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

The Association for Renewable Energy & Clean Technology (REA) is pleased to submit this response to the above consultation. The REA represents a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are over 500 corporate members of the REA, making it the largest renewable energy trade association in the UK.

Of further relevance to this consultation, the REA has many renewable power generators who have previously been supported under the CfD or RO. This includes member forums focused on biomass power, energy from waste, landfill gas, green gasses, advanced conversion technologies and hydrogen.

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 are any unintended consequences that come from this model?

The REA supports that this model presents the simplest solution to rewarding some Non-Price Factors (NPFs). However, we suggest that providing the top-up as a premium after the auction is unlikely to drive the level of behavioural change being sought.

It is unclear if auction participants will have a good view of what top-up value NPFs will have. If the value is not considered or adequately understood by participants when bidding into the auction, it is unlikely to drive the desired outcomes in the auction.

2. To what extent do you support the bid re-ranking model as a mechanism for implementing Non-Price Factors and are there are any unintended consequences that come from this model?

Of the three models presented in the consultation, the REA suggests the second model is likely the most effective. This model builds the NPF premium into the bidding process, while also prioritising price. As a result, participants should be incentivised to both reduce costs and balance that against being rewarded for good quality NPFs to clear the auction.

This increase will however need to be appropriately recognised within the auction budget. Only option 3 currently has any form of clear budget variation assigned with the application of NPFs. The REA suggest that having clear values assigned to each NPF and abilities to demonstrate budget variation, will need to be present in the design of Option 2.

REA recognise that this will make the auction more complicated, although likely less complicated than the third option as currently stated. Members have raised significant

concerns about whether introducing this level of complexity could be detrimental and lock smaller developers, or those unable to deliver NPFs, out of the auction. To combat this, the auction process will need to be carefully designed, ensuring opportunities for smaller generators and that a range of technologies can participate. It will be essential that clear guidance and modelling are provided to explain how NPFs will be valued and weighted in the re-ranking process so that market participants have a good chance of being able to design projects appropriately.

Equally, it will be important that the re-ranking process is suitably transparent. Demonstrable and objective scoring criteria will be needed, and not rely solely on the organisation running the auction to score an NPF bid based on their own interpretation, which could introduce biases or unfair auction practices. It will be important that it is clear how and why a bid achieved a certain score and that there is an auditable paper trail in order to demonstrate why a score is fair.

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 are any unintended consequences that come from this model?**

The REA recognise the benefit that Option 3 presents in being able to accurately see the value of NPF's adjusted in the overall budget for the CfD allocation round. Something the other two options are not currently designed to do. This will require there being a clear value applied for each NPF, and that value than being a discount on the strike price, to lead to a subsequent budget variation which would be applied. For example, if a project bids £50 but has £5 worth of NPFs benefits above those of the core tender, then it will need to be clear that they are to be evaluated as £45 in the budget.

However, overall, we suggest that the third model is likely to be the most complicated of the options when it comes to participants being able to model potential CfD revenues or what they can expect if they clear the auction. As a result, we suspect that such a model may lead to unintended auction behaviours, such as over-relying on NPFs to lower a project's impact on budget while still having a comparatively high strike price.

We suggest that, unless designed very carefully and the process is highly transparent, the market signal that this model would introduce, may not deliver the auction outcomes that the Government is aiming for, so it is not currently our preferred option. That being said, we think that certain budget-responsive design elements could be built into option 2, as discussed in question 2.

4. **Are there are 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?**

There are concerns amongst the members of the REA that all these models could unfairly benefit larger developers who may have more ability to integrate NPFs into their business models and have the economies of scale to present the most significant benefits. The introduction of NPFs needs to be done in a way that does not

automatically become a barrier to smaller developers who may lack the scale to deliver NPFs even if the projects can be built at lower costs. Thresholds for introducing NPFs could be considered or enabling separate auctions that still allow smaller projects an opportunity to clear the auction. Alternatively, it may also be appropriate that smaller projects are given the option to present information on NPFs but can also choose not to without being penalised within the allocation round.

It is expected that the introduction of NPFs will make the auction process more complicated. As identified within the consultation itself this does risk unintended consequences and undermining the CfD process, which the sector is now used to and recognises as relatively simple. Given this complexity, some members have raised concerns that the introduction of NPFs could drive up the cost for consumers. Overall, however, we believe it is still valuable to explore the addition of NPFs and encourage the government to consider a cost-benefit analysis by which the benefits of NPFs are clearly balanced against the impacts of increased complexity and potential costs. Of the three models, we suggest that the second model achieves this balance the best, enabling behavioural change in the auction and potentially being transparent in how NPFs affect the result.

The value of any NPF will also need to be considered over time. It is likely that as a service becomes more common in the market, the NPF's value may be reduced. The government will need to be clear on how they are valuing the NPF and how this may change over time as the market matures.

5. **Ways in which the models for a mechanism for implementation could be improved?**

We note that given the above it may also be appropriate for Government to consider alternative auction designs when allocating CfDs with NPF's. We note that given the complexities that may arise from having multiple NPF's in the auction, a clock-based auction may work better, where the price starts at a low level and increases at a predetermined rate until a bidder accepts the price. This will give the government the ability to better tweak NPF values over subsequent auction rounds. While we cannot say this would be totally supported by the industry at this time, we think that this may be worth considering further and something the REA will be exploring in their upcoming report on REMA, expected to be published at the end of June.

6. **Are there alternative mechanisms that government should be considering (including models outside of the CfD mechanism)?**

Development of the CfD needs to be considered at the same time as wider wholesale market objectives, being considered in the round as part of REMA. We are supportive of seeing NPF introduced, but it will need to be as part of a package of reforms to the CfD, as explored in questions 11 and 14. It might be appropriate to consider introducing NPFs as a quick win, or first step, as part of a wider energy market reform, with other changes to be introduced subsequently.

The government could also consider extending the life of Renewables Obligation support to maintain existing generation assets. Such an extension would be particularly pertinent for landfill gas sites, the majority of which will lose support in April 2027. Once a landfill site stops taking new material, methane generation decreases over time. Extending support in this way means maximising the amount of methane that is collected, avoiding methane emissions to the atmosphere, as well as generating renewable energy. Bringing the end date for support for landfill under the RO in line with most other technologies so that it is only withdrawn in 2037 would be administratively simple. The fixed amount of capacity already on the scheme and it's declining gas production would also mean that the costs (and cost-benefit) are straightforward to model. We say more about the interaction of landfill gas electricity generation and the Contracts for Difference scheme in our response to question 9.

Finally, some members have also suggested that some forms of NPF's may also be better served by the development of a support fund for those providing services like supply chain development or skills development. This could be financed through a levy on CfD generation. We suggest that this simpler mechanism may work for some NPF's, but not others and may not drive the behavioural change government is wanting to see. However, we note that a support fund is not mutually exclusive to the introduction of auction-based NPFs, and Government may wish to consider which NPFs are best delivered through the auction or may be best supported separately through a fund.

7. **Which projects (in terms of size) and technologies do you think should be eligible for non-price factors?**

All projects should be able to benefit from NPFs. However, some consideration will need to be given to the fact that NPFs may provide an advantage to larger developers, or specific technologies, who have the economies of scale to develop projects with more benefits provided. This could be addressed through appropriately weighting the NPFs, or providing separate pots so that similar projects are competing on an even playing field.

Development of NPFs should also be considered alongside proposals for using CfDs as a tool for repowering existing projects as they come to the end of Renewables Obligation contracts. In addition, and as consulted earlier in the year, NPFs could provide revenue to extend the life of existing assets and maintain current low-carbon generation capacity if applied to the development of repowering CfDs.

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 are any unintended consequences or issues in terms of monitoring, that could come from these?**

The REA is supportive of seeing these factors rewarded as NPFs.

It is noted that when it comes to innovation and skills, consideration will need to be given to existing policy measures that are already in place to drive these developments, such as existing grants, R&D tax benefits or simply extensions of the Supply Chain Questionnaire. It will be important that introducing NPFs do not complicate the market, creating multiple levels of incentives. If incentives already exist, these should also be considered when developing NPFs.

The wider physical barriers to deployment must also be considered. Projects should not be penalised for not delivering NPFs if issues like grid constraints or planning issues stop them from being able to deliver the expected benefits to the system.

9. **Are there alternative non-price factors that should be considered?**

Yes. There are a range of NPFs that our members have highlighted. It should be noted that some NPFs could be technology-specific, but this should not stop NPFs from being included if it is of strategic benefit to the wider energy transition and decarbonisation agenda.

It will be important that all included NPF are listed pre-auction with clear measurement mythologies so that bidding projects are able to accurately work out their value and model business models.

Further alternative NPFs could include:

- **Avoided emissions from Landfill Gas Sites**. The use of landfill gas to generate electricity has the added benefit of capturing methane emissions, a greenhouse gas that has a warming potential 80 time more potent than CO_2 over 20 years (IPCC). Such environmental benefits should also be considered an NPF. These could be captured by the NPF process proposed.[1] Alternatively, consideration of this additional benefit could form part of a rationale for a separate pot for landfill gas in any repowering CfD auctions and for the administrative strike price and budget allocated to it to be set to capture as much of the existing generation as possible. The REA provided substantial input on using CfDs to support repowering of existing landfill sites in our response to the previous consultation. Since then, we have commissioned WSP to produce a report on the costs of electricity generation from landfill gas and include this as part of our response to this call for evidence. We look forward to continuing to engage on this issue.

- **Reduction in Nitrogen Oxide emission**: Similarly, actions to reduce nitrogen oxide emissions, such as from the digestate use resulting from anaerobic digestion or water treatment, could also be supported through NPF. Specifically rewarding ammonia scrubbing, which reduces Nitrogen Oxide emission issues,

[1] Similar to option 1 in this consultation, a 'top up' to the strike price could be calculated – based on the expected methane emissions avoided – expressed in CO2eq and then converted into £/MWh based on the government's preferred measure of the value of avoided tCO2 emissions. This could equally be used in the methodology for options 2 and 3.

could be an appropriate additional NPF. It is noted that making the most of this NPF might require the lowering of the CfD AD threshold below the current 5Mwe for AD sites.

- **Having the capacity to deliver energy storage and flexibility services**. The delivery of a true flexibility market is being considered within REMA, but it remains the fact that there remains no obvious benefit to developing a co-location site under the CfD. Sites could be rewarded for having storage and flexibility capabilities while the wider flexibility market develops, and wider revenue streams are established. This can include a wide range of capabilities such as being able to deliver balancing, stability, reliability, resilience and grid services, as well as Black Start and natural inertia.

- **Firmness of generation**. In a decarbonised grid, with a high deployment of intermittent renewable generation, sites that can provide firm low carbon baseload generation could be supported with an additional NPF.

- **Provision of Waste Management Capacity.** Energy from waste, biomass using waste wood, and anaerobic digestion all provide an additional service of diverting waste from landfill that cannot be used elsewhere. The environmental benefit could be considered a NPF.

- **Delivery of Negative Emissions**. Bioenergy sites using CCS will be delivering negative emissions. While the negative emission market is being established, and Government develops direct routes to market, NPFs could provide some reward for early delivery of BECCS.

- **Delivery of Heat on Combined Heat and Power (CHP) sites.** To date, under the CfD there is little advantage to recognising efficiency benefits of CHP sites, given that it is only the power generation that is rewarded. Further rewarding the delivery of heat as a NPF would encourage low-carbon CHP sites powered by bioenergy or other technologies such as deep geothermal. This would help to displace fossil gas generation, which is currently supported through a low tax regime.

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?**

Some aspects of flexibility and operability could be rewarded through non-price factors. However, these need to be considered in conjunction with other reforms to the CfD that could be suggested as part of the REMA process. This could include items like adapting contract length, considering how firmness is rewarded, amending the auction process, or amending market reference price amongst other items. As such, reforms should be considered as a whole and be appropriately identified which benefits are best delivered through NPF as opposed to other reforms.

REMA should aim to set out all the reforms to the CfD that might be beneficial, with NPFs presenting a more immediate reform that could be introduced as part of a transition process to wider market arrangements. This is especially true for locational pricing, where government and industry must be clear on where locational pricing is best introduced and to what advantage. Using NPFs to introduce locational pricing early may not be beneficial or meet the government's objectives.

The REA shall be exploring the aspects of flexibility, operability and locational signals in greater detail in their upcoming REMA report which is expected to be published at the end of June. We would welcome the opportunity to engage with the CfD team in greater detail when this report is published.

11. **Are there any other issues identified in the REMA case for change that could be addressed through non-price factors?**

Looking to the future, if successful, we also note that CfD plus NPF model could be further used by Government outside of just supporting power generation. For example, it could also be applied directly to stand-alone storage, with a core CfD service paying for balancing services and the NPFs being further grid benefits such as the delivery of inertia. While hydrogen production could also be rewarded as a core CfD service, with NPFs related to dispatchability, storage and how green it is.

12. **What financial value would need to be attributed to the potential factors outlined above to incentivise ambitious behaviour for each topic?**

It is difficult to suggest values at this stage without clear modelling having been done. We would suggest that DESNZ commission a study into key NPFs to model potential value and appropriate levels of reward.

Such a study will also need to consider how that value may change over time. As markets become more established and certain provisions become more common, such NPFs may no longer need to be rewarded at such a level. As a result, some NPFs may be reduced over time.

More generally, on valuing carbon savings, we would also encourage DES NZ to consider how it could build upon a government wide and uniform methodology for valuing carbon savings, such as building on the *"Treasury's Green Book Supplementary appraisal guidance for valuing greenhouse gas emissions and energy use"*. [1]

[1] https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal

In terms of quantifying and valuing non-price factors, views and 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?

Without further clarity on which NPFs the government are going to take forward, it is difficult to provide feedback on appropriate measuring methodologies. As commented previously, the Government should aim to commission appropriate studies of these NPFs, their value, and how they might be best measured.

We note that some externality NPFs, such as the delivery of negative emissions or flexibility capacity, are likely to lend themselves better to validation and measurement. By comparison, others like job creation or delivery of supply chains are likely to be more relative and may need more objective methodologies to be developed.

Overall, we think qualitative methods for measuring benefits should be avoided as they risk introducing biases into the CfD process and likely lead to a lack of transparency around how different projects or technologies are being rewarded or ranked. Methodologies for reward should be transparent and enable project developers to model the potential revenues they could get from NPFs for them to be a bankable prospect.

14. **How we could measure non-price factors to value system flexibility, operability, and location?**

NPFs for these could be provided purely on the basis of their capabilities to provide storage or flexibility services. The value of those services would then be rewarded through the flexibility markets themselves, rather than the CfD. As such, rewards could be simply based on the size of potential and capability to provide these services while a developer is also able to stack revenues within the flexibility or capacity market.

We suggest that location should not, at this stage, be considered in NPFs until it is clear from the REMA process how locational prices might be introduced, if at all.

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?**

We believe the second model is likely to present the best opportunity for rewarding the widest range of NPFs. The first model is likely to encourage the easiest NPFs that will attract an immediate premium on top of an already bankable strike price. There would seem little reason for a developer to explore more complicated or innovative NPFs within their auction bid. By comparison, the third model seems more complicated in relation to how the delivery of NPFs will help a bid clear the auction and may fail to encourage significant behavioural change. As long as it is clear how NPFs are to be treated in a re-ranking process then we think the second model should drive the most change and deliver the most NPFs.

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?**

Yes, the proposed penalties seem fair. It will be important that any top-up benefits above the generation strike price from NPFs are removed if they are not delivered.

Overall we would suggest that the main penalty will be the loss of any NPF premiums on top of the CfD Strike price.

It will be important to understand how these penalties will interact with existing CfD penalties, such as being banned from entering a future auction if a contract is not delivered. If NPFs are not delivered, it will also be important to have that revenue recycled into the budget so that it can be accessed as part of a future allocation round.

We, however, note that wider physical barriers to deployment must also be considered. Projects should not be penalised for not delivering NPFs if issues like grid constraints or planning issues stop them from being able to deliver the expected benefits to the system.

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**

NPFs could be introduced in a phased approach, given the flexibility government have in setting the Allocation Framework for each auction. We would encourage some of the easier NPFs, that are clearly measurable, to be introduced as early as possible, by Allocation Round 6 or 7. Others can then be introduced in rounds beyond this.

However, it will be essential that the outcomes of REMA are fairly settled before NPFs are introduced so that they are considered as part of wider reforms that might be considered for the CfD. Again, NPFs could play a transitional role as wider wholesale market reform is delivered.

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