



Dear Ofgem Team

**ILI Group: Ofgem consultation on LDES Window 1 Cap and Floor regime financial framework**

Intelligent Land Investments Group plc (ILI) is a leading UK energy storage developer. We specialise in undertaking the early development of energy storage projects, bringing them to a 'ready to build' stage before seeking investors to take over construction and operation.

By way of background, ILI has, to date, successfully developed the 450MW Red John Pumped Storage Hydro (PSH) at Loch Ness in Scotland, with Statkraft acquiring the project from us in December 2023. We committed several years of development effort to this project, undertaking all the early development work, gaining land rights, grid connection, and the planning consent.

In addition, we have also successfully developed 400MW of lithium-ion battery storage projects in Scotland, all being acquired by respected investors and operators. We are proud that our energy storage projects can help deliver Net Zero, security of supply, lower energy costs, and UK economic growth, all in the national interest. They will play a critical role in providing flexibility as intermittent renewable generation grows, especially in Scotland.

ILI is currently developing the Balliemeanoch Pumped Storage Hydro (PSH) project at Loch Awe, Scotland. This project is expected to have a maximum generating capacity of 900MW, able to operate continuously for 15 hours. It has 13 GWh of storage capacity. We have been developing this project for the last three years, completing detailed preparatory work, including extensive engagement with the local community and Council.

The project has the necessary land rights and a 2034 grid connection date, although we have requested this be advanced. Our planning application was submitted last summer and will shortly be reconsidered by the planning authorities in Scotland followed a project redesign. We expect these consents will be in place by September 2025.

We submitted our application for Balliemeanoch to the Ofgem LDES eligibility process on 9th June this year.

**Background**

In October 2024 the Government published its decision to enable investment in Long Duration Electricity Storage (LDES) by introducing a cap and floor (C&F) regime to be run by Ofgem. The core purpose of the regime was to overcome investment barriers to LDES resulting from high capital costs and long build times.

This should remain at the forefront of mind as Ofgem works to deliver a C&F regime which fully recognises the long-term benefits that prospective LDES projects can provide to successfully enable the delivery of high-value projects which without C&F support would not otherwise come to fruition.

In this letter, we are responding to Ofgem's consultation (launched on 19<sup>th</sup> June 2025) on proposals for financial parameters to be applied for the LDES Window 1 Cap and Floor regime. Our letter also refers to points raised in our recent response to Ofgem's consultation about LDES project assessment approaches.

Key points from our response are summarised below with detailed responses to questions attached as an annex.

## **1. Using competition to set cap and floor levels**

Ofgem is proposing a competition where LDES project developers for all technologies bid returns for cap, floor and interest during construction (IDC), together with residual and decommissioning values. These parameters will be difficult to bid given the uncertainty associated with high value projects before final investment decisions, and of the C&F regime itself. This may result in bids that are highly caveated or cannot be delivered – both of which would be undesirable.

In principle, we agree that competition could be used but it is unclear in the time available before C&F how key interrelated characteristics i.e. technology, duration, cost, consumer benefit, etc., can be submitted, validated, scored and selected in a fair and transparent way.

We consider the most pragmatic way forward to meet C&F award timelines is for Ofgem to rank Window 1 LDES projects based on economic and strategic evidence, using individual project evidence, and set administrative C&F's. We would repeat our recommendation from our response to Ofgem's project assessment consultation that the assessment process should fully capture the value that an LDES project will deliver over its lifetime in terms of electricity system, energy security and socioeconomic benefits. In this regard, we highlight that PSH projects can offer additional benefits due to their long asset lifetimes.

## **2. Setting the floor.** As for interconnectors, the floor is designed to accommodate both corporate and project financing, providing downside protection for projects via minimum revenue to support bankability and financing.

Ofgem recognises that LDES projects applying in Window 1 are likely to have a higher credit risk than P2P interconnectors – and agree the use of BBB-rated bonds recognises this. However, we do not agree that the FOAK premium should be ignored. PSH projects face similar revenue risks to NSI projects. We note that Ofgem have added a 150bps risk premium to the floor of the pilot NSI project.

## **3. Setting the cap.** Ofgem propose to set an administrative cap using benchmark return assumptions evaluated on a notional capital structure. As for interconnectors, Ofgem propose to use a notional cost of equity calculated using the CAPM and applied to 100% of the RAV, with a 10% sharing percentage above the cap.

We do not agree that a 10% sharing percentage above the cap is sufficient incentive for LDES assets to operate. We suggest that a 50% sharing factor is more appropriate. We also consider that Ofgem's proposed cost of equity benchmark is too low and should reflect a more appropriate comparator group.

## **4. Incentives for cost control and timely delivery.** Ofgem propose additional incentives to encourage efficient construction and operation.

We agree with Ofgem's statement that LDES projects are already incentivised to avoid cost overruns and delivery delays, which will result in lost income and lost returns on investment. We do not consider that further incentives are needed. Ofgem's proposals for additional incentive mechanisms gives major construction projects another unnecessary variable and risk to manage, which may be priced into cost of capital.

Overall, we consider that our responses in this letter provide a balanced approach to protecting consumers from higher costs while also ensuring the LDES C&F can enable investment in a pipeline of new PSH investments, the first in the UK for over 40 years. GB energy consumers stand to gain significantly from lower electricity prices and greater energy security. The LDES C&F is an innovative way of delivering these benefits but is yet unproven – it will be important that Window 1 C&F design presents an attractive opportunity for investment.

We trust these comments are helpful and would be pleased to engage further.

Yours Faithfully,



ILI Group, CEO

## Annex: Responses to LDES financial parameter questions

### 1. Approach to C&F level setting for LDES

*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?*

*Q2. How well does the proposed competitive framework accommodate the differing risk profiles of various LDES technologies? Are there any technology-specific considerations that should be better reflected?*

*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?*

Ofgem aims to use competition in setting C&F levels for LDES projects. They consider this offers investors greater flexibility while encouraging innovation and cost efficiency. Ofgem proposes that competitive bidding allows different technologies to reflect their unique risk and cost structures and encourages more accurate risk pricing and broader participation.

*In our response to Ofgem's recent project assessment consultation, we suggested that asking projects to compete at this stage through bidding of financial parameters would be difficult to achieve given the uncertainty associated with high value projects before final investment decisions, and indeed of the C&F regime itself. This may result in bids that are highly caveated or cannot be delivered – both of which would be undesirable.*

*We would repeat this concern and do not agree that competitive bidding would realise Ofgem's aim of allowing different technologies to reflect their unique risk and cost structures and encouraging more accurate risk pricing and broader participation. In addition to our prior concern about bidding uncertainties, we consider the proposed approach is highly exposed to gaming risks.*

*In principle, we agree that competition could be used for delivery of new high value utility infrastructure assets such as LDES. However, this competition is seeking to distinguish between several interrelated characteristics i.e. technology, duration, cost, consumer benefit, etc., without clarity on how the scoring or assessment will be performed, and, most importantly, how this can be seen as a fair competition. Also, the additional steps needed for the robust design and delivery of such a process may delay the delivery of the first cap and floor awards due next summer.*

*We remain of the view that the most pragmatic way forward is for Ofgem to rank projects based on economic and strategic evidence, taking account of individual project submissions. We would repeat our recommendation from our response to Ofgem's project assessment consultation that the assessment process should fully capture the value that an LDES project will deliver over its lifetime in terms of electricity system, energy security and socioeconomic benefits. In this regard, we highlight that PSH projects can offer additional benefits from their long asset lifetimes.*

*We provide more detailed comments against each Ofgem proposal below:*

Ofgem proposes a regime where developers are expected to submit their proposed return levels through competitive bids which are then compared to Ofgem's administrative benchmarks. The competitive framework proposes the following assessment parameters:

- a) Target rate of return at both the cap and the floor that will apply to the Regulatory Asset Value (RAV). For the competitive process, Ofgem's proposed administrative benchmark for the cap return is 7.31% CPIH-real and for the floor return is 4.47% CPIH-real.

*Ofgem is asking projects to bid target rates of return for both cap and floor, where the lowest values for both cap and floor will be chosen. Potential drawbacks to this approach include:*

- *Targeting the lowest cap/floor bid may incentivise bidders to bid low to gain a C&F award and take profits elsewhere e.g. through higher operating costs or RAV.*
  - *Low bids may lead to successful bidders not being able to deliver their projects.*
  - *This will not deliver best value for money for consumers. Delivery of the most economic long duration flexibility should be prioritised over marginal gains on returns.*
  - *Not all LDES technologies are in the same position to quantify their risks and bid their cap and floor levels at the same time. For example, projects such as PSH may need to complete preconstruction works (such as ground investigations) before cap and floor return values can be determined.*
- b) Proposed residual value of the project at the end of the regime (expressed as the proportion of upfront capex). This would be excluded from the RAV used to calculate cap and floor levels. Ofgem's benchmark for this will be a residual value of zero.

*Residual value will be difficult to assess and compare across different technologies. For example, PSH projects with long lifetimes will benefit consumers by continuing to compete in electricity markets, but discounting the RAV (and associated revenues) by a terminal value will impact the ability to raise finance in the first place.*

- c) Developers must propose a regime length of at least 20 years. There is no fixed maximum but if a project proposes a term longer than 25 years, the developer must explain how the project will remain financeable over that extended period.

*The ability to propose longer regime lengths could offer benefits for both customers and developers, but it is unclear how this would work in a competitive framework.*

- d) Target Interest During Construction (IDC) rate (%real). Ofgem's benchmark IDC rate will vary depending on construction period duration, rather than being fixed for all projects.

*We do not consider a competition for IDC is workable and would repeat our comments regarding the drawbacks from cap and floor competition as described above.*

- e) Estimated decommissioning cost (as percentage of capex). This will be benchmarked by Ofgem based on its assessment of what is considered efficient and economic.

*Again, this is not an appropriate measure for competition. Information about decommissioning may be incomplete as future decommissioning arrangements may be unknown both in terms of scope and timing. Using this as a competitive measure risks costs being bid at levels below what is necessary.*

Ofgem proposes to determine administrative C&F levels for each project using the final Cap and Floor Financial Model (CFFM), due to be published in Q3 2025. These will be compared to the project-specific bid C&F levels based on the above parameters. If the bid C&F levels are lower than administratively set parameters, Ofgem will apply these lower levels provided if they think doing so is in consumers' interests. Also, the bid C&F levels may be used in the Financial Assessment component of the Multi-Criteria Assessment (MCA) framework.

*As described above, we do not consider that Ofgem's proposals for competitive tendering of LDES project financial parameters are workable at this time and further work is needed to design a fair and effective competitive process. We consider that projects should be selected based on the outcome of Project Economic and Strategic Assessments, and an administrative cap and floor should be applied to successful projects.*

## **Truth telling incentive**

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

Ofgem is seeking to introduce a framework to encourage projects to bid truthfully, and propose the following incentives:

- a) *Enhanced revenue sharing*: The top 25% of bids, based on the biggest percentage below administrative C&F levels, will receive a higher revenue sharing rate above the cap. This may be up to 20% of extra revenue, instead of the 10% offered under the default regime.
- b) *Financial Assessment*: The competitiveness of bids will be assessed as part of the Financial Assessment under the Project Assessment framework, and Ofgem expects that the most competitive projects would be likely to score higher in this assessment.

*We do not see how these truth telling incentives can be effective and are concerned that they may lead to unintended consequences.*

*The enhanced revenue sharing is seeking to encourage bidders to bid below the administrative C&F levels. This does not encourage truth telling – it simply encourages low bids to enter the next stage of the competition. Such low bids may be caveated (and subject to later increases) or not be deliverable. Such an approach risks excluding viable projects that have insufficient certainty about the regime and their own project parameters at such an early bid stage.*

*Similarly, using the financial assessment does not encourage truth telling. Ofgem has not provided any information about how the financial assessment would be scored to realise this aim. Projects that deliver the greatest value to customers and the economy should be prioritised rather than relying on the lowest bids of certain financial parameters.*

**Strategic bidding** – Ofgem is concerned that projects may understate costs or overstate performance to appear more competitive. Ofgem proposes to address this by requiring robust evidence for all bid parameters, including third party validation where appropriate.

*Yes, this is a valid concern. We agree that robust evidence should be provided and validated if a competitive process is to be effective. This validation will require specialist knowledge across a wide range of commercial, technical, and delivery matters. It must be thorough and proportionate so as not to become a barrier to participants in the LDES C&F scheme.*

**Comparability between bids** – Ofgem is concerned comparability will be reduced due to the bespoke nature of the five bid parameters. Ofgem proposes that projects will be assessed 'in the round' including suitable comparator metrics or like for like technology comparisons.

*We have set out our views on the five comparators above. It is unclear how Ofgem envisage an 'in the round' decision this will work. In order to gain confidence in the C&F award process, we suggest that Ofgem should base their decisions on the evidence provided with priority being given to the value delivered to existing and future consumers.*

**Approach to selection** – Ofgem proposes that the administrative level will act as a ceiling and will be applied to any bids above this level. If bids fall below the administrative level, then a competitive approach will be used.

*As described above, we do not consider the proposed competitive process to be robust. We consider that an administrative process should be applied to projects offering the greatest economic and strategic value. The administrative levels must be set so that projects are investible, noting that these levels may differ between different technologies such as BESS and PSH.*

**Inflation indexation** – Ofgem's proposes to apply its RIIO-3 approach to CPIH indexation where the cost of debt allowance for fixed rate debt will be provided on a nominal rather than real basis, while maintaining real returns from index-linked debt and equity. This seeks to avoid overcompensation due to differences in fixed rate debt inflation assumptions and outturn.

To apply this approach to the LDES C&F regime, Ofgem is considering two options:

- estimating C&F debt and equity/opex components in real terms. Indexing the debt component with 2% long-run inflation and the equity/opex to outturn CPIH.
- Adopting a fully nominal regime where C&F levels are indexed to forecast inflation. Equity investors bear outturn inflation risk, but the opex reopener could mitigate.

Ofgem considers that most project debt will be fixed, and therefore indexing the floor would misrepresent actual financing costs. Ofgem propose to adopt a fully nominal regime which is based on their long-run inflation forecasts of 2%.

*Ofgem's use of a fixed 2% long-term inflation index means that projects will need to include costs of hedging for real inflation which will need to be included in financing costs.*

*We suggest that the C&F scheme should reflect actual CPIH inflation.*

**Taxation** – Ofgem are considering either an ex-ante allowance or actual tax to be treated as a pass-through cost. Ofgem propose to apply the ex-ante approach using the applicable tax rate in the same year that the cap and floor awards are made.

*We consider this is an appropriate approach.*

**Regime duration and residual value** – Ofgem propose allowing projects to bid for their preferred duration (no shorter than 20 years) and to submit a residual value. Ofgem expect a project with longer duration and residual value would require lower C&F levels. Any residual value beyond the end of the awarded duration e.g. up to 40 years, will be at the developer's risk.

*We do not agree with this approach. PSH projects with long lifetimes will benefit consumers by continuing to compete in electricity markets, but discounting the RAV (and associated revenues) by a terminal value will impact the ability to raise finance in the first place.*



## 2. Downside protection – designing the floor mechanism

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

Ofgem's C&F scheme is designed to attract investment in LDES projects that might otherwise struggle to get funding due to unpredictable market revenues. The floor makes projects bankable, ensuring any consumer support is proportionate, and limits market distortion. As for interconnectors, the floor is designed to accommodate both corporate and project financing.

*Ofgem's proposals currently seem to suggest that a truing up of cap and floor payments should take place at the end of the regime term. We suggest that there should be a 5-year true-up as used for interconnectors. This would be an effective way of balancing any peaks and troughs during the regime term.*

### **Administrative floor**

This uses a standardised, Ofgem-determined benchmark that reflects a notional cost of debt. It is expected to suit balance sheet-financed projects, where the financing is more integrated with the sponsor's wider corporate arrangements. The proposed approach is consistent with Ofgem's regime for Offshore Hybrid Assets (OHAs) and for project-financed interconnectors.

*We support that the administrative floor should be applicable to both balance sheet and project finance approaches.*

Ofgem propose to set the administrative floor rate of return using the iBoxx index of BBB rated GBP non-financial corporate bond yields of 15+ years remaining maturity, in line with the OHAs pilot C&F regime. The cost of debt benchmark will be the average yield over the 20 trading days up to 8 April 2025. This floor rate of return will apply to the entire RAV.

*We support the floor rate of return applying to the entire RAV. We agree that the iBoxx index of BBB rated corporate bond yields and the cost of debt benchmark period are both appropriate.*

Ofgem propose to use a bond index with a long-dated maturity of over 15 years as a good proxy for LDES project long-term debt structures given the 25-year default length of the C&F regime. To express nominal index yields in real terms, Ofgem proposes to deflate them using the Bank of England's 2% CPI inflation target as a proxy for CPIH.

Ofgem consider the iBoxx index for BBB-rated bonds reflects a lower average credit rating than the blended average used for P2P interconnectors, which combines iBoxx A-rated and BBB-rated indices. Ofgem considers this lower rating reflects that LDES projects applying in Window 1 are likely to have higher credit risk than typical P2P interconnectors that operate under a more established framework. Ofgem propose to keep the gap between cap and floor as wide as possible and are not including the 'First of A Kind' (FOAK) risk premium or the 'Pilot NSI' uplift that were added to the NSI floor rate of return.

*Ofgem's use of a fixed 2% long-term inflation index means that projects will need to include costs of hedging for real inflation which will need to be included in financing costs. It should be more efficient for the C&F scheme to reflect actual CPIH inflation.*

*We welcome that Ofgem recognises that LDES projects applying in Window 1 are likely to have a higher credit risk than P2P interconnectors – and agree the use of BBB-rated bonds recognises this. However, we do not agree that the FOAK premium should be ignored. We note that Ofgem have added 150 bps risk premium to the floor of the pilot NSI project. PSH projects face similar revenue risks to NSI projects.*

### **Actual cost of debt (ACOD) floor**

For projects that are project financed, Ofgem propose that projects can temporarily receive floor payments based on Actual Cost of Debt (ACOD), reflecting competitively raised debt costs. As for interconnectors, if the ACOD floor ends up higher than the administrative (or competitive) set floor then the project must repay the difference to consumers before any equity distributions can be made.



The ACOD floor rate will be set according to each projects debt raising timeline. Ofgem propose that no indexation will be applied given that most project debt is fixed or floating rate rather than index linked.

*We agree that an ACOD approach should be available for project financing. We note that the competitive process proposed by Ofgem will require bidders to submit a floor level before debt terms are known and have been agreed. This can then be revised after financing is agreed but if the revised ACOD floor is higher than the bid floor, the developer must repay the difference before any equity distributions.*

#### **Minimum availability target (MAT)**

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

Ofgem propose that projects must meet a MAT to be eligible for the floor. This will be set individually for each project determined by either an independent expert appointed by Ofgem or by reference to system stress events. It will exclude planned outages and force majeure events.

It is proposed that a project will become ineligible to receive floor payments if it falls below the MAT in any given year. However, for project financed LDES, Ofgem may allow projects to retain floor eligibility for a limited period if availability falls below the MAT. Any floor payments received while below the MAT must be repaid to consumers once revenues exceed the floor or after the regime end.

*We agree that LDES projects should be incentivised to operate at high levels of availability. They are already highly incentivised to do so as their profitability depends on competing in wholesale, balancing, ancillary service and capacity markets. Consumers will receive greatest benefit from LDES projects competing effectively in these markets, and this should be the priority of the regime.*

*We recognise that an availability target may be needed to protect consumers, but this must be proportionate, not unduly complex, and not inhibit long term efficient commercial operation. Each project is different, so we welcome that the MAT will be set on an individual basis, and that planned outages and force majeure events will be excluded.*

*The proposed approach to availability is non-symmetrical in that a penalty-only approach is proposed. If Ofgem's aim is to incentivise higher availability, we suggest that this incentive should be symmetric so that there is also a reward for achieving higher levels of availability. This is the approach Ofgem has successfully used on price controls and the OFTO regime.*

*The process for assessing and determining potential MAT incentives should be treated similarly for both administrative and ACOD projects.*

### 3. Designing the cap mechanism

Ofgem proposes the cap sets an upper limit on the revenue a project can earn annually under the C&F regime. When market revenues exceed a certain threshold, the cap provides for some of the excess to be returned to consumers. The mechanism should incentivise efficient operation by allowing projects to benefit from upside potential.

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

*Ofgem's proposals currently seem to suggest that a truing up of cap and floor payments should take place at the end of the regime term. We suggest that there should be a 5-year true-up as used for interconnectors. This would be an effective way of balancing any peaks and troughs during the regime term.*

#### Soft cap

Ofgem have proposed a 'soft cap' mechanism to ensure that LDES operators continue to have an incentive to efficiently operate the asset once their revenues exceed the cap. Ofgem is seeking to balance risk and reward between developers and consumers, and consider that it is sufficient incentive that projects retain 10% of revenues above the cap.

*In their proposal, Ofgem reference analysis performed by CEPA<sup>1</sup> for DESNZ and published earlier this year. The CEPA report agrees that a firm cap means the asset owner may be worse than indifferent to trading and dispatching the asset optimally. There is also an incentive to cycle less frequently than may be optimal due to the wear and tear of the asset for a limited return.*

*CEPA recommend a soft cap design with sharing factors for incentivise optimal operation. They suggest that a 10% sharing factor would be a sufficient incentive to outweigh wear and tear costs and ensure that incentives for optimum dispatch are maintained. The CEPA analysis also models a 50% cap and highlights that the level of the cap is a more important driver of consumer impacts than the sharing factor above the cap.*

*We do not agree with the CEPA conclusion that a 10% sharing factor is an appropriate incentive. Their analysis appears to assume that a LDES project will be able to predict exactly when it will deliver trading margins above the cap. But LDES projects will be operating in highly competitive trading markets with a daily upside and downside risk. A low sharing factor will reduce the incentive for LDES assets to take additional risk and participate effectively in these markets.*

*We do not consider that a 10% incentive is sufficient to encourage ongoing operation above the cap. We suggest that a 50% sharing factor is fair, incentivising LDES projects to compete in electricity markets, and protecting consumers from the risk of excessive returns are realised.*

*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?*

#### Administrative cap

Ofgem propose to set this using benchmark return assumptions evaluated on a notional capital structure. As for interconnectors, Ofgem propose to set the administrative cap rate based on a notional cost of equity calculated using the CAPM and applied to 100% of the RAV. The CAPM cost of equity calculation requires three key inputs:

- Equity beta ( $\beta$ ): Measures how volatile the asset is vs. the overall market. Ofgem propose to benchmark against six listed comparators: Drax, SSE, Iberdrola, Ørsted, RWE and National Grid. An equity beta of 1.125 for Window 1 LDES is proposed.

*We do not consider this is an appropriate set of comparators. Whereas LDES equity investors are exposed to merchant revenue risk, National Grid is primarily a regulated network company. Even if National Grid's interconnector business (NGV) is considered to have equivalent risks to LDES,*

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<sup>1</sup> <https://assets.publishing.service.gov.uk/media/67d0159ead017430364eeecd/l-des-cf-cap-floor-design.pdf>

*Ofgem's own analysis<sup>2</sup> shows this only represents 11% of National Grid's underlying operating profit. Excluding National Grid from this comparator assessment results in a simple average equity beta of 1.33.*

*An alternative, and potentially more appropriate merchant business comparator may be Glencore, a leading commodity trader, which has an equity beta of 1.51. LDES assets also take merchant risk from commodity trading across several markets.*

- Risk-free rate (RFR): Typically based on the return of government bonds. Ofgem propose to benchmark this to the 20 day average of 20 year indexed gilts, converted from RPI to CPIH inflation. A CPIH adjustment of 26 bps is proposed.
- Equity risk premium (ERP): The expected return of the market above the risk-free rate (calculated as the Total Market Return (TMR) minus the RFR). TMR has been estimated for RIIO price controls as a range of 6.5% to 7.0% with the midpoint of 6.75%. This will be updated in the RIIO-3 decisions later this year.

*These factors are also applied in Ofgem's decisions for network price controls and interconnector C&F decisions. We recognise that these Ofgem will be updating these market-wide factors for RIIO-3 price controls later this year.*

Ofgem propose that the CAPM inputs for LDES projects be aligned with those used in the Window 3 interconnector C&F regime, using a reference date of 8 April 2025 – the date applications for Window 1 opened.

Ofgem notes that LDES projects may face higher risks than point to point (P2P) interconnectors and LDES projects may seek higher returns. However, Ofgem proposes to use the same benchmark because:

- a) LDES revenues above the cap are shared, releasing more upside potential
- b) LDES projects may receive timing benefits from early revenue spikes, effectively increasing the cap level
- c) a higher floor is proposed for LDES projects compared to P2P interconnectors

*We do not agree with Ofgem's rationale that LDES projects should have the same benchmark as P2P interconnectors. We consider that PSH LDES is at least as risky as non-standard interconnector (NSI) projects.*

*Both PSH LDES and NSI are high-value construction projects deriving value from merchant revenues. NSI's derive value from capacity auctions (exploiting their dominant locational monopsony position), plus revenues from offshore hybrid (windfarm) assets. Both face significant revenue uncertainty. Ofgem decided<sup>3</sup> to add 150bps to cost of debt for the NSI pilot scheme floor and set the cap 2% higher, resulting in a floor of 5.63% and a cap of 7.73% (real).*

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<sup>2</sup> Ofgem (July 2024) Further consultation on the cap rate for the cap and floor regime for Window 3 electricity interconnectors, paragraph 3.36. [https://www.ofgem.gov.uk/sites/default/files/2024-07/Further\\_Consultation\\_on\\_Beta\\_for\\_Window\\_3\\_Interconnectors.pdf](https://www.ofgem.gov.uk/sites/default/files/2024-07/Further_Consultation_on_Beta_for_Window_3_Interconnectors.pdf)

<sup>3</sup> <https://www.ofgem.gov.uk/sites/default/files/2025-04/Further-detailed-regime-parameters-for-the-Offshore-Hybrid-Asset-pilot-scheme-decision.pdf>

## 4. Capital costs

*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?*

Ofgem propose that the cost base for LDES projects should include the following elements:

- a) Development expenditure (devex)
- b) Construction capital expenditure (capex)
- c) Spares
- d) Replacement expenditure (repex)
- e) Decommissioning cost
- f) Interest During Construction (IDC)
- g) Transaction costs

*We agree these are appropriate cost components for determining the RAV and C&F levels.*

*In line with transaction cost allowances the interconnector regime, Ofgem propose an equity allowance of 5% and a debt allowance of 2.5% of the opening RAV at the start of the operational period to reflect the costs incurred. We agree these levels are appropriate.*

### Treatment of opex

Annual opex is included in the C&F level calculation. This includes:

- Controllable opex – regular operational and maintenance costs.
- Baseline uncontrollable opex / Pass-through costs – cost elements outside the project's control, such as GB licence fees and property fees, where applicable.
- Corporation tax – provided separately as an ex-ante allowance.

Ofgem propose that 'Marginal cycling costs' may be treated as controllable operating expenditure (opex) or as a pass-through cost. Marginal cycling costs refer to the additional expenses incurred each time the storage system is charged and discharged.

*We agree that there should be a clear definition of marginal cycling costs in the LDES C&F regime. The costs will be incurred each time the storage system is charged and discharged and should not be included in the annual opex calculation.*

*We consider that marginal cycling costs should include electricity purchases, variable operating costs, route to market costs, and TNUoS or DUoS costs. Variable operating costs should include costs associated with PSH unique operating modes e.g. spin gen,*

### Cost assessment reopeners

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

A similar approach is proposed to the interconnector regime where reopeners are only allowed in limited cases:

- For opex, a reopener may be triggered by either Ofgem or the project, but not earlier than 10 years into the regime and no more than once every 10 years thereafter. Any changes would take effect from the decision date the decision and remain in place until the next reopener is triggered.
- For decommissioning, a reopener may be triggered if there's a change in law that significantly affects the expected cost of decommissioning.

*We do not consider the interconnector approach of limiting reopeners is appropriate. Interconnectors are largely passive assets with predictable operational and expenditure profiles. However, LDES assets such as PSH have significantly different characteristics in terms of technology, asset life and*

*operating characteristics, and will require a more flexible approach. We suggest that more frequent reopeners are needed for assets such as PSH e.g. every 5 years.*

*We agree with the proposed approach for decommissioning reopeners.*

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

In the interconnector regime, decommissioning costs are included in the RAV and recovered over the regime period. Ofgem propose that LDES projects estimate their full decommissioning cost as a percentage of capex but bid to only recover a portion through C&F levels. Ofgem consider this to be more realistic and transparent than using the RAV or fixed values.

*We recognise that Ofgem is seeking to ensure that the RAV and C&F levels are not unduly inflated by the inclusion of decommissioning costs. PSH projects with long lifetimes will still need to address decommissioning costs, potentially by building up reserves over time. It should be possible to express this as a percentage of capex. However, we do not consider it is appropriate to bid a decommissioning figure – it should be captured as an efficient cost that each project will need to provide for.*

*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?*

Ofgem proposes to calculate a benchmark IDC rate using a WACC approach consistent with the approach used for interconnectors but taking account of longer expected construction durations for some LDES projects. Ofgem propose to use the midpoint of a 0.5 to 0.9 asset beta range to reflect a higher construction premium.

*In principle, we agree this is an appropriate approach, but Ofgem's IDC rate decision will be critical in enabling projects to commence construction. It should not become a barrier or disincentive. The IDC rate will need to appropriately reflect the risks inherent in delivering major new construction projects.*

*We do not agree that projects should bid their IDC rate but suggest that Ofgem does allow projects to justify their individual IDC rate based on their individual technology or construction risks and evidence from finance providers.*

## 5. Cost and delivery incentives

Ofgem proposes to introduce incentives to encourage projects to deliver on time and to budget. These incentives should balance consumer protection and supporting efficient project delivery.

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

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

### Cost incentives

The alternative approaches are proposed to encourage efficient and economic cost delivery are:

- **Option 1: RAV adjustment approach.** This approach would adjust C&F levels by modifying the RAV either up or down from a cost benchmark. This benchmark may be the midpoint or upper end of the cost range submitted at the Project Assessment stage.

If final costs are lower than this benchmark, the RAV will be reduced at the Post Construction Review stage. If final costs are higher, the RAV may be increased, but only if those additional costs are assessed as efficient and economic. Any efficient costs above the benchmark will be subject to a 50:50 cost-sharing.

*We agree that LDES projects should be incentivised to deliver economic and efficient costs. We do not agree with the proposed 50% cost sharing approach for outturn costs that are more than Ofgem's benchmark. Projects face a risk that Ofgem's ex-ante benchmark may be too low and is unachievable – this unnecessarily increases construction risk and may mean that projects are unfinanceable or cost of capital increases to address this risk.*

*Developers already have a strong incentive to avoid cost overruns so that projects can deliver forecast returns. We agree that the RAV should be reduced if outturn costs are lower than forecast, and that Ofgem's Post Construction Review should only allow costs that can be justified as economic and efficient. This ex-post review, and the risk of cost disallowance, provides a very strong incentive for developers to deliver within budget.*

- **Option 2: Outturn cost comparison approach.** This approach would allow efficient and economic cost increases beyond the range submitted at Project Assessment to be added to the RAV. If this results in additional floor payments under the C&F regime, these additional payments may be subject to repayment after the end of the C&F regime. If no floor payments are received, no clawback will apply.

*As stated above, we agree that only efficient and economic cost increases should be added to the RAV at the Post Construction stage. Disallowance of any non-justified expenditure will protect consumers from the risk that the floor is set at a higher (and inefficient) level.*

*The proposal that there should also be a clawback of additional floor payments because of an efficient ex-post RAV increase is an unnecessary additional incentive. Projects have a significant incentive to deliver projects to ex-ante cost targets – they face the risk that additional expenditure will be disallowed. Adding a further potential revenue disallowance simply increases investment risks which will be reflected in the investment cost of capital.*

*Furthermore, if this clawback policy is pursued, it is likely to be complex to administer and of limited value to consumers. The value clawed back at the end of the regime may be minimal and outweighed by the cost of administration. Also, the clawback relies on a project running beyond the end of the C&F regime which may not be the case for some technologies.*

### Delivery incentives

Ofgem recognises that LDES projects already have incentives to avoid delays, as these can reduce income. In addition to this, two alternative approaches are proposed by Ofgem to encourage timely delivery and fair risk sharing between developers and consumers. These are:



- **Option 1: Graduated levers.** The IDC rate would be adjusted by 25 basis points for each year to incentivise timely delivery. If a project is delivered ahead of schedule, the IDC rate would increase or if a project is delayed, the IDC rate would decrease. This would apply to the whole construction phase.

*We agree with Ofgem that LDES projects are already incentivised to avoid delivery delays, which will result in lost income and lost returns on investment. We do not consider that further incentives are needed. This additional incentive mechanism gives major construction projects another unnecessary variable and risk to manage, which may be priced into cost of capital.*

- **Option 2: Clawback mechanism.** If a delayed project needs floor payments these projects may need to be repaid after the regime ends. If a delayed project does not receive floor payments, no clawback would apply.

*Again, we consider this measure is unnecessary. LDES developers are already incentivised to deliver as quickly as possible. Adding uncertain floor payments as a future potential penalty adds an uncertainty which may be priced into the project financing, reducing benefits to consumers.*

### **Treatment of delays and force majeure**

Ofgem recognises it is important to protect consumers from the costs of inefficient delivery while also ensuring developers are not penalised for events they could not reasonably prevent. This approach supports fairness and helps maintain investor confidence.

Ofgem proposes to include both pre-operational and operational phase force majeure (FM) arrangements in the C&F regime. During the pre-operational period, Track 1 and Track 2 projects, due by 2030 and 2033, may request deadline extensions to 2032 and 2035, respectively, if delays are caused by FM events and are supported with clear evidence.

It is proposed that, for the operational period, LDES projects will have FM provisions alike those in the C&F interconnector regime. These will cover events and circumstances beyond the reasonable control of LDES operators that occur after the regime starts. FM events also trigger Income Adjusting Event and Exceptional Event adjustments in the interconnector regime.

*Ofgem's target delivery dates of 2030 and 2030 will be challenging to achieve for major construction projects such as PSH.*

*We welcome that Ofgem proposes to include provision for FM events to cover events and circumstances beyond the reasonable control of LDES operators. However, limiting the permitted delays to force majeure events sets a high threshold which is unlikely to be sufficient to cover the range of exogenous delivery risks which PSH projects face.*

*In addition to force majeure events, we believe there should be permitted delays or 'contingencies' which encompass factors that would not fall under the usual interpretation of force majeure but could nonetheless significantly impact delivery timeframes for reasons outside a developer's control. Examples of such factors include:*

- *Grid delays: transmission owners face a highly demanding schedule of grid reinforcement whilst simultaneously facing resource and supply chain constraints. Outages for connection or commissioning may be delayed.*
- *Unforeseen ground conditions: There is a limit to how well ground conditions can be understood prior to construction commencing. If ground conditions are more challenging than expected, this could significantly delay a project.*
- *Unforeseen ecological or archaeological impacts: New impacts may emerge on a site during the construction period and could necessitate a pause in construction.*
- *Planning authority delay: where consents are being managed through the pre-construction phase and the discharge of planning conditions is delayed by the planning authority or statutory bodies, this would delay the delivery of a project.*
- *Supply chain constraints: Failure of the supply chain to mobilise and deliver on time could lead to significant delays to projects. The current developing global political situation raises concerns about cost and delivery times being far less predictable.*



*Each of these risks could potentially significantly delay a project's delivery at no fault of the developer. We therefore believe that each of these risks should be included within the defined reasons for a project to be allowed a delayed delivery date without incurring a penalty.*

*We note that Ofgem's recent guidance to Transmission Companies in relation to delivery of Accelerated Strategic Transmission Investment Projects has used a similarly broad definition of potential events or circumstances that are outside their reasonable control. We suggest it is appropriate to apply a similar approach to large scale LDES projects.*

*As such, we suggest that Ofgem's extension limits of 2032 and 2035 for Track 1 and Track 2 projects respectively should also be subject to adjustment in the event of delays outside of reasonable control.*

*We agree that Income Adjusting and Exceptional Event adjustments should be applied as in the Interconnector regime.*

## 6. Financial resilience

*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?*

Ofgem proposes to introduce measures to ensure that projects can withstand financial pressures and continue to deliver reliable service. These are necessary to safeguard consumers from adverse consequences of financial distress which may result in increased costs to consumers, where the projects play a critical role in the energy system, or payments are owed to customers. The following measures are proposed:

- *Gearing cap* – as for the interconnector C&F regime for project-finance assets, a gearing cap is proposed as a safeguard against excessive leverage and help ensure that projects' financial structures are sound. Ofgem proposes an 80% gearing cap and invites feedback on how such a threshold should be implemented and monitored.
- *Ringfencing* – Ofgem proposes standard ringfencing provisions to isolate regulatory assets and protect the financial integrity of projects. The proposed asset ringfencing provisions include restrictions on asset disposal, charges over assets, and cross-default clauses in financing arrangements.
- *Financial reporting* - regular financial reporting requirements are proposed to allow Ofgem monitor the financial health of LDES operators. These will be based on the RIIO model used for network companies. Annual reports would cover:
  - Key financial metrics such as cash flow, profitability, and liquidity;
  - Gearing levels and their forecasts;
  - Details of financing arrangements and anticipated refinancing events;
  - Dividend payments and equity movements, with justifications;
  - A narrative explanation of financial risks and how they are being managed.

*Ofgem's proposed measures to ensure resilience for LDES projects appears to be significantly more intrusive than those currently applied to interconnectors.*

*The proposed financial resilience and associated monitoring requirements appear to more closely reflect those currently applied to monopoly network licensees where financial resilience is critical to protect consumers. The proposals appear unduly heavy-handed for LDES assets that will be competing alongside other flexibility assets that do not have these resilience requirements.*

*Nevertheless, we do agree that appropriate financial and performance reporting is required for each C&F asset is needed while the C&F regime is in place, ensuring that cap and floor arrangements are administered effectively. As for interconnectors, appropriate ring-fencing and project finance gearing arrangements will be needed.*

## 7. C&F payments and charging mechanisms

The C&F mechanism will need to both receive and make payments from consumers. Ofgem's aim in selecting a charging mechanism is to ensure costs are shared fairly, support system flexibility, minimising the impact on consumer bills, and make the scheme easy to deliver. Ofgem's initial preference is to use BSUoS rather than TNUoS to manage payment flows.

Ofgem considers that BSUoS charges are more closely aligned with the role of LDES in supporting system balancing and flexibility. BSUoS charges are recovered through volumetric usage, meaning they reflect actual electricity consumption and do not fall on standing charges. Including C&F payments in BSUoS aligns with how other balancing and flexibility costs, like constraints and reserve services, are recovered from consumers.

TNUoS charges are used for interconnector payments. As well as being difficult to implement, Ofgem considers that TNUoS is not well aligned with the nature of LDES and flexibility services.

*Q16. Which charges - TNUoS or BSUoS - do you consider more appropriate for funding cap and floor payments and receipts, and why?*

*We agree that BSUoS is more closely aligned with the role of LDES and is an effective route for funding cap and floor payments and receipts.*

## 8. End of regime arrangements

*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?*

*Q18. What policy mechanisms should be introduced to support investability now and post regime or recovery of residual value beyond the C&F period?*

Ofgem has set out proposals for managing asset value post C&F period, addressing residual value, depreciation, and potential clawbacks. Key proposals are:

- the default C&F regime duration will be 25 years, but flexibility in regime length is proposed for assets, such as PSH, that remain economically valuable for much longer.

*We agree that there should be flexibility in regime length – this should be helpful for long asset life projects such as PSH, giving more flexibility in financing arrangements and potentially enabling lower cost financing solutions.*

*However, debt tenors beyond 25 years may not be available and refinancing arrangements (and potential reopeners) will be needed for longer regime durations*

- post-regime clawback arrangements for any floor and incentive payments made during the regime, possibly introducing a soft cap to achieve this.

*Having a post-regime floor clawback has the potential to add significant complexity and operator risk without significant consumer benefit.*

*The interconnector regime uses 5-year C&F reconciliation periods – applying a similar approach may be more appropriate instead of an end scheme reconciliation.*

- C&F levels, and to treat all projects equally, the residual value would be set to zero at the end of the 25 years. The proposed C&F competition would allow bidders to make individual depreciation and residual value assumptions.

*While PSH projects may be able to determine residual values at the end of 25 years based on an expected long asset lifetime, they may not be able to secure finance on these assumptions. As a result, the residual value used to set the C&F would probably need to represent financing assumptions rather than customer value assumptions,*

*We consider that an approach which allows each project to determine their own representative residual value is appropriate but do not consider this is an appropriate figure to be used in a competition. The residual value will vary according to market assumptions and will be difficult to predict accurately.*

- if a project incurs cost overruns or delays resulting in higher C&F levels and increased floor payments, then this benefit may be recovered after the regime ends

*We consider that the project will have already been penalised through loss of income (through delays) and reduced profitability (due to higher costs), We do not consider an additional penalty after the regime ends would add a significant additional incentive.*

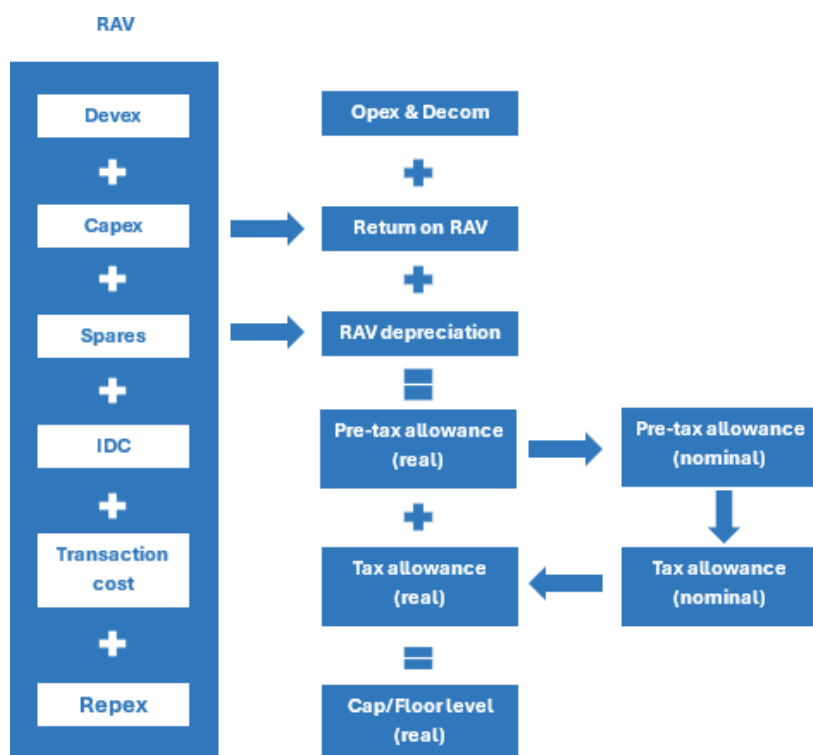
- for long-life assets such as PSH, accelerated depreciation may increase the risk of floor payments and reduce the risk of cap repayments, increasing risk to customers. Ofgem propose not to address this risk now but to adopt the following principles
  - Consumers should face similar risk across long- and short-lived projects;
  - Post-regime rules should not reintroduce investment risks the C&F regime is designed to reduce
  - Rules should not discourage further LDES investment, including refurbishment, where that makes the most sense;
  - Project lifetime returns should not be capped below the C&F regime return at floor return over the asset's full economic life.

*We note Ofgem's concerns that long-life assets may seek to accelerate depreciation and gain a higher C&F during the C&F period. The primary aim of the regime is to deliver consumer benefits from high value long-build time LDES assets that could not otherwise be financed. We agree that the regime should be applied in the way that makes most sense to deliver this goal.*

## 9. Cap and floor financial model (CFFM)

Ofgem propose to use the same Cap and Floor Financial Model (CFFM) and an accompanying handbook for all LDES projects, based on the structure used for interconnectors. The model will be used to calculate C&F levels for projects under both the administrative and competitive C&F setting processes. Regarding governance, Ofgem propose to use a similar approach to interconnectors, where updates to the CFFM and handbook are led by Ofgem in consultation with industry. The following flowchart shows how the CFFM calculate the C&F annual revenue.

- The RAV is the total of devex, capex, spares, IDC, transaction and replacement costs.
- Return on RAV and RAV depreciation are calculated; operating and decommissioning costs are added to form the total pre-tax revenue allowance in real terms.
- Real tax allowances are calculated to determine the C&F revenue level in real terms.



*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?*

*In principle, the application of the proven interconnector approach to the LDES CFFM and its revenue calculation, and associated handbook appears appropriate.*

*However, there are likely to be significant differences between LDES projects that will need to be appropriately reflected in the CFFM and associated handbook. These are likely to include different assumptions for asset lifetimes, depreciation periods, repex requirements, end of life treatment, etc., that are applicable to different technologies.*

*It will be important to ensure that the CFFM and handbook are fully developed before C&F award to provide confidence to both Ofgem and project developers for the ongoing operation of the regime.*