



Department for  
Energy Security  
& Net Zero

# Contracts for Difference for Low Carbon Electricity Generation

Call for Evidence on introducing non-price  
factors into the Contracts for Difference  
Scheme

Closing date: 22 May 2023



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# Contents

General information	4
Call for Evidence details	5
How to respond	5
Confidentiality and data protection	5
Quality assurance	6
Call for Evidence	7
Mechanism for implementing non-price factors	8
“Top-up” to the CfD strike price	9
Bid re-ranking	10
Amending valuation formula	11
Alternative mechanisms	12
300MW threshold and application to different technologies	12
Potential non-price factors	13
Non-price factors that could address deployment capacity, sustainability, skills and innovation	13
Non-price factors that could address issues identified with current market arrangements	16
Alternative non-price factors	17
Quantification of non-price factors	17
Impact of different models on different non-price factors	17
Compliance	18
Timing	18
Next steps	21

## General information

As part of the Government's Net Zero agenda, we have committed to a fully decarbonised electricity system by 2035, subject to security of supply considerations, with an ambition to deploy up to 50GW of offshore wind by 2030, including up to 5GW of floating offshore wind, as well as 70GW of solar PV by 2035. Delivering this will require rapid and sustained scale-up of low carbon deployment. The Contracts for Difference (CfD) scheme is fundamental to achieving this goal, supporting low cost, low carbon electricity generation.

In the longer term, our Review of Electricity Market Arrangements (REMA) will ensure that our market arrangements are fit for the purpose of delivering these ambitions cost-effectively for consumers. In the nearer term, to keep pace with the scale of change needed in the power sector in the coming years and following the work of the Skidmore review and the Offshore Wind Acceleration Taskforce, the Government is looking at how to make the Contracts for Difference (CfD) scheme more adaptable, forward looking and able to address a range of emerging issues in the renewable energy industry.

This Call for Evidence seeks views and evidence on whether potential reforms to the CfD, to value factors other than price in CfD auctions, could help accelerate renewable energy deployment and address potential energy security issues without impacting UK investment. If, following this Call for Evidence and further policy development, appropriate changes to the CfD scheme have been identified and deemed more effective than other potential policy levers, then the Government would consult on these, where appropriate.

## Call for Evidence details

**Issued:** 17 April 2023

**Respond by:** 22 May 2023

**Enquiries to:**

Email: [BEISContractsforDifference@beis.gov.uk](mailto:BEISContractsforDifference@beis.gov.uk)

**Consultation reference:** Call for Evidence on introducing non-price factors into the Contracts for Difference Scheme.

**Audiences:**

The Government welcomes responses from anyone with an interest in the policy area. We envisage that the Call for Evidence will be of particular interest to those considering the development of new low carbon energy projects in Great Britain, electricity traders and suppliers, businesses operating in the energy sector, and consumer and environmental groups with an interest in the electricity sector.

**Territorial extent:**

The CfD scheme applies to the UK but does not currently operate in Northern Ireland.

## How to respond

Your response will be most helpful if it is framed in direct response to the questions we have asked, though further comments and evidence are also welcome. When responding, please state whether you are responding as an individual or representing the views of an organisation. In view of the ongoing coronavirus situation, we are requesting responses by electronic means only. Please do not send responses by post to the department, as we may not be able to access them.

**Respond online at:** [beisgovuk.citizenspace.com/clean-electricity/cfd-non-price-factors-cfe](https://beisgovuk.citizenspace.com/clean-electricity/cfd-non-price-factors-cfe)

or

**Email to:** [BEISContractsforDifference@beis.gov.uk](mailto:BEISContractsforDifference@beis.gov.uk)

## Confidentiality and data protection

The information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential, please tell us but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable data protection laws. See our [privacy policy](#).

We will summarise all responses and publish this summary on [GOV.UK](#). The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

### Quality assurance

This consultation has been carried out in accordance with the Government's [consultation principles](#).

If you have any complaints about the way this consultation has been conducted, please email: [beis.bru@beis.gov.uk](mailto:beis.bru@beis.gov.uk).

# Call for Evidence

Government is looking at ways of amending the Contracts for Difference (CfD) scheme to address specific challenges facing the renewable energy industry, including recommendations stemming from the Offshore Wind Acceleration Taskforce report. The Department for Energy Security and Net Zero is therefore launching this Call for Evidence to consider ways in which the scheme could capture the wider value of renewable projects. This is part of our work to continue to evolve the CfD scheme, as we consider long-term market arrangements through the Review of Electricity Market Arrangements (REMA).

Industry challenges that have been identified by stakeholders include: renewable energy supply chains struggling to cope with upward pressure on costs; increased supply chain disruption; surging global demand for renewable energy; and limited manufacturing capacity for key components. While current government policy addresses some of these challenges (for instance, the Offshore Wind Manufacturing Investment Scheme), government is looking at ways in which Contracts for Difference policy could be developed to better address current issues. We are also considering some of the challenges identified in the REMA case for change and how Contracts for Difference policy can help address those issues. As part of this work, government is looking closely at what other major renewable energy markets are doing in similar policy areas.

Contracts for Difference are a 15-year private law contract between low-carbon electricity generators and the Low Carbon Contracts Company, a government-owned company that is operationally independent and manages CfDs at arm's length from government. Contracts are awarded in a series of competitive auctions; the lowest price bids are successful, which drives efficiency and cost reduction and is a low-cost way to secure clean electricity. Generators receive revenue from selling their electricity into the wholesale market. However, when the market reference price is below the strike price, generators receive a top-up payment for the additional amount. Conversely, if the reference price is above the strike price, the generator must pay back the difference.

CfDs have been hugely successful in driving down deployment costs. This downward pressure has quickly passed through to the supply chain, where low margins and a tough economic environment are making it more challenging for industry to support longer term investments, for example in skills, innovation, or wider system flexibility and operability. In the near-term, there is a risk of deployment challenges and bottlenecks arising from these global pressures.

The government is exploring on the back of the Skidmore Review and Offshore Wind Acceleration Taskforce ways of mitigating these challenges, including the introduction of non-price factors in the CfD auction allocation process. This would mean the cheapest bids would no longer automatically win a CfD, applicants would have to balance overall costs with other factors, for example sustainability, addressing skills gaps, and enabling system flexibility and operability (i.e. non-price factors). While this could encourage developers to adapt their bidding strategies in a way that strengthens their investments in a wider range of factors in support of sustainable renewable energy deployment and security of supply, it could also increase deployment costs and consequently costs for consumers. It would also add to the complexity of the CfD auction, including creating an increased risk of unintended consequences from auction design decisions. Changes therefore have to be carefully considered to understand their full impacts, and how to introduce them in a way that would best address emerging challenges and bottlenecks, whilst minimising consumer impacts.

As part of REMA, we are considering whether the system integration challenges are best addressed by modifications to the CfD, or by more transformational changes to our overall market design. This Call for Evidence seeks input on how these modifications to the CfD might be designed should government choose to take this option forward. In that case, the government would aim to consult on more detailed proposals later in the year.

We are seeking views and responses on these proposed changes from anyone with an interest in renewable energy deployment and the CfD in general. The Call for Evidence is split between 'how' non-price factors could be introduced and enforced in the CfD (including which projects might be eligible), and what type of factors government could consider. We expect this Call for Evidence document will be of particular interest to those considering developing new low carbon energy projects in Great Britain (GB), businesses involved in low carbon electricity generation supply chains, and consumer and environmental groups with an interest in the electricity sector.

Note that this Call for Evidence does not imply that the Government will necessarily introduce reforms to the CfD. Such a decision will be taken on the basis of the evidence received through this Call for Evidence and wider policy considerations. Government will consider sources and analyses such as an assessment of impacts on renewable energy deployment, costs to electricity consumers, impact on UK investment certainty and wider value for money considerations. The impacts on the wider ecosystem of the renewable energy industry, not least industry's readiness to play its share in addressing those challenges will also be considered. Other policy levers are also being considered. Once demonstrated that our deployment and investment ambitions will not be negatively impacted and that other policy levers are less appropriate, a decision on non-price factors could be taken. This decision will follow further engagement with industry and any policy implementation will be undertaken with appropriate time and consideration to maintain the integrity of individual CfD allocation rounds.

## Mechanism for implementing non-price factors

Contracts for Difference are currently awarded on the basis of a competitive auction, where developers of low carbon power projects submit bids, the lowest priced of which win a contract. The auction mechanism currently awards contracts based on price, budget availability and GW capacity. Developers must put in bids which represent their minimum viable price for generating electricity, reflecting the cost of investing in a particular low carbon power project. The auction mechanism identifies those participants that would be willing to accept a contract at the lowest bid or 'strike' price, and awards contracts until a pre-specified budget is used and/or a predetermined capacity limit is reached. Government also determines the maximum prices it is willing to pay for each low carbon technology (the 'Administrative Strike Price'), which act as a backstop to protect consumers from subsidising excessively expensive capacity.

Part of the exploratory work on non-price factors involves developing a mechanism by which factors other than price are taken into account through the CfD allocation, that also includes an appropriate penalty system for non-delivery of these factors. When designing such a mechanism some of the key principles to which we would adhere and risks to consider would include ensuring value for money; implications for competition in auctions and for electricity consumers; subsidy control principles; addressing barriers to deployment; and limiting unintended consequences. Any new policy that government could introduce that rewards non-price factors through the CfD scheme would replace existing policies that pursue similar or related aims, for example Supply Chain Plan policy.



So far, government has considered three models on how non-price factors could be introduced into the CfD. It should be noted that each proposed model comes with inherent risks outlined above which government would need to consider in more detail following this call for evidence before pursuing any changes in the current CfD policy.

### “Top-up” to the CfD strike price



The model would introduce a “top-up” to the CfD strike price. Auctions would be run exactly as they are now, with no change to the bidding process. After the auction has been run, projects that made it through the auction, and that submit high-scoring non-price factors, could receive a top-up to their strike price by [X%] (potentially on a sliding scale) for the first [Y] years of their CfD Contract. This could incentivise developers to commit additional investments through their project that support the government’s deployment targets, and address challenges the industries are facing. Projects that do not score higher than a pre-determined minimum standard would not receive a “top-up”.

The “top-up”, if introduced, could potentially be paid over the first few years of the project, so a developer can access the uplifted revenue stabilisation earlier in their contract.

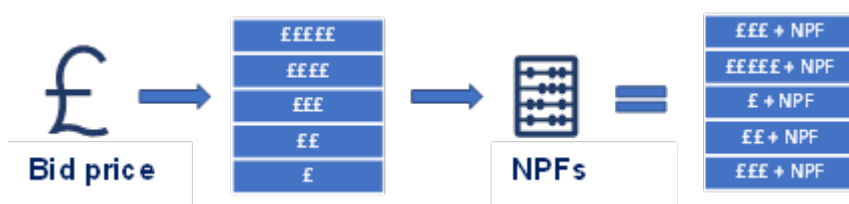
Projects would be monitored on their implementation of non-price factor commitments, with financial penalties proportionate to the level of non-delivery. Any penalties would nonetheless need to be sufficiently large as to act as a credible disincentive to non-delivery.

Any “top-up” would need to comply with subsidy control principles, meaning that it would need to be proportionate and limited to the minimum amount necessary to remedy an identified issue or challenge. The objectives would be re-assessed before each allocation round.

Although this model involves the fewest changes to the CfD and is the least complex option to implement, setting an appropriate value for the “top-up” that neither under-pays nor over-compensates applicants, from both a value for money and subsidy control perspective, could prove challenging. This model would avoid increasing complexity of decision-making when setting auction parameters which could otherwise result in unintended consequences for deployment and value for money. Nonetheless, this model represents an overall reduction in the Government’s ability to control the impact of the CfD on electricity bill payers.

*The Government would be interested to hear about the extent to which respondents support this mechanism for introducing non-price factors, including when the most appropriate time for determining the value of the top-up could be, suggested scale of the top up as well as any evidence supporting the views. Views are also invited on whether there are any unintended consequences that would come from the top-up model.*

## Bid re-ranking



Under the current CfD scheme, renewable energy projects' sealed bids for each pot are ranked in the bid stack on the basis of price per megawatt-hour for each delivery year. The estimated budget impact of each project is calculated in ascending bid price order until the budget (or capacity cap if one has been set) for that pot is exceeded, at which point no further CfDs are awarded. In the bid re-ranking model, non-price factor scores would have a direct impact upon the bid stack ranking methodology, making it possible for a project scoring sufficiently highly on non-price factors to win a CfD ahead of another project bidding into the auction at a lower price but scoring poorly on non-price factors. This is similar to the model developed in many countries of the European Union. This model could incentivise CfD applicants to submit bids that take into account a range of deployment and energy security issues.

The Government has identified two sub models for implementing this methodology. The first sub model is to define a reduction in the bid price of a project, for the *purpose of bid stack ranking only*, that would be awarded for a certain non-price factor score. For example, if the policy decision was taken that a score of 100% in non-price factors should be awarded a £X/MWh reduction in bid price for the purpose of bid stack ranking, any project achieving this score could be considered for a CfD ahead of any project bidding in up to £X/MWh lower (dependent on those projects' own non-price factor scores). The reduction in bid price used for the purpose of bid stack ranking for each pot could be pro-rated to projects' non-price criteria scores on a linear scale. Setting an appropriate value for this reduction may however prove challenging.

The second sub model currently under consideration would amend the bid stack ranking methodology to define the proportion of marks that would be awarded for bid price and non-price factor scoring respectively. For example, if the policy decision was taken that 70% of marks should be awarded on the basis of bid price and 30% on the basis of non-price criteria, projects could be awarded a mark of 0-7 based on their bid price, where 7 is awarded to the lowest bid in the auction and 0 is the Administrative Strike Price, with bids scoring on a linear scale between the two. Projects could be awarded a mark of 0-3 based on their non-price factor score, where 3 is a score of 100% and 0 is the minimum score required to qualify for the allocation round (e.g. 60% pass mark). The summation of these two scores would give a project's final score for that auction, used to determine final bid stack ranking for each pot. Note that setting appropriate weighting for non-price factors may prove challenging.

It is important to note that under either of the two models listed above the auction would run as currently, excepting the changes to the bid stack ranking methodology. Once the bid stack order is determined for each pot, the method by which budget impact of each project and final strike price is determined would be unchanged. Specifically, under the model where an effective 'reduction' in bid price is awarded for a certain non-price factor score, this would only be applied for the purpose of bid stack ranking and not carried forward into budget or strike price calculations.

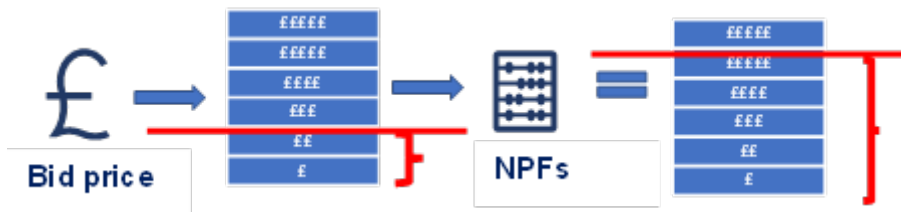
Projects would be monitored on their implementation of non-price commitments through regular monitoring meetings until a project is commissioned. Failure to deliver on some or all

commitments would be subject to proportionate financial penalties, which should nonetheless be sufficiently large as to act as a credible disincentive to non-delivery.

Compared to the top-up model described above, this model does involve more changes to the CfD model, but still allows most of the CfD process to be run as it is currently. Government is aware of the additional complexity this model could add to the auction mechanism and is considering the extent to which risks of unintended consequences exist, including for costs to consumers and/or renewable energy deployment. This model would also require careful consideration to ensure that it is compliant with subsidy control principles.

*The Government would be interested to hear about the extent to which respondents support this mechanism for introducing non-price factors. Views are also invited on whether there are any unintended consequences that would come from the bid re-ranking model.*

### Amending valuation formula



This model involves amending the valuation formula used to estimate the annual budget impact of project bidding into a CfD Allocation Round. This formula determines when the assigned budget of an auction has been exhausted and therefore which of the projects of that auction will be successful in winning a CfD.

If implementing this model, the valuation formula would be amended such that projects scoring more highly on non-price factors would be calculated to have a proportionally lower estimated budget impact. The cumulative impact of this would potentially enable additional project(s) to come in under the budget and successfully win a CfD, also resulting in an increased strike price for all successful bidders in that scenario. The incentive in this model would be to maximise performance on non-price factors to maximise a project's chance of being successful in the auction by diminishing its budget impact.

The method of amendment to the valuation formula, and the exact reduction in estimated budget impact that a project would benefit from in £ per MWh for a given non-price criteria score, would be announced in advance of the window for submitting non-price criteria applications for assessment. This may prove challenging to calculate, however, and the interaction with budget may mean government would need to apply auction parameters differently in future to control spending.

Projects would be monitored on their implementation of non-price commitments through regular monitoring meetings until a project is commissioned. Failure to deliver on some or all commitments would be subject to proportionate financial penalties, which should nonetheless be sufficiently large as to act as a credible disincentive to non-delivery.

The design of this model may, however, enable a free-rider effect whereby projects who are not submitting high scoring non-price factors nonetheless benefit from others that do, since more projects could ultimately secure a winning bid through this model. This model would be a significant change in the role of the CfD budget (controlling costs to consumers), even with appropriate constraints in place. This model would weaken the ability of a budget to limit those

costs and also create additional complexity where the valuation formula for running the auction differs from that used to estimate costs consumers will face.

*The Government would be interested to hear about the extent to which respondents support this mechanism for introducing non-price factors. Views are also invited on whether there are any other unintended consequences that would come from this model of amending the valuation formula.*

### Alternative mechanisms

The Government is interested to hear views on any alternative mechanisms for introducing non-price factors that should be considered and any evidence supporting those views. This could include models outside of the CfD mechanism.

### 300MW threshold and application to different technologies

As a matter of fairness, the Government is considering which projects could be required to, or be exempted from, submitting non-price factors.

Generating stations with a generating capacity of 300MW or more are currently subject to Supply Chain Plan requirements<sup>1</sup> because the Government considers that this policy should capture projects large enough to make a material contribution to the Government's Supply Chain Plan objectives in the low carbon electricity generation market. All floating offshore wind projects are also subject to Supply Chain Plan requirements because of their unique position as a technology that is on the verge of mass commercialisation and deployment, but they are only required to fill out a smaller bespoke Supply Chain Plan questionnaire. Smaller sub-300MW projects from other technologies were excluded because developing an application would be disproportionately expensive.

The Government is seeking views on whether it is fair to keep the current 300MW threshold limit in the event that it decides to introduce non-price factors. It is seeking views on where the balance lies between on the one hand the possible administrative and financial burden of partaking in the process for sub 300MW projects, and on the other hand acknowledging that it may be fairer to require all projects to submit applications considering the potential rewards for submitting and delivering high scoring non-price factors.

Alternative models could include the development of a bespoke set of non-price factors for sub-300MW projects, along the lines of the sub-300MW Floating Offshore Wind Supply Chain Plan Questionnaire to account for the smaller sizes of projects. Government would also consider whether bespoke non-price factors are needed for each eligible technology, specifically whether all renewable energy technologies face the same type and scale of challenges and deployment shortfalls. This would further complicate the auction process, however. Any bespoke set of factors would be designed so that they do not advantage or disadvantage a particular technology in relation to others. Another model could be to make the submission of non-price factors voluntary for some or all sub-300MW projects depending on the technology. This would give developers the option of applying for the rewards if they considered this appropriate for the benefit of their project, but would also require delivery of the non-price factors and the associated penalties for non-delivery. However, this option may not work with all potential models for non-price factor.

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<sup>1</sup> <https://www.gov.uk/government/publications/contracts-for-difference-cfd-allocation-round-5-supply-chain-plan-questionnaire-and-guidance>

*The Government is interested in views on which projects and technologies should be eligible for non-price factors, referencing specifically any barriers to deployment that might apply, and what potential consequences inclusion or exclusion might have for those technologies and a given CfD auction.*

### Potential non-price factors

When designing non-price factors, government believes there are a number of principles that should be adhered to. These include;

- ensuring non-price factors encourage commitments and actions that deliver the maximum impact in terms of addressing challenges being faced by the renewable energy industries, specifically the challenges identified above and including but not limited to sustainability, skills and innovation, barriers to integrations with the future electricity system and perceived lags in investment to support increased renewable deployment;
- ensuring non-price factors are quantifiable and can be objectively measured, ensuring good value for money including to the electricity consumer;
- limiting the number of non-price factors to reduce administrative burdens and limit overall cost;
- ensuring that non-price factors are feasible to implement within a reasonable period of time (within the scope of a project); and,
- ensuring that non-price factors are compliant with government's international commitments.

The Government has prepared a potential long-list of such factors, designed to match specific challenges and bottlenecks. The list is not exhaustive however, it is indicative of the sort of questions that could be developed. Government is keen in the first instance to understand whether the right family of factors is being considered, before going into detailed design.

### Non-price factors that could address deployment capacity, sustainability, skills and innovation

Renewable energy supply chains are currently struggling to cope with upward pressure on costs; increased supply chains disruption; and surging global demand for renewable energy but insufficient manufacturing capacity. These pressures may have an erosive effect on wider investments necessary to increase our energy security and support deployment. In particular, there has been:

- a lag in investment in the longer-term sustainability of renewable energy industries including their environmental impact and access to key materials and resources;
- a lag in investment in manufacturing and infrastructure capacity necessary to deploy renewable energy projects;
- a potential knock-on impact on innovation investment; and
- a potential knock-on impact on investment in the skilled people needed to deploy and operate renewable energy infrastructure.

Government could consider a number of potential non-price factors aimed at encouraging actions and commitments that could help to address some of these challenges.

Major renewable energy markets such as EU Member States, and the USA, are also using non-price factors to address these issues by valuing factors that encourage deployment capacity, sustainability, skills and innovation.

### Capacity Building

The government is considering factors that would work to encourage renewable energy capacity creation, specifically the necessary manufacturing and infrastructure facilities needed to resolve bottlenecks in deployment.

Whilst rapidly scaling up, global manufacturing capacity faces real challenges in delivering UK and global deployment targets. Investments in such capacity have long lead-in times, carry considerable risks for rapidly growing industries, while market conditions are stretched due to current global commodity supply and price crises.

The following factors could be considered to help address this challenge. Illustrative examples of how the factors could be measured have been included alongside in italics.

- Developing the supply chain: rewarding developers for using Small and Medium Enterprises (SMEs). *This could be measured by allocating points based on the percentage of work as a share of total project cost carried out by SMEs.*
- Funding industry initiatives: rewarding developers for funding industry initiatives designed to increase renewable energy capacity. *This could be measured by allocating points based on the £ per MW put towards such funding.*
- Collaboration to utilise infrastructure: rewarding activities demonstrating collaboration with other developers or suppliers to develop the infrastructure required for deployment. *This could be measured by allocating points based on the number/type of collaborative actions done by a project.*
- Investment in infrastructure: rewarding investment in the infrastructure needed to build capacity (e.g., ports, grid, etc). *This could be measured by allocating points based on the £ per MW put towards such funding.*
- Investments in assisted areas<sup>2</sup>: rewarding, among others, investments created by the project in assisted areas (i.e., more deprived areas near deployment zones). *This could be measured by allocating points based on value provided to assisted areas.*

### Sustainability

The government is considering factors that help drive the sustainability of renewable energy industries, specifically its ability to reduce its carbon impact and access the resources and materials it needs to deploy sustainability at scale in the longer term.

The importance of driving sustainability in renewable energy supply chains is two-fold; firstly, government believes that building a supply chain that is designed with such issues in mind such as provenance and mix of materials, recycling and reusing, reduces some of the capacity pressures that pose risks to renewable energy deployment in the longer term. Secondly,

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<sup>2</sup> Likely drawn from definitions under the Industrial Development Act, and equivalents in the European Union or other relevant jurisdictions.



reducing the environmental impact of supply chains is an important contribution to the government's Net Zero ambitions.

The following factors could be considered to address this challenge:

- Sustainable decommissioning: rewarding work being done to help an industry move towards sustainable decommissioning practices. *This could be measured by allocating points based on the recyclability rate of materials.*
- Sustainable procurement: rewarding actions that increase the sustainability of the procurement, operations and maintenance phases of a project (such as using recyclable materials and minimising emissions from transport and construction, minimising use of rare earths, use of green steel, etc). *This could be measured by allocating points based on performance against a sense of individual sustainability benchmarks for each issue (e.g., recycling, carbon reduction, use or avoidance of certain materials etc).*
- Decarbonisation: rewarding low carbon intensity supply chains. *This could be measured by allocating points based on a project's lifetime CO2 equivalent emissions figure for the construction and operations phases.*

### Innovation

The government is considering factors that support innovation in renewable energy deployment, specifically helping to address sustainability and capacity issues. Pressures on project, developer and supplier costs should not impact other aspects of deployment such as innovation.

This is why the following non-price factors could be considered:

- Investment in R&D: rewarding sums invested in high ambition R&D. *This could be measured by allocating points based on £ per MW invested in R&D.*
- Use of new technologies: rewarding the use of new technologies in the construction, operations and maintenance phases of a project. *This could be measured by allocating points based on the £ per MW spent on new technologies used.*

### Skills

The government is considering factors that would encourage investment in the skills needed to strengthen the supply chain, specifically where known shortages are starting to affect deployment, in part due to insufficient investment in skill capacity building.

This is why the following non-price factors are being considered:

- Apprenticeships: rewarding developers for creating apprenticeships, within a project. *This could be measured by allocating points based on the number of positions created by a project in relation to a project's size.*
- Skills gaps and shortages: rewarding investment in actions that contribute to reducing skill gaps and shortages. *This could be measured by allocating points based £ per MW spent on targeting specific skills gaps.*

## Non-price factors that could address issues identified with current market arrangements

Current market arrangements have worked well in meeting our objectives for dramatically lowering greenhouse gas emissions from electricity generation, while maintaining energy security cost-effectively. However, our commitment of a fully decarbonised power sector by 2035, subject to energy security, will require additional policy changes and potential future electricity market reforms. The challenges facing GB's electricity market include delivering the investment needed to decarbonise and ensuring a reliable supply of electricity with rising demand.

Through the REMA programme<sup>3</sup>, the Government has set out a case for change to develop its understanding of medium to longer-term challenges of a low-carbon electricity system under current market arrangements. The case for change identified key market challenges, including increasing system flexibility<sup>4</sup>, retaining system operability<sup>5</sup> (through low carbon ancillary services), and providing efficient locational signals to minimise system cost.

REMA is considering the role of existing support schemes, including the CfD, in addressing these challenges. Options range from minor adjustments to current mechanisms to more significant whole-system reforms. These are set out in the REMA consultation document published in July 2022. We will need to understand the full impact of any proposals before implementing them, particularly any unintended consequences.

In parallel, there is potential to consider addressing some of the challenges identified in the short to medium term through existing mechanisms, such as the CfD scheme. Alongside significant benefits, in some cases deployment of new renewable capacity may be associated with externalities impacting the overall system. We are seeking input on where there may be opportunities to internalise such impacts through non-price factors. We think non-price factors would be most appropriate in those cases where a specific capital expenditure could increase the value of a renewable generator to the system. System impacts that could be internalised through non-price factors in the CfD auction include:

**Managing variability:** An efficient system requires high amount of flexibility to balance the variability of renewables. However, the government and Ofgem's Smart System and Flexibility plan<sup>6</sup> identified that, while the CfD scheme drives investment in renewable generation assets, flexible technologies cannot compete directly in the CfD scheme, which means they are not on a level playing field in the market. This could contribute to an inefficient balance of variable generation relative to flexibility. Options to address this in the CfD scheme would need to consider unintended impacts on other forms of flexibility. Predictable generation technologies which reduce the overall need for flexibility could also be valued here.

**Operability:** system operability is a significant challenge for the future market. Certain responses to the REMA consultation suggested the cost of installing the equipment to provide ancillary services can make bids uncompetitive in CfD auctions. Additionally, most generators

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<sup>3</sup> <https://www.gov.uk/government/consultations/review-of-electricity-market-arrangements>

<sup>4</sup> Flexibility is the ability to shift the consumption or generation of energy in time or location - it is critical for balancing supply and demand, enabling the integration of variable renewables and maintaining the stability of the system.

<sup>5</sup> Operability refers to the actions that the system operator regularly needs to undertake to ensure the safe and efficient movement of power across the network, including through ancillary services: frequency response, reserve, inertia, voltage control, constraint management and system restoration.

<sup>6</sup> <https://www.gov.uk/government/publications/transitioning-to-a-net-zero-energy-system-smart-systems-and-flexibility-plan-2021>



must take a final investment decision before they know if they will be successful in real-time ancillary service markets, discouraging that investment. Options to address these issues directly in the CfD will be weighed against other options being considered under REMA to improve coordination between the CfD and existing ancillary service markets.

**Location:** Decisions on where to locate a generation asset are largely driven by the availability of resource, planning and consenting decisions, access to grid connections, and network charges. The REMA consultation sought views on the most effective way of delivering locational signals to drive efficient investment and dispatch decisions of generators, demand users, and storage. One suggestion raised by respondents was to send such signals through renewables support schemes, such as the CfD, although significant further work would be needed to assess whether appropriate.

Views collected through this Call for Evidence will be used to support policy development alongside the REMA programme. Any investment signals sent through non-price factors will only be effective if generators are exposed to the right real-time market signals as well, to ensure they operate in a way that most benefits the system, and so responses will be considered in the context of wider REMA market reforms.

### Alternative non-price factors

The Government is interested to hear from respondents on whether there are any alternative potential non-price factors, other than those outlined above, that would meet the policy objectives of ensuring maximum impact in terms of benefit deployment capacity, and addressing barriers to system integration, as well as adhering to the other principles outlined above, namely ensuring objectivity, and minimising administrative burdens on developers. Any supplementary suggestions would need to align with existing government policy on related matters (whether on the levelling up agenda, or free ports, for instance).

### Quantification of non-price factors

When considering the design of non-price factors, a guiding principle is to ensure that factors are fully objective and quantifiable to ensure fairness and transparency. For a number of the potential non-price factors outlined above, options for quantification have been suggested. These are high level and not exhaustive or exclusive. The Government would be interested to hear from respondents as to whether there are alternative ways of quantifying the factors set out above. The Government would also be interested in views on whether there are any factors for which a more qualitative method of assessment would be more appropriate.

### Impact of different models on different non-price factors

Government is also interested in views as to how the three non-price factor models introduced above could have different impacts on the relevance and value of the potential choice of non-price factors themselves. Government is specifically interested to hear whether the top-up, bid re-ranking or valuation formula models might themselves affect behaviours towards investment in capacity building, sustainability, innovation, skills and system flexibility, operability or location.

## Compliance

Ensuring developers deliver on any non-price factor they put forward would be central to the impact of any reform, and central to its value for money assessment. When considering existing precedent, under Supply Chain Plan policy, the Low Carbon Contracts Company (LCCC) currently has the right to terminate a CfD contract for non-delivery of commitments. Contract termination may be disproportionate in the context of non-price factors considering their more precise and quantifiable individual impact.

The government is therefore considering options for an alternative and effective deterrent to support the key principles of delivery and compliance, while minimising the risk of auction gaming.

Penalty options for non-delivery of commitments that could be considered include:

- The withdrawal of any “top-up” - if a financial “top-up” were introduced.
- Having a set range of financial penalties, proportionate to the level of non-delivery of a non-price factor.
- Netting off penalty payments from CfD revenues.

*The government would be interested to hear views on the above options and whether they could provide a credible and effective disincentive for non-delivery. Other options that could provide a credible and effective disincentive for non-delivery are also welcome, even non-financial penalties.*

## Timing

Government is also seeking views and evidence as to the best moment to introduce non-price factors into the CfD process, in recognition that many actions required under non-price factors could have significant lead-in times and that publishing the criteria shortly before an allocation round might be too late. The government could introduce and publish the non-price factors for each allocation round, for example, up to two years in advance. Note that for offshore wind, while some countries operate non-price factors at seabed leasing stage, the UK model is different in so far as the Crown Estates have oversight of this process.

*The government would be interested to hear views on the question of non-price factor timing, and the best moment to introduce them.*

### **Call for Evidence questions:**

*Please provide supporting evidence with all views provided.*

### **In terms of a mechanism for implementation, views are invited on:**

1. **To what extent do you support the top-up model as a mechanism for implementing Non-Price Factors and are there any unintended consequences that come from this model?**

2. **To what extent do you support the bid re-ranking model as a mechanism for implementing Non-Price Factors and are there any unintended consequences that come from this model?**
3. **To what extent do you support the model of amending the valuation formula as a mechanism for implementing Non-Price Factors and are there any unintended consequences that come from this model?**
4. **Are there any additional risks of unintended consequences (e.g., for renewable energy deployment, auction design / competition and consumers) you have identified with certain models and think should be considered?**
5. **Ways in which the models for a mechanism for implementation could be improved?**
6. **Are there alternative mechanisms that government should be considering (including models outside of the CfD mechanism)?**
7. **Which projects (in terms of size) and technologies do you think should be eligible for non-price factors?**

**In terms of potential non-price factors, views are invited on:**

8. **Are the factors outlined above on addressing capacity building, sustainability, skills and innovation, the right ones to meet supply chain challenges, and are there any unintended consequences or issues in terms of monitoring, that could come from these?**
9. **Are there alternative non-price factors that should be considered?**
10. **Is valuing non-price factors the right approach to address the specific issues identified related to system flexibility, operability and locational signals, and could there be any unintended consequences or better ways to address these issues through the CfD scheme or other policy instruments?**
11. **Are there any other issues identified in the REMA case for change that could be addressed through non-price factors?**
12. **What financial value would need to be attributed to the potential factors outlined above to incentivise ambitious behaviour for each topic?**

**In terms of quantifying and valuing non-price factors, views are invited on:**

13. **Are there alternative ways of measuring and monitoring the non-price factors than the examples outlined in this Call for Evidence. The government would also be interested in your views on whether there are any factors where a more qualitative method of assessment would be more appropriate?**
14. **How we could measure non-price factors to value system flexibility, operability, and location?**

**15. Of the models for implementing non-price factors (top-up, bid re-ranking or valuation formula), are some likely to be more effective for certain non-price factors than others?**

**In terms of compliance, views and invited on:**

**16. Are the compliance and penalty options for non-delivery appropriate and proportional, and whether other alternatives could be considered?**

**In terms of timing, views are invited on:**

**17. When would be the best moment to introduce non-price factors in the CfD process and is the government's initial suggestion (up to 2 years in advance) appropriate?**

## Next steps

Following the close of this Call for Evidence, we will analyse the responses, summarise the views expressed and set out decisions in a government response.

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This consultation is available from: [www.gov.uk/government/consultations/introducing-non-price-factors-into-the-contracts-for-difference-scheme-call-for-evidence](https://www.gov.uk/government/consultations/introducing-non-price-factors-into-the-contracts-for-difference-scheme-call-for-evidence)

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