REA Response: Long Duration Energy Storage Consultation

The Association for Renewable Energy & Clean Technologies (REA) is pleased to submit this response. The REA represents industry stakeholders from across the sector and includes dedicated member forums focused on the deployment of energy storage technologies, at all scales, and solar. Our members include generators, project developers, heat 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.

1. Do you agree with the policy objectives that have been identified? Please explain your reasoning.

Yes, the REA broadly agree with the stated policy objectives in the consultation.

We particularly highlight the importance of objectives for enabling investment and ensuring deliverability within a sensible time frame. Without meeting these objectives, the UK will fail to attract the investment required to see a range of Long Duration Energy Storage (LDES) technologies delivered or be able to do so in the time needed to meet the Government's ambitions for Net Zero or their 2035 target for a fully decarbonised power system. It will be important that Government urgently set out timeframes for the delivery of the LDES support mechanism in their response to this consultation.

We also support the objective on system benefits but suggest more could be done to set out how they are to be quantified and weighted within Government considerations. Current proposals within the consultation on system benefits are vague regarding what is expected to be delivered. We also welcome other objectives and commend that Policy Alignment is recognised, given the potential to overlap with a wide range of government workstreams on grid decarbonisation, not least with the outcomes of REMA, and the ongoing evolutions of the CfD and Capacity Market mechanisms. Policy alignment should also be kept in mind when reviewing how the scheme is funded, recognising that overall, we should be looking to see policy costs covered either across taxation, or at least wider energy costs, rather then also added consumers electricity bill.

2. Are there other factors we should consider in our policy objectives?

While potentially captured in Objective of Reduced Systems Costs, there should be some consideration of value for money within the policy objectives. Appropriately supported LDES technologies will provide a range of services to the grid system beyond just the storage of energy. In addition, this could be considered against the counterfactual, of a lack of storage on the system requiring increased deployment levels of renewable generation and higher costs for grid reinforcement action. Recognising this value for money within the policy objective will ensure a mechanism that supports projects that deliver a range of services and provides the best possible use of public money. We do note that in assessing Value for Money, some consideration will also

need to be given to how the CAPEX of any technology can be expected to decrease as the sector and supply chains become more established.

3. Will these policy objectives help to bring forward LDES projects to help the electricity system reach net zero in the most effective way? If so, why?

Yes, as described in question 1, the objectives recognise the need to both make LDES financeable and the importance of delivering new projects at speed if the UK is to meet its Net Zero objectives.

4. Do you agree with our assessment that a cap and floor is the most appropriate policy option to enable investment and bring forward the required LDES? Please explain your reasoning.

Yes. The REA has long supported the delivery of a dedicated Cap and Floor mechanism for delivering LDES. This follows analysis within our 2021 Long Duration Energy Storage Report, which concluded that a Cap and Floor was the most appropriate support mechanism for the technology delivery. [1]

Under the Income Floor, different revenue can be considered to determine whether returns (gross margin) are below the Floor. Ensuring this floor is met, therefore provides the simplest mechanism for de-risking investment, ensuring that dispatch models continue to be driven by price signals, and encouraging plant operators to maximise the value of the plant for themselves and for consumers. This, therefore, apportions risk between all involved parties.

The mechanism can also be applied to a range of storage technologies, while not limiting their ability to benefit from any additional balancing or grid services that they are able to provide. The Cap then provides a straightforward mechanism for controlling government spending and the amount being funded by the consumer.

In our report, we agreed with the Government's analysis that the Capacity Market was not a suitable mechanism for delivering new investment in LDES and does not meet the stated policy objectives in the consultation. The CM is designed to ensure system adequacy at lowest cost, which is valuable, but does not appropriately reward system flexibility, stability and resilience needs. Current contract lengths within the CM would also fail to create a bankable business model for LDES. As such, CM payments would be unlikely to be sufficient on their own to service debt costs for large scale investments in new LDES developments.

We recognise that separate government workstreams are underway in relation to reforming the Capacity Market to make it better aligned to Net Zero targets. We are supportive of these reforms and ask that the government ensure a Cap and Floor and reformed CM are appropriately aligned. Indeed, CM revenues should form an important part of stackable revenues within cap and floor mechanisms, while in the future an established LDES sector will also support the CM.

Finally, we also highlight that the choice to develop a Cap and Floor mechanism also accords with other mechanisms we are seeing developed elsewhere in the world, suggesting a shared conclusion in delivering this critical technology and precedent for success. For example, Australia has already delivered their Long-Term Energy Service Agreement, which offers up to a 40-year contract Cap and

Floor-based CfD model. Last year over 4GWh of LDES was selected through the New South Wales Tender Process, demonstrating that the mechanism is attractive to investors. [2]

[1] REA (2021), 'Longer-Duration Energy Storage: The missing piece to a Net Zero, reliable and low-cost energy future' https://www.r-e-a.net/resources/rea-longer-duration-energy-storage-report/
[2] Energy Storage (2023) Over 4GWh of long-duration energy storage selected through tender in New South Wales, Australia https://www.energy-storage.news/over-4gwh-of-long-duration-energy-storage-selected-through-tender-in-new-south-wales-australia/

5. Do you agree with our approach to not set an overall scheme capacity?

Yes, we agree with the proposals not to set an overall scheme capacity. Given the status of the industry to date, it is likely that any government figure will be, as identified in the consultation, lower than the current potential pipeline of projects. Seeing a low-capacity figure could send a signal to the market that Government are not ambitious enough and could undermine investor confidence in the scheme.

Government, however, could consider the setting of a minimum capacity deployment figure, that they expect to exceed. With such messaging Government would be indicating a clear 'low regret' option and provide a base level for consideration by investors, further reinforcing confidence.

We recognise that once the scheme is more established, and following analysis of the how the wider power system is evolving, Government may choose to consider a maximum capacity figure again.

6. Have we sufficiently identified wider risks and do you agree with the proposed mitigations? Please provide your reasoning.

Overall, we agree with the identification and analysis of wider risks and proposed mitigations. We particularly agree with the analysis of the wider pipeline and its interaction with other generation and storage technologies. LDES provides options for multiple scenarios to decarbonise, and it is important that Government are looking to deploy a range of renewable technologies in parallel, such as the Hydrogen to Power deployment, providing the best chance for the UK to meet its Net Zero targets.

However, overall, we do not expect LDES technologies to represent a significant risk of market disruption given the ability of the technology to complement other low carbon generation and the fact that most LDES technologies are aligned with existing market arrangements.

7. Do you agree that only those technologies that meet the electricity storage definition should be eligible for an LDES scheme?

No.

The consultation provides no good reason for the exclusion of Thermal Storage from the scheme, beyond it unfairly falling outside of a legislated definition, which we have previously highlighted to Government as insufficient. Thermal Storage could be particularly useful in meeting process heat demands, consequently removing electrical demand from the grid. This includes power to steam systems that could make use of excess power generation, store the energy as heat and then dispatch it to meet demand. With workstreams in Government also looking at industrial

decarbonisation and the development of heat networks, we believe the exclusion of Thermal Storage to be counter the stated policy objectives of ensuring the LDES scheme is policy aligned with other Government aims.

We note that the REA did raise the issue of the Energy Act 2023 energy storage definition at the time the bill was laid. We raised concerns that this would mean certain technologies are unnecessarily excluded from storage policy development. If Government choose to continue to exclude Thermal Storage, then they must urgently signal to the market how they plan to deliver a route to market for such technologies, as it will still be needed to decarbonise UK power and heat demand.

We do, however, recognise the benefit of having a standardised definition, especially in being able to quickly assess the eligibility of an application and providing clarity to the market. As such we suggest that the legislation for a LDES support mechanism creates a uniform definition that ensures support for both electrical and heat storage.

The REA have a full briefing on Thermal Storage that we would encourage DESNZ to read and reflect on in regard to its exclusion from support. This includes relevant case studies for where Thermal Storage could be beneficial. This can be read here: https://mcusercontent.com/57981e55e365722b7bb40867b/files/9d746eba-8b92-f2fb-b956-13dfbc7b4e54/FINAL_Thermal_energy_storage_briefing_document_.pdf

In addition, we would also direct Government to revisit the reports they previously commissioned on Thermal Storage, that identified a critical role for the technology: https://www.gov.uk/government/publications/evidence-gathering-thermal-energy-storage

8. Do you agree that it is appropriate to exclude technologies that can already be funded under existing market arrangements and/or those that would be eligible for multiple business model support?

Yes.

As we identified in our 2021 Long Duration Energy Storage report, the focus of support needs to be on the delivery of technologies that both represent good value for money, and which do not currently have an accessible route to market. [1]

We fully support the need for Shorter-Duration technologies, and we encourage Government to continue to consider how to ensure the extensive existing pipeline for BESS technologies can continue to be delivered outside of a LDES support scheme.

However, the need for Long Duration Storage, is a separate problem. This is demonstrated given the growing evidence base that highlights the UK will need a considerable amount of additional Longer-Duration Storage operational by 2030 and secondly because several technologies within this category, while readily available for commercial deployment, lack the current market framework for investment. As such, the issues faced by Shorter-Duration and Long Duration assets are different, as is their overall role in the energy system.

[1] REA (2021), 'Longer-Duration Energy Storage: The missing piece to a Net Zero, reliable and low-cost energy future' https://www.r-e-a.net/resources/rea-longer-duration-energy-storage-report/

9. Do you agree with our proposal for a minimum duration of 6 hours? If not please provide a rationale.

We largely agree with a minimum duration of 6 hours and recognise that the market is now able to support this duration length. Previously we had called for a lesser duration of 4 hours to be supported but believe the sector has moved on sufficiently and that 6 hours is the starting point for where the additional benefits of Long Duration may be felt, and where the value for money of delivering Long Duration can be realised.

That being said, looking at other markets, it is correct to recognise that even longer durations are now common, with 8 to 10 hours being seen as a relevant benchmark for realising the value of Long Duration Energy Storage and the benefits it provides to grid. As such, to further realise value for money, it may be appropriate to consider an increased duration threshold to 8 hours in the future, perhaps applied specifically for Stream 1. This may help to differentiate the asset class of LDES sufficiently to ensure the delivery of high-class projects. Similarly, inclusion of alternative time frames that align with STOR and the capacity market could also be appropriate. We would encourage Government to consider the impact of these factors further and perhaps consult on it in future as part of the evolution of the scheme.

10. Do you believe we should be setting a minimum efficiency criterion? Please provide your reasoning.

No, a minimum efficiency threshold should not be set as an eligibility criterion within the streams. This is due to the wide range of efficiency values of different technologies and concern that setting a prescriptive efficiency at the eligibility stage could unintentionally disadvantage specific technology types and could potentially exclude novel approaches.

However, we recognise that it could be appropriate to set an operational efficiency as part of the bi-lateral negotiation for contracts. This can then be set appropriately to the project and technology. This would also allow for consideration of minimum efficiencies in relation to wider system benefits, including the flexibility services provided as part of a cost benefit analysis conducted within the assessment process. This will then also still provide confidence to Government that awarded contracts will still represent value for money and deliver high quality projects.

11. Do you agree with the proposed approach to splitting the streams by TRL level? Please provide your reasoning. If not, please suggest an alternative approach.

Yes, overall, we support the approach of splitting the streams, recognising an intention to ensure both novel and established technologies will have a route to market. However, we note that the consultation lacks detail in regard to what Government is really trying to achieve by doing this.

It is not clear how government spending will be split between the streams, or what exactly will be needed to demonstrate applicable TRL levels. This could lead to confusion in the market, and inconsistencies in how different technologies present themselves. Clarity around budget allocation and funding caps from treasury will be essential contextual information for potential projects. In

addition, it would be helpful to understand the intended process for how a technology might be assessed as graduating from stream 2 to stream 1, and whether this would apply to a specific applicant or to all projects using the same technology.

As such, it is not yet clear as to whether the two streams will really help novel technologies come to market or whether this will prioritise funding for more established approaches. Both these outcomes do not need to be mutually exclusive - if the streams are well designed -but further detail is really needed to understand how they will operate.

12. Do you agree with the different capacity minima set out for the streams? Please provide your reasoning.

No. We encourage DESNZ to consider the existing pipeline of projects for long-duration storage and ensure that the setting of a capacity Minima, in either stream, is reflective so that it does not unintentionally exclude existing projects that have significant capital already committed to their development. For example, we are aware of a Pump Hydrogen Energy Storage Project, that has been in development for more than a decade and planned at 99MW. Such a project should not be excluded by the implementation of a new threshold.

Separately, if capacity minima are to be implemented, the Government may also consider being more flexible with novel technologies in stream 2. This would allow smaller novel projects to plug gaps in the market while providing a route to market for these smaller projects. This will help ensure sizable and value-for-money projects, while enabling more novel approaches to become established, such as those starting small with the potential for higher capacity delivery in the future.

13. Do you agree that the identified wider system benefits should be considered when assessing a project?

Yes, the identified benefits are appropriately considered when assessing the value of a project. Further detail will be required to understand how these factors are prioritised or weighted when assessing a project, especially if they are used to determine which applications are awarded through the administration process.

14. Would an approach similar to that of the interconnector scheme be appropriate? If not what alternative would you suggest?

It is sensible to use a similar process to that of the interconnector scheme, given that it is established and understood. It is a process that works in an administrative allocation process. However, this would need to be re-evaluated in a competitive allocation process.

The assessment process itself will need to recognise nuances of LDES technologies and how they provide these additional services, whilst recognising they are different to that of interconnectors and will operate differently as a result.

15. Are there any wider economic and societal benefits that have not been identified that LDES projects could provide that we should include in the criteria?

While likely addressed when considering consumer impacts, the benefits made available to industrial or commercial decarbonisation should also be made clear, recognising that storage processes could play an important role in addressing complex to-treat areas. This should be explicitly included when considering the wider economic benefits in the supply chain of a project within the assessment process. This would be particularly pertinent if Thermal Storage was also allowed through the scheme.

In addition, security of supply benefits of LDES must be also recognised, reducing dependency on imported fossil fuels which are subject to a volatile energy market.

16. Do you agree with allowing recovery of debt via the floor and recovery of equity via the cap? Please provide your reasoning.

The setting of the floor at the Cost of Debt should be considered a minimum requirement for the support mechanism. We recognise that this is an established and well-understood model, which incentivises developers to ensure that their earnings are always above the floor to generate returns for equity investors. However, some members have raised concerns that a floor set purely on debt will not do enough to make projects financeable. The floor price needs to be set on actual cost of debt, and possibly include a minimum level of return, likely set through the administrative process. It is feared that just covering debt will not be enough to get financial close as there will be no guarantee of a return. Further input from financiers, such as industry and finance roundtables, should be sought to understand what would ensure financial close. The REA would be happy to facilitate such discussions.

We also note that it is our current understanding that operational costs will be deducted from the revenue calculation, to provide a gross margin that the floor is applied to. As such, operational costs are considered within the floor. It is important that this should be made explicit in the Governments final response to the consultation.

Members have also raised concern around calculation of the cost of debt, saying it should not be exactly the same as the process for interconnectors. It could be appropriate to give optionality to developers, given that each developer will have a different financing structure. They will then have a choice between setting the Cost of Debt at an Actual cost (Pass-though) or Notional Cost of Debt (index) within the administrative process.

In addition, when considering the cost of debt the expected credit rating also needs to be different to what is seen with interconnectors, which is 'BBB'. A lower notional credit rating should be used to ensure the rating is reflective of the actual construction, revenue and operational risks involved in investing in innovative and nascent technology like LDES.

We also support the use of a 'soft' Cap, as explored in later questions, in order to be able continue to send market signals that will encourage operators to maximise the operation of their assets and deliver the highest possible value to the grid, while still protecting consumers from high prices.

17. What costs should be eligible for inclusion in the cap and floor reconciliation calculations?

Reconciliation should be done annually and aligned with capex costs, as agreed through the administration process. Operational costs and maintenance costs should also be considered.

18. How do we design the thresholds to be at the appropriate level to balance investment certainty with potential consumer exposure to additional support costs?

One potential option, would be the inclusion of a minimum return within the floor Price to deliver investment certainty and reduce the cost of capital. It could potentially allow for a lower Cap as less risk will be seen in delivering a return.

Alternatively, Government could also look to set a minimum availability target as part of the administrative negotiation, which would consider technical and operational specifics of eligible assets. It is, however, noted that such a target would need operational provisions for exceptional events, such as unplanned outages, which are beyond the operator's control.

19. Should we require projects to outline how they intend to operationalise the asset to exceed the floor?

This should not be required beyond what will already be stated in an external consultant report, as already proposed. On the whole, further requirements should be avoided where possible to reduce concerns around the commercial sensitivity of handing such information over, even if it is never intended to be published.

The government should take confidence in the fact that a project will not be able to reach financial close unless able to demonstrate to investors that they can get above the floor.

20. Do you agree using annual gross margin is a suitable approach to setting the cap and floor thresholds? If not, what alternative would you suggest?

Yes, this seems appropriate, as is the case with interconnector agreements.

We recognise that the approach is like the treatment of Market Related Costs in the interconnector regime which allows for the partial pass-through of variable controllable Opex. For storage developers, pumping or charging costs represent a significant proportion of Opex, yet are very volatile and difficult to forecast. Using annual gross margin to set the cap and floor threshold reduces the volatility of charging costs and reduces the overall risk. This can result in better benefits for consumers through potentially lower costs of financing.

21. What performance incentive could be used to encourage full operation of assets to prevent dispatch distortions around the cap?

As we identified in the call for evidence, we support a soft-cap approach, which would mean that assets are still able to respond to market signals, rather than see a cliff edge return of their gross margin above the cap. If designed well, with a clear tapering system, the assets will still maximise their operation above the Cap and prevent dispatch distortions.

22. What performance incentive could be used to encourage full operation of assets to prevent dispatch distortions relating around the floor?

As discussed in question 18, one potential option would be to build in a minimum return at the floor, this would ensure assets are operational to the floor, delivering a return.

Alternatively, Government could also look to set a minimum availability target as part of the administrative negotiation, which would consider technical and operational specifics of eligible assets. It is, however, noted that such a target would need operational provisions for exceptional events, such as unplanned outages, which are beyond the operator's control.

23. Do you agree with our proposed mitigations, or would you recommend others?

In regard to cap distortion, a performance requirement as a mitigation proposal is likely to be redundant if you have a sliding soft cap. Operators will already be incentivised to maximise their operations if they are still able to keep some returns above the cap.

In regard to floor distortions, as highlighted in question 16, a minimum return built into he floor would itself be a mitigation against underperformance. As an alternative, setting a minimum availability target within the administrative process would ensure the operator has a continued incentive over the period of the regime to operate and maintain the asset effectively. Failure to meet the availability target could be penalised, subject to force majore and exceptional circumstances caveats.

24. Have we identified relevant operational risks associated with creating an LDES investment scheme?

Yes, however we suspect the risk of asset operators being able to game the cap and floor mechanism is limited. Commercial and financial requirements will mean that operators are incentivised to deliver the best possible returns to investors and not put this revenue at risk, while regulatory mechanisms including licence conditions and financial regulations will already restrict gaming Options. We suspect that after some time of the scheme being in operation, government will be better placed to assess the real risk of gaming and whether mitigations are really required.

25. Are our proposed mitigations sufficient for mitigating against the operational risks, like gaming? Please provide your reasoning.

We note that the banning of a vertically integrated offtake and supply agreements are unlikely to be effective, as companies could sleeve returns through an external company and bring it back in at a small cost. It is unlikely to dramatically reduce the impact of gaming. In addition, such a measure would probably go beyond the scope of the ability of cap and floor legislation, with potential wider fundamental market impacts, such as liquidity and ability of suppliers to meet their obligations. These wider impacts would need to be very carefully considered.

There are also worries about the timeframes involved in transparency requirements. It is possible that this could create a situation where a firm which has unknowingly been operating incorrectly for several years, is then reproached by Government, or the scheme regulator, who then may seek repayment. This could create a significant policy risk for developers, making financing difficult, as well as being onerous on the site operator.

We also note that there is not enough information to properly assess the proposal of developing a deemed revenue index and as a result, we are unable to find a shared view across our membership on whether it is a sensible option. While on the face of things, this could be attractive with operators hoping to trade above the average price. However, members have also raised serious concerns that a deemed approach would require an assumed operating regime to be made in advance. This would have to be done with no visibility of market signals or prices. Such an operational regime would be impossible to model and result in removing the market signals that are essential for maximising the benefits of Long Duration Energy Storage. This may be mitigated by using site specific data and actuals, but this is likely to be highly complex and may not be worth the effort given the limited level of gaming expected to occur.

Further detailed modelling is really required of all these options before industry can be confident in supporting their adoption. DESNZ should consider commissioning such research as a matter of urgency to help demonstrate the impact of these mitigation proposals.

26. Do you agree that the cap and floor scheme should be allocated administratively?

Yes, we support an administrative allocation process. Especially given the different types of technologies and operational realities of LDES projects.

27. Do you agree that length of a cap and floor contract should be based on the project length?

Yes, we strongly welcome this flexibility being proposed. This will help recognise the different operating life expectancies of different LDES technologies. It is appropriate that this is agreed through the administrative allocation process**.**

We, however, note that this will need to consider the intended operation of the LDES technology, with more frequent cycling possibly having an impact on project life expectancy. If this is the case, additional thought may need to be given if the contract length turns out to be set too long and, due to more frequent use, the project decommissions earlier than expected. This will be very technology dependent and require bi-lateral negotiation.

28. Do you agree that cap and floor recipients should also be able to participate in other electricity markets, such as the CM? Please provide reasoning.

Yes, there is no reason that further services provided by LDES should not also be rewarded. Overall, the more revenue streams that LDES can benefit from, the more derisked the floor will be. Enabling multiple revenue streams will help the sector to establish itself quickly and ultimately prove its business model, so firms can move away from government support faster.

We note that involvement in the capacity market will depend on effective reforms to contract length being delivered through the current consultation on how the capacity market operates. The one-year-ahead contract available to interconnectors will not be sufficiently attractive to the LDES market, so evolution of the CM will be needed before we see significant LDES participation.

29. To what extent could finance be needed from UK Infrastructure Bank or elsewhere, alongside the cap and floor scheme, to help address barriers to investment in LDES?

UK Infrastructure Bank should be focused on addressing the infrastructure barriers to the deployment of LDES, as well as broader low carbon generation. Specifically, this must involve investment in reinforcement of our power grid to reduce capacity constraints. This will both enable new connections but also, as identified in the consultation, help maximise the benefits of LDES. As such, UKIB investment should be focused at external barriers to wider decarbonisation of the power system. An effective Cap and Floor mechanism should be sufficient to see delivery of LDES.

30. Do you agree that the proposed pre-qualification criteria are reasonable for both streams? Please provide your reasoning.

We agree with most of the pre-qualification criteria but suggest that the process should have more stages. Having an intial, but more lenient, 'check' phase would enable projects to gain confidence and get financiers interested. A final pre-qualification process could then ensure final financial close.

Such a process would also help the developer and DESNZ respond to changes in market realities. This includes the potential bringing-forward of grid connection dates, especially given current transmission and distribution action plans. This includes proposals to prioritise storage asset connections, recognising the benefits they bring to grid capacity. For this reason, pre-qualification should just require a connection offer, but it may not match the expected commissioning date of the project, as it can be expected to be brought forward.

31. Are there additional pre-qualification criteria that should be considered to establish the eligibility of a project?

As stated in other questions, we encourage the use of a multi-stagged pre-qualification process. An initial indicative pre-qualification would help activities such as finalising consent, FEED study, tendering and procurement and arranging finances.

The requirements of an initial pre-qualification criteria can therefore be more lenient in the first stage but become more prescriptive as the project moves towards full qualification. This would be particularly beneficial for addressing issues such as planning consent, where a robust plan for securing the relevant rights can be presented but recognise ongoing delays and processes of the planning system. It would then be up to developers to ensure they secure the necessary consents within agreed delivery timeframes.

32. If you have a LDES project in the pipeline, how would these eligibility parameters affect your project's application?

33. What time length would you recommend for conducting reviews of cap/floor threshold (e, g, annual or multi-year)?

Multi-year reviews may present an efficient approach. These have worked well for interconnectors. However, we note that Interconnector revenues and revenue streams are less volatile compared to LDES. Therefore, depending on the financing structure of a project, longer periods of reviews may have significant impacts on projects' cashflows and cost of debt. Eligible projects are likely to have

different financing structures, therefore , will have different requirements. Any financial risks or unintended consequences need to be considered carefully when determining the optimal length of review periods.

34. Do you agree that exceptional event should be considered as part of the review of cap/floor? Please provide your reasoning.

Yes, however clear rules and thresholds will need to be defined for an exceptional event, so that it is not used unfairly or unexpectantly by Government.

35. What criteria could a proving period for LDES be based on?

A proving period would not be required if a multistage qualification phase was in place. Confidence in the delivery of the project would be built through the qualification process and effectively prove a worthwhile deliverable project by the point of full qualification.

36. Do you agree that target start dates should be set? If not, please explain why.

Yes, however, very careful consideration must be given to exceptional events beyond the operator's control. Issues like grid connection and planning delays are prevalent in the industry. While sudden changes in the market realities, as we have seen in the economy in the last two years, could well impact expected CAPEX and delay supply chains. Lenience for these factors will need to be considered and built in. The explanation for how the impact of start dates will be mitigated must be provided in the government's response to the consultation. There is concern that the presence of an overly rigid start date could be damaging to investor confidence if no debt can be recovered due to development delays.

37. Are there any other parameters that we should be considering in the design of the scheme?

38. What are the important factors for deciding who is the appropriate body to bring forward this scheme?

Ultimately, sector confidence in the bodies' ability to deliver the scheme is critical, as this will be a determining factor when being assessed by investors. Previous poor delivery of government schemes will be considered an investment risk. We note that we have seen examples of this with Ofgem, especially around late payments in the RHI.

39. Would either of the delivery routes set out affect the investment case for LDES projects?

Option 1 is slightly preferred with the understanding that Ofgem will have a good understanding of how the electricity market works, and it mimics what already happens with the interconnector agreements, demonstrating it works for investment.

However, we note that option 2, is also likely to be investable, given it would be backed by a government private law contract which are also seen as attractive**.**

40. Are there any additional benefits or risks to a delivery route that have not been

identified?

We note a potentially higher political risk with delivery via a CfD and funded through a supplier levy. This has clear implications for consumer bills that may create higher risks for delivery. As noted in question 1, the impact on consumer electricity bills may be greater for Option 2, while TUNoS charges (option 1) can be better spread between power and gas prices.

We also note that the existing CfD legislation is potentially now being used for a wide range of different support schemes, including the hydrogen and CCS business models. This could create a risk of over-diluting that base legislation model.

41. Do you believe TNUoS charges should be used if the scheme is administered by Ofgem (option 1)? If not, please provide your reasoning and/or an alternate method.

Yes, we would support TNUoS being used, it being an established delivery route for the interconnector contract.

42. Do you believe a supplier obligation levy should be used if the scheme is administered using a CfD style approach (option 2)? If not, please provide your reasoning and/or an alternate method

Yes, a supplier obligation could be used if administered via a CfD, although acknowledging this has its political risks associated with it and may be more difficult to get parliamentary approval.

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