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Eku

Long Duration Storage Team, Ofgem

10 South Colonnade,
London, E14 4PU

17 July 2025

Dear Sir or Madam,

RE: Consultation on Long Duration Electricity Storage Project Assessment

1.1 Introduction

Eku Energy[1] is a specialist global battery energy storage business dedicated to advancing the energy transition. Jointly owned by a Macquarie Asset Management managed fund and British Columbia Investment Management Corporation, Eku Energy's purpose-built team brings together specialist technical capabilities, with experience across origination, development, system design, power markets and software optimisation. Eku Energy has a 4.6 GWh portfolio of 50+ projects across five countries - UK, Australia, Italy, Germany, and Japan. Our current portfolio in the UK includes 40 MW in operation, 150MW in construction with a further pipeline of over 2GW.

Eku Energy has been actively engaged with the development of the LDES scheme, both with DESNZ and Ofgem, as we see it as a critical pathway to delivering the longer duration storage that is needed on the energy system. In addition, Eku is participating in LDES tenders in Japan, Australia, and Italy, including securing an LDES contract for a 100MW / 800MWh project in Australia. We brings this global experience and knowledge to our analysis and welcome the opportunity to respond to Ofgem's consultation on the scheme Assessment approach.

1.2 Consultation response

1.2.1 Key points:

Across the consultation, we recommend that Ofgem focus on increasing simplicity and transparency.

1. **Simple, comparable, technology neutral metrics** - The bidding parameters should make it easy for bidders to assess how competitive their project is, particularly supporting technology-neutral assessment rather than 'like-for-like' comparison. At present, it is unclear what the financial framework is solving due to the numerous bid parameters, how its outputs will inform the multi criteria assessment, or how projects will be evaluated across technologies
2. **Value to consumers** – The complex framework focuses on bid flexibility and a large amount of inputs into a financial model to determine a rate of return. In doing so, the framework does not make it clear how each bid criteria drives the most competitive and lowest cost solutions for energy consumers. We would recommend using a bid parameter of a volume-weighted value of the floor and the cap (£/MW/a or £/MWh/a) that is adjusted by a contract duration coefficient, as it is clear the maximum costs to consumers and has been used successfully in the UK's CfD auctions and in global LDES schemes.
3. **Higher cap levels and revenue sharing –** Higher equity returns will be necessary to incentivise building the amount of LDES required by CP30, particularly as returns will be low in initial years. The low cap level may exclude some projects with a higher risk profile and cost of capital. In addition, the proposed revenue sharing above the cap is insufficient to prevent perverse trading behaviour.

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1.2.2 Detailed consultation response:

Q1. What are your views on our proposal to move beyond focusing solely on project return rates at the C&F levels, towards a more flexible approach that allows projects to tailor key parameters to the needs of their LDES project archetype?

For a new scheme, it will be important that each bidder is able to clearly assess how each of the bid parameters will impact their bid and what the impact will be on consumer costs for each variable. The current approach is overly complex, making it difficult to assess the competitiveness of bids on a quantitative basis. It also makes it difficult for a bidder and lender to understand the payment mechanisms which will be critical for investment. We believe that a scheme which allows participants to bid the target rate of return at the cap and floor and regime length is sufficient, but it would be even better if the bid parameter were volume-weighted value of the floor and the cap (£/MW/a) that is adjusted by duration and can be indexed to inflation.

Using a target rate of return for a cap and floor already allows for significant flexibility for different technology types while still involving a high level of complexity. Typically, in other markets where they have offered a LDES support scheme, such as in Italy and Australia, the floor payment is bid as a fixed value (e.g. $ or €/MWh), which allows for easy comparison. By using a target rate of return, the LDES scheme is implicitly also including DEVEX, CAPEX, OPEX etc all as bid variables, but making these total costs less transparent by only focusing on the relative % return. We would recommend having a fixed price for the floor and cap that varies with inflation. This is simple for bidders, lenders and Ofgem to compare, plan and administer the scheme.

We agree there is merit in allowing projects to set the duration of the contract. This further ensures different technologies will be able to bid while also enables projects to have an additional parameter to reduce costs for consumers by shortening payment durations. However, the additional complexity with adding in further parameters such as the residual value, Interest during Construction and Decommissioning cost makes the solution unnecessarily complex.

For decommissioning costs and residual value, we do not see a value in this being included further in the financial model as the bidder should be able to take these into account already when they propose their target rates. In the context of BESS, our financial modelling takes the general assumption that the residual value of the project is equivalent to, or exceeds, the decommissioning cost, and we therefore do not include a decommissioning cost in project financial models.

In addition, Interest during Construction is a function of the debt terms from lenders. We recognise if this is included as a proxy for the development risk profile of an asset to compare across technologies, but we do not think that this needs to be set competitively (see our response to Question 19 for further detail). Any form of interest would be reflected in the project capex which translates to the rate of return. If the rate of return at the cap and floor are set competitively this should already capture the development risk profile of participating projects.

Flexibility can be delivered in a myriad of ways for a fixed-value floor bid. We refer to the Long Duration Storage LTESA in New South Wales, Australia as an example. An LDES LTESA is a financial derivative contract that provides an LTES Operator with a series of options to access a variable annuity payment. If the option is exercised, the annuity payment will be in the form of a top up to net operational revenues achieved by the Project.

There is significant flexibility embedded in the LDES LTESA: bidders can reduce the contract term of an LTESA, excluding potential support in certain years, varying bid prices by year; and bid with a nominal dollars pricing structure; or remove escalation risk.

The LDES LTESA scheme also calculates 'average equivalent annuity cap', a representative value across the successful projects used for communicating bid prices, considering the maximum allowable contract term for a given technology rather than any reduced term. This support bid process transparency and improvement over time[2]. This demonstrates how providing the right kind of flexibility in LDES scheme bid variables can influence tender competitiveness, facilitate the comparison of different technologies and drive down costs of the scheme to consumers[3].

[2] NSW LDS LTESA Tender Round 5 Briefing Note. Available at: https://aemoservices.com.au/tenders/-/media/5f1a4e79b0404c2fbedfc6041d4dfe76.ashx?la=en
[3] NSW LDS LTESA Overview. Available at: https://aemoservices.com.au/products/long-duration-storage

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Q3. How can Ofgem best ensure comparability between bids given the bespoke nature of the proposed parameters? Are there specific normalisation techniques or benchmarks you would recommend?

As stated in our key points, comparability of bids across all projects is a critical objective of a technology neutral scheme. The current proposal is too complex and does not allow comparability. It also does not make it clear what is being used from the financial framework in the multi criteria assessment. We would recommend:

1. Simplifying the number of bid parameters.

2. Making it clear which values are being used for the multi-criteria assessment.

3. Making it clear what the floor payment could be for each project if it was needed to be paid for the entire duration. This is a proxy for the max cost to consumer, and should be an important metric in the multi-criteria assessment. It will also be important for lenders to understand what payments are expected.

Q4. What are your views on the proposed truth telling incentives? Do you think these will effectively discourage inflated or strategic bidding?

We support the intent behind Truth telling incentive A (revenue sharing above the cap) as a more straightforward and concrete incentive for project developers. However, in the context of LDES, this incentive may be of limited value to investors. It may be likely that asset revenues do not exceed the cap particularly in the earlier years of operation as current market design and system operation do not yet fully value the long-duration flexibility that LDES provides. Therefore, revenue-sharing above the cap may be less attractive to investors than a higher floor level (in £ terms) as managing downside risk.

We do not support truth telling incentive B as currently proposed. This methodology risks undermining the transparency of the scheme. If the purpose of this incentive to select the most deliverable projects and discourage strategic underbidding, we believe there are more objective alternatives. For instance, requiring bidders to substantiate their costs through provision of OEM pricing ranges (with appropriate flexibility for final contract negotiations post-scheme award) would offer stronger evidence of deliverability.

We would also like to note that strategic underbidding can occur in a myriad of ways beyond headline capex. For example, for BESS, bidders may apply aggressive annual augmentation assumptions to account for degradation. This may look more commercially attractive on paper given forecasted battery cost decline year-on-year, but in reality, such augmentation strategies can be challenging to deliver, particularly in the context of global supply chain volatility. This introduces material deliverability risk that is difficult to assess through cost benchmarking. We acknowledge that Truth telling incentive B seeks to address risks like this. However, we are concerned that this may reduce transparency of assessment. Therefore, we suggest that Ofgem could instead retain truth telling incentive A, and to mandate projects to submit technical configuration and operating plans (incl. degradation assumptions, augmentation schedules and performance management strategy) and/or an OEM availability statement to ensure projects can continuously meet the 8h+ duration at full power. While these documents were submitted in the Initial Assessment stage, projects will progress beyond this when submitting costs for the CBA stage and can provide more detail.

Furthermore, we disagree with the proposal in paragraph 2.20 to evaluate bids on a like-for-like basis within each technology class. We emphasise the need for the scheme to maintain technology neutrality and provide value for money for consumers. Allowing more costly projects to win based on an intra-technology like-for-like comparison will cost consumers, contrary to the scheme's objectives.

Q5. What are your views on our proposed approach to floor setting?

The proposed floor is set at the typical level of debt for infrastructure projects, however many of these assets may have higher technical uncertainty. To make up for the risk of falling below the MAT (availability) and losing their floor payment, a higher floor level may be required by lenders. Allowing projects to submit competitive floor levels based on lender term sheets should reveal the true costs of debt.

Rather than using a floor value as a % of costs, we recommend using a floor value which is a bid parameter that is a volume weighted price (£/MW/a or £/MWh/a) and adjusted for duration for easy comparison and simplicity of understanding for lenders. We also recommend indexing this to true inflation as we see in most other markets. This reduces the complexity of using indexes for the floor but not for the cap.

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Q6. What are your views on our proposed performance-linked measures to access the floor and incentives below floor?

We agree that a minimum availability target is sensible to ensure projects are not getting floor payments when they are not available, wasting consumer money. It will also ensure that some level of technical risk is factored into the cap and floor scheme. However, it is critical that the MAT values are made transparent as soon as possible, along with how they will be calculated (e.g. across what time period).

In New South Wales, AEMO's long-term Energy Service agreement which similarly provides a floor for 8h+ storage sets a 97% availability threshold, excluding AEMO-directed curtailment. For projects falling below this threshold and above 80%, every % that the project falls under the threshold results in a 1.25% deduction in the floor payment. We welcome a similar methodology in setting the MAT in the UK.

Q7. Does the proposed cap design provide the right balance between incentivising efficient operation and sharing upside with consumer?

The proposed cap requires further consideration to make it an effective tool to incentivise equity investment and efficient operation.

First, the cap should be bid as a simple £/MW/a or £/MWh/a level with a multiplier for duration of the contract. This will make it easy to administer and also allows projects that can reduce their costs to see an upside in the revenues they share.

If sticking with a target rate of return, the cap level is set too low. The target rate of return for the riskier asset class of short duration storage is typically in the low teens for equity backed investment. For LDES assets, the returns will likely be hitting the floor more in the initial years until the volatility in the system increases or a market is set up to incentivise longer duration assets. Therefore, assets will need to be allowed much higher returns in later years to make up for the low equity returns in the initial years.

Finally, a 10% sharing of revenues above the cap is too low to incentivise producers to efficiently operate. Typically, a 5-10% share of revenues is paid to the optimiser of an asset. Therefore, the additional revenue share would all be passed through and the owner would not be incentivised to operate the asset above the cap. In addition, the cycling costs are very hard to calculate. If the accounting of the cycling cots are below the actual costs, the 10% revenue will eat up all the additional value lost to cycling.

In Italy, the MACSE scheme is aiming to incentivise long duration energy storage. They have included a 20% revenue share on the merchant portion of the asset (in addition to a fixed payment). The 20% portion is viewed to not be sufficient incentive to run the asset for the increased costs, and therefore asset operators are expecting to bid into the merchant market at high costs to not be called upon. This is not the efficient level of operation for the system, and a higher revenue share would change this outcome.

Q8. What are your views on the use of the CAPM and the proposed input assumptions (e.g. equity beta, RFR, TMR) for calculating the cost of equity for LDES? Are there refinements or alternatives you would recommend?

The proposed system is overly complicated, involving too many variables that make it difficult for developers to understand what the value of the cap mechanism is. See answer to question 7 for alternative suggestion of how to set the cap.

If the CAPM model is to be applied, the equity beta needs to be confirmed and locked prior to the project assessment stage to provide investor certainty. It is not sufficient to apply the value from the interconnector scheme, as the asset classes are fundamentally different and not comparable. Interconnectors have low volatility in returns with high institutional investor familiarity, whereas technologies submitting in LDES will fundamentally face merchant market volatility and technology risk which is likely to result in a higher equity beta than currently proposed.

Q9. What are your views on the proposed capital cost components for determining the RAV and C&F levels, including the equity and debt transaction cost allowances?

The capital cost components are standard. However, we would like to note that our financial model which has been approved for debt-raise processes do not include decommissioning costs. This is because we assume that residual value and decommissioning cost balance out at the end of the asset's operational lifetime. Therefore, there is opportunity to simplify the capital cost stack.

Q10. Do you agree with limiting reopeners during the operational phase to opex (after 10 years) and decommissioning (if there's a legal change)?

For simplicity, we would suggest there are no reopeners.

Q11. What are your views on the treatment of decommissioning costs and IDC - particularly around timing of recovery, project delays, and legislative changes?

If decommissioning cost is a bid parameter we agree that this should be a % of project capex; this is standard in project finance modelling. However, we do not believe that decommissioning cost is necessary as a bid parameter. Please refer to our answer to Q1 for further detail.

Q12. What are your views on the proposed IDC rate approach and the option for projects to bid their own rate? Should riskier technologies receive a different rate?

We do not think that IDC rate should be a bid parameter. We think that the proposed IDC approach is unnecessarily complex. In most cases, IDC is a minor component of the total capex and is determined by the lender debt terms. For projects like BESS which generally have a 1-2 year construction period this does not materially affect the investment case. Attempting to benchmark or determine IDC independently of actual debt structuring is inaccurate to real-life debt financing processes. We recommend that the IDC is based on lender debt terms at financial close subject to reasonableness checks rather than a benchmarked input. This can simply be baked into project capex for inclusion in the RAV.

Q13. What are your views on the types of cost efficiency and delivery performance incentives included in the regime?

Our main input is for the cost incentive approach (see response to Q14).

In addition, we strongly recommend that a delay in the grid connection offer date is considered a force majeure event which is out of the control of a developer. Based on experience in the UK market, projects which are ready to connect may be unable to due to oversubscription at the GSP or delay to the schedule of works due to lack of capacity at the DNO (for distribution-connected projects). Some of the projects which we are entering into the LDES cap and floor scheme require a new GSP to be constructed and this is ultimately dependent on the transmission owner and DNO. We foresee that these issues will persist and cost overruns resultant of these should be appropriately accounted for.

Q14. What is your preferred approach to cost incentives (e.g. cost sharing vs. outturn comparison), and how should these be appropriately calibrated?

We welcome Ofgem's willingness to share risk on construction costs through the RAV adjustment approach. Given the timing of when costs need to be declared and 'locked' for the scheme in advance of full contract negotiations with EPCs / OEMs close to delivery, this capex risk-sharing is appropriate and necessary.

It is critical that the benchmark RAV as mentioned in paragraph 6.5 is set sufficiently late in the Project Assessment stage when costs are more substantiated, after bidders have had more detailed pricing discussions with EPC/OEMs. Submitting costs in Q3 2025 would be too early for the level of accuracy required by Ofgem for a competitive bid. The benchmark should only be determined after the cost update window in Q2 2026. Setting the benchmark too early risks anchoring cost expectations and RAV to preliminary estimates that do not reflect contracted pricing. In such a case, bidders risk being penalised for efficient but necessary cost increases.

We disagree with Option 2: Outturn cost comparison. If floor payments can be clawed back post-regime, the value of the floor as a fixed revenue stream for the asset disappears. This risks project bankability as the floor becomes effectively conditional on no cost overrun based on costs submitted in 2025/26, much earlier than detailed contract negotiations and financial close. As previously mentioned in this consultation response, we believe that projects would generally receive floor payments since 2030+ merchant revenues for 8h+ assets are still too low to make these assets commercially viable in the absence of a floor.

We are concerned that the outturn cost comparison approach confuses the purpose of the floor. This regime would make floor payments conditional on construction cost performance, even if the cost overrun was macro- or otherwise externally-driven, e.g. transformer scarcity driving up transformer pricing. However, the floor is designed to mitigate

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against merchant revenue risk of long-duration assets. Construction risk and revenue risk must be decoupled to maintain investor and lender confidence.

If construction cost discipline is the objective, this can be addressed via the RAV adjustment approach with a clearly-defined, transparent cost efficiency test.

Q15. Does our proposed mix of gearing caps, ringfencing, and financial reporting strike the right balance between financial resilience and flexibility for LDES projects? If not, what would you change?

We do not think there is a need to set a gearing cap for projects as this is already set by lenders based on the project's merits, and all project debt will already be sized to minimum DSCR requirements. Effectively this already constrains projects to a 70-80% gearing cap for strongly-contracted BESS assets, which the floor can be treated as if it is at an appropriate level.

Ringfencing is standard practice across project finance. However, it would be beneficial to get clarity on whether ring-fencing would permit the same lender(s) across multiple LDES-qualified project SPVs, if each SPV has a separate debt facility, to optimise debt transaction costs.

Annual report to declare financial performance is acceptable. The parameters which Ofgem seeks to view within each report need to be clearly defined and minimise reporting burden for operators. However, declaration of anticipated refinancing events is likely to be too commercially sensitive to report. We are willing to report on completed or publicly announced refinancing transactions once they have reached financial close, but we do not believe it is appropriate to disclose plans before they are finalised. This approach safeguards competition in the debt market and avoids unintended consequences on deal execution.

Q17. What are your views on including a residual value at the end of the cap and floor period, and how should this affect depreciation and investor returns?

We do not generally include a residual value in our financial models for BESS assets. Our assumption is that while there is a residual value to these projects, these will be balanced out against the decommissioning costs and site repowering considerations. We do not see it being significant enough to warrant inclusion in the context of BESS.

Q19. What are your views on our proposed financial model and handbook? Do you have any suggestions for simplifying it while keeping it clear and robust?

We find the financial model to be non-intuitive for developers. Primarily, the cap and floor return rate used to generate cap and floor annuities in the model is a cash yield on the asset RAV (or Devex + Capex + Repex). These rates are used to calculate the annuity to spread the allowed return and asset depreciation across the operating lifetime of the asset. As a project developer, we would assess the return on equity deployment of our capital and this is through an IRR, rather than cash yield, basis. We acknowledge that the cash yield methodology may be better-suited for regulatory pricing input, and we do not think that Ofgem needs to use an IRR methodology in setting the floor and cap return rate. However, as currently determined, we expect both the cap and floor return rate to be too low to meet investor requirements using the methodology detailed in the financial model.

In addition, Ofgem must be clearer about the parameters which it requires from developers to 1) competitively bid their projects and 2) declare their assumptions. The cap and floor return rates and floor term are competitive bid parameters, whereas the IDC, decommissioning cost and residual value are underlying assumptions which inform the competitive bid parameters. The latter should not be made as competitive bid parameters on their own as this risk overcomplicating the bid selection process and muddying which projects are most competitive.

Furthermore, we would like to note that an annual financial model is quite simplistic for the purposes of project finance and may introduce errors. We would generally use a quarterly model to allow for sufficient granularity, and this is quite important for accurately calculating tax allowances, contributing to the final cap and floor. The taxation allowance section is considered too simplistic to accurately capture the tax element of the cap and floor level. If taxation is to be modelled, appropriate sophistication is required (e.g. different capital allowances buckets, accounting for SHL interest, tax losses, EBITDA caps etc.)

Finally, we would like to flag that the way total debt service is calculated in the tax deductions sheet in the financial model is also simplistic and may distort the floor requirement downwards. The variable revenues of an energy storage asset results in year-on-year volatility in the CFAD, so developers would sculpt debt based on the expected revenues per year. We expect long-duration asset merchant revenues in the earlier years of operation to be lower and would

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realistically sculpt debt to allow for smaller repayments upfront. Therefore, if sticking with the use of the current financial model, we recommend that Ofgem includes functionality to appropriately model different debt structures, e.g. funding sequencing, sculpted debt for calculating the notional floor level etc.

The high level of differentiation between an investor/developer financial model and Ofgem's model is likely to cause an unnecessary amount of complexity for bidders. If bidders were allowed to provide parameters that could be easily assessed, such as £/MW/a figures for the cap and floor, this would reduce much of the risk of a lack of alignment.

1.3 Continuing engagement

Thank you for the opportunity to contribute to this important consultation. The UK's careful consideration of the LDES scheme assessment approach is an exciting next step toward finalising the cap and floor scheme. This is a complex set of topics, and we would welcome the opportunity to collaborate further. Please do not hesitate to contact us for more information.

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Yours faithfully,

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Principal Policy Manager, EMEA