implement bid bonds.

A bid bond requirement could be introduced for Pot 1 and Pot 2, as the technologies in these categories have relatively low entry costs (in the form of the advance expenditure to prepare a project that is qualified to bid). A bid bond need not necessarily be applied to Pot 3, as the level of expenditure and other commitments required to qualify to bid in a CfD auction is much higher for offshore wind and the risk of speculative bids is very low. However, to ensure technology neutrality and avoid disincentivisation of smaller projects, Energy UK proposes that bid bonds be applied to all technologies.

27. The government welcomes views on whether a bid bond would be practical for smaller projects. If difficulties are foreseen, what are they, what mitigation might apply and in respect of what size of project?

Energy UK understands that a bid bond could constitute a greater obstacle to deployment for smaller projects than it might for larger projects. One potential solution to this would be to introduce a cap of the level that a bid bond could amount to. For example, a £10,000/MW could be applied in a similar manner to the Capacity Market but there could be an overall cap (i.e. £1million) to avoid the level being prohibitively high for smaller projects.

28. The government welcomes views on what a suitable level for a bid bond would be: would £10,000 per MW be effective and practical?

Energy UK supports the introduction of bid bonds for reasons previously outlined. The level of the bid bond should account for the stringency of the eligibility criteria, MDD and other NDD rules. We recommend that BEIS looks to international examples of the use of bid bonds as a starting point in developing a version for UK CfDs. In doing this, it will become apparent that £10,000 per MW is comparatively low versus other international support schemes:

- Netherlands – undergoing reform but penalty payments in the past have generally been around 28,000 EUR per MW (c£25k) within four weeks after CfD award provided by bank guarantee (and replaced 12 months later by a bank guarantee over 100,000 EUR per MW, again akin to MDD)
- Germany – between 25,000-200,000 EUR per MW (c£22-179k/MW) but non-delivery at FID milestone currently only results in 30% penalty (of 200,000 EUR) of bid bond
- Japan – a low bid bond at c£3,800/MW but c£34,000/MW within eight weeks of auction award; c£96,000/MW is also required within 12 months but this is more akin to MDD
- Mexico – 99,000 USD (c£80,000) fixed fee per generator in addition to 21,000 USD (c£17,000) per MW and additional fees

- Ireland – a low bid bond at 2,000 EUR per MW for RESS1 but successful bidders then have to provide a performance bond of 25,000 EUR per MW

The 2018 IRENA Policy Guidelines<sup>12</sup> state that in the initial stages of moving to auctions, the bid bonds should be kept low; to 1.5-3.5% of expected project costs. The UK CfD is a tried and tested auction, which would suggest best practice should be >3.5% of expected project costs. We would therefore urge that the Government assesses the value of a proportional methodology (e.g. % of TPPCC) as this is a fairer approach.

Assuming a fixed methodology is taken forward, then we believe a higher figure would be more effective, and we would strongly support the introduction of £10,000 per MW as the minimum level. Should the £10k/MW be chosen, then we would urge that this is set in 2012 prices to fully align with the Administrative Strike Prices and monetary Budget methodology.

Energy UK would also welcome clarity in terms of when bid bonds would be collected and returned to developers.

29. The government welcomes views on alternative approaches to the Non-Delivery Disincentive and how they might work in practice.

Energy UK considers that the application of a bid bond requirement, if applied correctly, is the most appropriate additional approach to the current Non-Delivery Disincentive.

### Technical Changes to Future Rounds

With regards to delivery year simplification, given the re-introduction of Pot 1 and the inherent shorter time required between FID and construction for those technologies, the AR1 delivery year model (i.e. more than two years) is more appropriate than the AR2 & AR3 Delivery Year model (i.e. 2 years). We therefore remain unconvinced of the benefits of simplification, particularly given the status quo is already well understood. We propose BEIS reconsider this proposal.

30. Whether you agree the government should introduce the flexibility to apply any capacity cap, maxima, and minima as either a soft or hard constraint, set on a round by round basis?

Energy UK understands the rationale behind the proposal to introduce additional flexibility on auction parameters but warns that additional flexibility can create uncertainty for developers as they have less clarity on the type of auction that they are bidding into. As a general point, Energy UK encourages the government to provide as much clarity and foresight as possible when it comes to auction parameters. This could be communicated as part of a wider procurement strategy that would be extremely useful in mapping out the government's approach to delivering 40GW of offshore wind by 2030 and additional capacity beyond this date.

In principle, Energy UK is supportive of the introduction of a soft cap /maxima if it eliminates the risk of under-procuring in future rounds. For example, if a soft capacity cap leads to a situation whereby a project that would otherwise have been rejected by a hard cap, is awarded a contract, this would be a positive outcome in terms of government targets, industry and supply chain development. Again, our support is conditional on the detailed design of the flexible constraints, for example, industry would prefer a higher hard constraint if this would lead to more deployment than a lower soft constraint. Assuming that the soft constraint is applied to an appropriate capacity cap/maxima, Energy UK then believes that government should stick with the soft constraint approach so as to reduce the level of auction parameter uncertainty for investors.

<sup>12</sup> [https://www.energy-community.org/dam/jcr:4ab03f8c-de3d-4783-931d-4766f643fe7b/EBRD\\_EnCS\\_PC\\_RE\\_Auction\\_032018%20.PDF](https://www.energy-community.org/dam/jcr:4ab03f8c-de3d-4783-931d-4766f643fe7b/EBRD_EnCS_PC_RE_Auction_032018%20.PDF)

31. The type of soft constraint (including those proposed) that could be deployed in future allocation rounds;

If it is decided that a soft constraint should be applied to future rounds, Energy UK believes that the softest approach should be taken. From the options outlines on page 42 of the consultation, Energy UK supports the following:

*“Accepting a bid and awarding a contract to the project that breaches the cap, if enough budgetary money remains”*

32. And any further evidence on benefits and disadvantages of a soft capacity cap constraint.

Energy UK recognises the soft capacity cap constraint as potentially being an efficient way of ensuring value for money depending on how it interacts with wider auction parameters. Now that we are in a world where strike prices are coming in below the reference price by some margin, it raises the question of whether it would be in consumers’ best interests to procure as much capacity as possible.

## Storage

33. What storage solutions could generators wish to co-locate with CfD projects over the lifetime of the CfD contract?

Energy UK firmly believes that improving electricity system flexibility will be an important part of the future low-carbon electricity system<sup>13</sup>. Whilst incentivising flexibility isn’t a primary objective of the CfD scheme, Energy UK believes that the scheme should evolve to enable flexible solutions to be installed on CfD sites and rewarded appropriately.

The main storage solution that is being considered for co-location on CfD sites is battery storage. However, Energy UK recommends that BEIS also consider mix technology sites, for example, a site that contains wind power, solar power and battery storage would create a better load profile and be a significantly more value asset to the wider system.

Co-location can allow a storage operator to avoid some of the costs of connecting to the grid, which improves the business case for the storage asset. This includes both the regulatory costs of operating a connection and the costs of the physical connection assets, both of which can be shared with the CfD project. The business case for storage is further strengthened by maximising the range of services that can be delivered, thereby building up a revenue stack.

From the point of view of customers, maximising the co-location of storage with CfD projects will minimise the total cost of installing the further storage that is needed to develop a flexible future electricity system, as that reduction in cost will ultimately be passed on to the customers. It is in all stakeholders’ interests to maximise the opportunities to co-locate storage.

Given the opportunity that co-located storage offers for system management, Energy UK recommends that BEIS set up a work stream with developers, Ofgem and the LCCC to examine the issues and options for enabling more flexibility in co-located storage, beyond the levels allowed under the current rules. It is important that all the parties involved work together to explore if there are further viable opportunities to maximise the range of services that can be delivered by co-located storage.

<sup>13</sup> [https://www.energy-uk.org.uk/publication.html?task=file\\_download&id=7421](https://www.energy-uk.org.uk/publication.html?task=file_download&id=7421)

**34. What, if any, barriers are there to co-location of electricity storage with CfD projects?**

The current CfD rules exclude storage projects that import “brown” power from the grid from co-location with a CfD project, unless the storage is set up as a separate Balancing Mechanism Unit (BMU). However, registering as a separate BMU incurs a number of additional costs and is a significant barrier to co-location.

There is a further disadvantage of registering the storage as a separate BMU with separate metering. Once registered as a separate BMU, under the current rules a CfD generator cannot use the storage to store output generated during hours with low system demand and, at a later time, to export this power to the system and receive payment under the CfD for export at that later time. As periods of negative system prices increase in frequency in future, this ability to “time-shift” output from CfD generators will be increasingly valuable, both to the individual generators but also to the system as a whole.

This time-shifting of CfD output and payment is possible under the current rules for just one configuration, for storage located behind the CfD meter. However, in that configuration, the storage unit cannot import “brown” power from the grid for export later, which greatly restricts the range of other storage services that can be provided.

We believe there are technical solutions to this challenge that can reduce costs, allow better use of green generation and improve system flexibility. Given the opportunity that co-located storage offers for system management, Energy UK recommends that BEIS set up a work stream with developers, Ofgem and the LCCC to examine the issues and options for enabling more flexibility in co-located storage, beyond the levels allowed under the current rules. It is important that all the parties involved work together to explore if there are further viable opportunities to maximise the range of services that can be delivered by co-located storage.

**35. What, if anything, could be changed in the CfD scheme to facilitate the co-location of storage with CfD projects?**

Energy UK recommends that the CfD rules should be amended so that:-

- co-located storage can import brown power and re-export within the same BMU as the CfD project (i.e. the storage is behind the CfD meter).
- co-located storage in a separate BMU to a CfD generator can store the CfD output and then export this to the system at a later time and receive payment under the CfD for export at that later time (i.e. the storage is outside the CfD meter).

These arrangements would require appropriate metering and other controls to guarantee that brown power is not re-exported as renewable generated power. The new work stream that we recommend in our answer to Question 34 above would examine the challenges and find solutions to deliver robust monitoring arrangements.

**Negative Pricing****36. Do you have any views on the proposal to extend the negative pricing rule? Please include in your response any specific evidence in relation to the incidence and impact of negative pricing.**

Energy UK supports the principle that electricity market prices should reflect the true short-run marginal costs of power generation. This will send the correct signal to which generators then respond. However, a generator with a CfD will be incentivised to continue to generate even when the market price becomes

negative. The proposal to extend the negative pricing rule is intended to remove this distortion to the market price signal from generators awarded CfDs in future.

Energy UK supports the intent of the extension of the negative pricing rule. However, there is a linked but separate question of which party ultimately takes on the risks arising from negative pricing. Leaving the risk entirely with the CFD generator is challenging for the generator to price and manage. Negative pricing is becoming an increasingly significant risk for all generators. The level of negative pricing in future years depends heavily on the composition of the future generation mix, which is driven by government policy. As that composition is not possible to predict in detail, it is correspondingly hard to predict the significance of negative pricing.

Given this context, one possible impact of the extension of the negative pricing rule is that it will affect the perception of investors of the level of revenue risk for projects supported by the CfD. Investors will conclude that CfD revenue risk has increased due to this rule change, so this will increase debt financing costs and reduce project investment gearing ratios. That in turn will lead to increased project costs and increased strike prices under the CfD. It is important to note that this risk of a change in investor perception is potentially independent of the actual change in risk from the rule change. We note that the accompanying Impact Assessment concludes a reduction in consumer bills due to reduced BSUoS. It is unclear whether the increased scheme and project financing costs have been incorporated into this assessment. Either way, we would welcome the opportunity to scrutinise an Impact Assessment covering only this precise proposal.

It may be less costly overall if some or all of the risk is taken by consumers, who are the ultimate counter-party in the CfD. In recognition of this, other support schemes for renewable generators have incorporated a degree of compensation for negative pricing, through arrangements that do not distort the market price formation (for example, by compensating generators if the total number of negative price hours in a year exceeds a pre-set threshold).

Another option would be to phase in the extension of the negative pricing rule. For example, the current rule specifies that CfD payments are halted after 6 consecutive hours of negative pricing have occurred. This 6 hour period could be reduced to 3 hours as a first step in extending the negative price rule.

We recommend that BEIS reviews further options for the allocation of negative pricing risk as part of the detailed implementation of this proposed extension of the negative pricing rule.

Beyond the brief review of system integration in the consultation document, which considered negative pricing, Energy UK recognises a wider set of issues on how best to incentivise and reward flexibility, across all levels and technologies on the electricity system. We, therefore, urge government to continue with the development of the Smart Systems & Flexibility Plan to deliver a framework to support the deployment of flexibility providers and therefore reduce the occurrence of negatively priced hours.

Broader still, Energy UK is concerned by the fundamental flaw in existing wholesale market design, whereby the market does not reflect the cost profile and remuneration requirements for zero short run marginal cost renewables. An integrated approach is needed for this wider challenge, to tackle the underlying causes of negative pricing, alongside other objectives for both the market and decarbonisation. Whilst the current proposal for an isolated rule change to the CfD has merit, it should be one part of a comprehensive approach to market design.

Energy UK notes that there is an upcoming CfE on the CfD scheme that will look at the longer-term development of the scheme. We welcome this CfE and encourage BEIS to ensure the content considers the wholesale market impacts of increasing volumes of CfD generation, the role for PPAs, a strong carbon price policy and the potential to adapt the scheme to new technologies such as Carbon Capture Usage and Storage (CCUS) and hydrogen.

**Phasing**

37. The government welcomes views on the preferred approach to maintain the cap on phased projects at 1500MW.

Energy UK accepts the proposal to keep the cap on phased projects at 1500MW for AR4. We agree that this could increase the likelihood of a greater number of applicants (including potential new entrants) being successful in future allocation rounds, thus further diversifying the projects in play. However, we note that the rationale for the 1500MW cap is becoming increasingly difficult to justify, and we therefore urge BEIS to review the cap ahead of future rounds, especially given that ScotWind projects may result in higher capacities due to density requirements.

We also suggest that the 1500MW should be reviewed for the following reasons:-

- The cap was originally instated during EMR formation in 2013 and, therefore, does not have consideration for the faster than expected technological innovation (e.g. larger turbines), the greater capacity that is being procured in each round and increased UK ambition for offshore wind.
- Increasing the cap would deliver further cost reductions through technological advancement and economies of scale
- The 1500MW limit is arbitrary – ScotWind projects do not have a limit and the limit imposed by The Crown Estate has been heavily criticised by industry
- A Power Purchase Agreement (PPA) market for offshore wind does exist but it is limited in the UK due to the finite number of large off-takers such as data centres and heavy industry.

We also note that auctions in other markets place restraints on single bidders acquiring certain capacity limits (e.g. 50% of total capacity in Portugal). Further discussion is needed on an appropriate cap on phased offshore projects and we believe the CfE on the CfD is a good opportunity to address this.

38. The government welcomes views on whether there are any barriers to developing a phased offshore wind project on a part-merchant basis.

It is widely understood that the scale of low-carbon electricity generation infrastructure deployment required to satisfy the net zero target will not be possible without CfDs. It is for this reason that Energy UK is strongly supportive of the continued use of the CfD scheme as the primary mechanism for supporting deployment of low-carbon electricity generation infrastructure. However, the use of CfDs should not preclude opportunities to deploy new low-carbon projects on a full or part merchant basis where such opportunities arise.

Phased offshore wind farms in particular offer opportunities to co-locate capacity that is covered by a CfD with capacity that is supported on a merchant basis. The LCCC recognises this scenario and provides the following guidance:

*“Any additional generating capacity that is separately metered and not a part of the Facility is not subject to the CFD and to all intents and purposes is distinct from the Facility and any obligations LCCC has under the CFD. In the specific case where a Generator can clearly identify the additional assets accounting for the additional capacity of 200MW from those comprising the 800MW Facility, and where the Generator can separately meter the resulting generating output of the additional capacity of 200MW; then such development could be possible. Nevertheless LCCC must be satisfied with such metering arrangement and therefore approvals should be sought by LCCC”*

Energy UK is satisfied that appropriate metering arrangements can be put in place to satisfy this guidance and therefore does not envisage any barriers to developing phased offshore wind projects on a part-merchant basis.

**Milestone Delivery Date**

39. The government welcomes views on the benefits, such as successful delivery of projects or reduced costs for consumers that would result from extending the Milestone Delivery Date for: (i) the project commitments route only, or also (ii) the 10% spend route.

Energy UK strongly recommends that the period of the Milestone Requirement (MR) is increased to at least 18 months for offshore wind, onshore wind and Remote Island Wind (RIW) technologies, for both the project commitments route and the 10% spend route. However, we note that this policy lever should not be looked at in isolation. Of most relevance is the relationship between NDD and Milestone Delivery Date (MDD). In our view, MDD needs to be extended even with the existing penalty regime, but the Government can be even more certain it is an acceptable amount of risk following NDD extension and particularly bid bonds.

For offshore wind farms, neither of these routes can be achieved within 12 months without very costly acceleration of the project. This requires decisions on technical solutions and suppliers to be taken almost immediately, unnecessarily expedited project finance, highly constrained ability to open up supply chains to UK entrants and negotiate with suppliers, unnecessary increases in the time cost of capital and reduced access to viable, next generation technologies. The unique scale and complexity of offshore wind compared to other CfD technologies means that the “generic” 12 month duration is too short.

Onshore wind projects are increasing in scale and complexity to maximise the opportunities that are offered from each site. This trend is one of the factors that is delivering further reductions in the cost of onshore wind. However, it can also require more time to finalise suppliers and technical solutions once a CfD has been secured. Compressing these timescales to meet an arbitrary 12 month deadline for the MDD can increase costs. For this reason, it would be most efficient to extend the MDD to at least 18 months.

For RIW projects, a key step in enabling the project is to secure a grid connection agreement. This will require confirmation from the transmission owner that new capacity in the grid interconnection to the island will be installed. The timescales for this confirmation are variable and, for this reason, the MDD should be increased to 18 months for RIW.

Regarding the 10% spend route, we note that there is an alternative approach that could be taken whereby developers commit to 5% spend after 12 months and 10% spend after 24 months. This approach would provide the breathing space and associated benefits outlined above but also deliver some reassurance to BEIS in terms of progress against milestones.

40. The government welcomes views on whether an extension should apply to all projects or only to particular technologies or sizes of projects.

For technologies other than offshore wind, onshore wind and RIW, meeting the Milestone Requirement within 12 months is not as challenging. However, given the severe consequences of not meeting the Milestone Requirement, this presents a significant risk to the project and, as a result, activities and expenditure may be brought forward to ensure sufficient margin to assure the due date is met. An extension for all projects would avoid this.

If bid bonds are introduced for Pot 1 and Pot 2 technologies (which Energy UK would support), then the Milestone Requirement need only provide a “backstop” assurance of progress with a project and can be extended to 18 months for all technologies without undermining the incentives for developers to deliver progress.

41. The government welcomes views on the length of an effective extension and the implications. Would an extension to a 15-month deadline be effective and if not, why?

Energy UK believes that an extension to the MDD to at least 18 months after the signing of a CfD would be most effective. The current 12 month MDD imposes an 'artificial' Financial Investment Decision (FID) on projects, particularly offshore wind which are complex projects with long development programmes. The current length of the MDD period acts as a restriction on how an investor would otherwise optimally plan and execute the procurement process. Extending the MDD could:

- Better align the spend and decision profile to a FID. In reality, expenditure and commitments are not required until at least 18 months after CfD.
- Increase competition amongst suppliers and reduce costs. For example it would improve the negotiation process because the developer has greater certainty over the design of the site and the pricing, which allows sufficient time for suppliers to understand project needs and develop capabilities / prepare bids. It also allows time to negotiate and close contracts resulting in more robust contract.

Encourage new entrant suppliers. Together with future visibility of future CfD auctions, a longer period between signing the CfD and MDD could encourage new entrants to enter the offshore wind industry which could improve competitiveness. The current MDD period favours incumbents as they require less time for technical clarifications. Extending the MDD could also provide opportunity for innovation and to explore new techniques and technologies.

### **Miscellaneous Allocation Regulation Changes**

42. Do you agree with the government's proposal to remove all references to "end date of the allocation round"?

Whilst Energy UK understands the rationale behind the proposals in this section in response to the events surrounding CfD Allocation Round 3 (AR3), we urge the government to consider the balance between introducing increased flexibility to government decision making and that the impact that would have on investor risk perception.

The key aim of the CfD scheme is to deliver low-carbon infrastructure at the lowest possible cost to the consumer and it is likely that, if some of the proposals in this section are brought forward, it would result in a material increase in overall project costs. This would be due to lenders charging a higher interest rate to reflect the uncertainty that would be introduced by these measures.

43. Do you agree with the government's proposal to add more detail on when key dates can be varied using a round variation notice?

Energy UK agrees with this proposal.

44. Do you agree with the government's proposal to remove the requirement to publish certain dates in the allocation framework?

Energy UK agrees with this proposal.

45. Do you agree with the government's proposal to provide an extra scenario under which the allocation process must commence?

Energy UK agrees with this proposal.

46. Do you agree with the government's proposal to make explicit the ability to amend the overall budget before the commencement of an allocation round?

Energy UK agrees with this proposal.

47. We would welcome views on adding additional powers to allow revision of a capacity cap before an allocation round commences.

Energy UK strongly disagrees with this proposal.

Developers must prepare bids some time in advance of the auction itself, to allow time for internal verification and approval. A key factor in preparing a bid is an understanding of the auction parameters, including the capacity cap. For this reason, the preference of developers is to minimise revisions to any auction parameter once the original auction announcement has been made. We appreciate that government may wish to reassess capacity post-application, but we would urge extreme caution in this regard and assess the impact to international attractiveness. It is far preferable for all parties involved to provide a more conservative guaranteed volume, and thus bankable capacity, rather than an uncertain higher figure subject to political risk

It has been a long established principle that Budget Revision is upwards only due to the impact on investor confidence of such late-stage changes. As with monetary budget and maxima/minima, any capacity cap amendment must be upwards only. However, our preference would be for no change to the allocation round parameters once they have been set in order to maintain investor confidence.

Energy UK therefore would urge that additional powers to allow revision of a capacity cap before an allocation round commences must be upwards only.

48. We would welcome views on adding additional powers to pause an allocation round between the commencement of the round and the issuance of CfD notifications.

Energy UK would prefer that there were no delays to future auctions but we recognise that pausing a round due to a significant external event is preferable to termination of a round. Therefore, pending clear detail on the circumstances around which a future round could be paused, Energy UK is willing to accept this proposal.

It is important that BEIS understands the implications that pausing an allocation round can have on project cost and therefore viability. Developers prepare bids, including target delivery windows and dates, on the basis of the specified timetable for the CfD auction completion and subsequent CfD notifications. If an allocation round is paused, this will inevitably lead to a delay in the CfD notifications and in the commencement of the CfD project construction. A delay in commencing project construction can have numerous impacts (for example, on supply chain timing and availability of project resources), all of which have cost implications.

Consequently, a delay to the allocation round could significantly change the project cost base, potentially increasing the total cost beyond the value used to prepare the original allocation round bid. This could have serious implications on a developer's ability to deliver a project. We do, however, understand the rationale behind the proposal given the events around AR3, and therefore would be open to a discussion with BEIS on the terms of the additional powers to ensure that they do not come into play unless auction termination is a genuine threat.