Assessment Framework

Cap and Floor Project Assessment: Long Duration Electricity Storage (window 1)

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This document sets out the final Multi-Criteria Assessment (MCA) Framework that Ofgem, working with the National Energy System Operator (NESO), will use to select Long Duration Electricity Storage (LDES) projects to be awarded a cap and floor regime in window 1.

It follows the Consultation on Project Assessment for LDES Window 1, where Ofgem asked for feedback on its proposed approach to selecting LDES projects (Projects). That consultation has now closed, Ofgem has reviewed all the responses and published its Decision. This final version of the MCA Framework follows on from the Decision document and provides detail of how Projects will be assessed and how Ofgem will determine which Projects are offered a Cap and Floor (C&F) regime.

This MCA Framework should be read alongside the Project Assessment Decision and NESO's Cost Benefit Analysis (CBA) methodology, which explains in greater detail the market modelling that NESO will undertake to support Ofgem in its determinations.

This document is written for eligible Projects as determined by the results of the first Eligibility stage of Window 1 C&F and other interested market participants.

References to the "Authority", "Ofgem", "we", and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day-to-day work

MCA Framework – Cap and Floor Project Assessment: Long Duration Electricity Storage (window one)

Contents

Executive Summary

This document sets out the detailed Multi-Criteria Assessment (MCA) Framework that Ofgem, working with NESO, will use to determine which Long Duration Electricity Storage (LDES) Projects will be awarded a cap and floor (C&F) regime in the Project Assessment stage of Window 1. It follows the Consultation on Long Duration Electricity Storage Project Assessment and should be read alongside the Decision document following that consultation. Projects that have passed the Eligibility stage will be required to submit further information about their Project to enable Ofgem to carry out this Project Assessment.

Ofgem will use a Multi-Criteria Assessment (MCA) approach to examine each Project across an Economic Assessment, a Strategic Assessment, and a Financial Assessment, with each assessment considering multiple Project impacts. Aligning with our principal objective to protect the interests of existing and future consumers, we plan to take an in-the-round approach of not setting weightings between these assessments.

The Economic Assessment will combine both monetised and non-monetised impacts to make sure the full value of each Project is considered. We will assess the impact of each Project on the Socio-Economic Welfare (SEW) of consumers, producers (i.e. owners of other assets in the electricity system) and the LDES asset owners themselves, alongside wider impacts on the GB electricity system and wider social and economic impacts.

To estimate the monetised impacts within the Economic Assessment, modelling will be used to assess the Project against a counterfactual of the GB electricity system without that Project. This will be compared against each Project's costs as determined through a Cost Assessment process that will take Project submitted cost ranges and adjust as appropriate (more detail in Cost Assessment Guidance). This will produce a Benefit-Cost Ratio (BCR), a metric to assess the monetised impacts of each Project, normalised by Project size.

The Economic Assessment BCR ranking is adjusted using impacts that are not monetised. Where the asset provides System Operability benefits by providing system services, this will be taken into account. Wider economic and social impacts such as natural capital, and local impacts will be considered.

The modelling will use the Future Energy Scenarios 2025: Pathways to Net Zero (FES) Holistic Transition pathway as the Base Case. To check the reliability of these results, sensitivity analysis will be used to test how outcomes vary under specific market conditions, for example alternative FES Pathways will be tested.

MCA Framework – Cap and Floor Project Assessment: Long Duration Electricity Storage (window one)

The Strategic Assessment will look at the risk and opportunities of the Projects beyond the immediate impacts assessed in the Economic and Financial Assessments by conducting scenario analysis. It will also examine how the overall portfolio of Projects selected meets wider strategic and policy objectives.

The Financial Assessment will use the adjusted costs, along with expected revenues, to estimate the level of consumer support required via C&F payments. It will test how changes in revenue forecasts, financial assumptions, and Project-specific cost ranges affect overall Project viability.

The Financial and Economic Assessments will be carried out in parallel. The Financial Assessment will produce expected revenue as a percentage of the Project's floor level. Projects that fall below a minimum threshold for this metric and are likely to place excessive burden on consumers in terms of floor payments will not be offered a C&F.

The Initial Decision List of Projects, to be consulted on in Spring 2026, will be based on the adjusted Economic Assessment ranking, Financial Assessment ratings, and Strategic Assessment. NESO will provide advice which will guide the Window 1 target LDES capacity range which will be set out as part of our decision when we publish the Initial Decision List.

The Initial Decision List will identify the Projects that perform best against the Project Assessment within this range. In making this decision, we may also consider a degree of additional capacity to ensure resilience against potential attrition and to provide confidence that we will have enough projects that can be operational by 2030, and no later than 2035. We expect to make final C&F awards to Projects in Summer 2026.

1.Introduction and context

Purpose of this document

1.1 This MCA Framework explains in detail how Ofgem, working with NESO, will conduct its analysis in the second stage of selecting Projects for the LDES Window 1 Cap and Floor regime. We refer to this second stage as Project Assessment or PA. The first stage was Eligibility and is described here: Long Duration Electricity Storage: cap and floor application window 1

1.2 The MCA Framework serves as a reference point for Ofgem (and its advisors), NESO and the Projects that are being assessed as well as providing transparency to wider industry stakeholders.

1.3 The document provides an explanation of the data required from Projects, explains how that data is used in the assessments and describes the methodologies that will be employed. It describes the decision process that Ofgem will follow in reaching the Initial Decision List of Projects expected in Spring 2026 and how we will make our final determinations on which Projects are awarded a C&F regime in LDES Window 1, expected in Summer 2026.

1.4 The MCA Framework was developed following the Consultation on Long Duration Electricity Storage Project Assessment. It should be read alongside the Decision on that Consultation which is being published at the same time. The Decision document describes where we changed or maintained our approach in response to the consultation. This document will focus solely on the final framework.

Roles and responsibilities

1.5 **Ofgem:** In October 2024, the government decided to use a C&F scheme to encourage investment in LDES. It asked Ofgem to determine which Projects should be offered a C&F regime and further develop the regulatory framework. This was included in our Forward Work Programme 2024/25 (Objective 8.4).

1.6 **NESO:** Following the Technical Decision Document (TDD) published in March 2025 by Ofgem and the Government, NESO have worked closely with Ofgem to develop this MCA Framework. NESO will conduct the Project Assessment analysis described in their CBA Methodology, as outlined in NESO's support for Ofgem's assessment of Long Duration Electricity Storage (LDES) Projects. Their main contribution to the assessment of Projects will be to assess the Socio-Economic Welfare (SEW) impacts of each Project.

1.7 **CEPA:** Ofgem have engaged Cambridge Economic Policy Associates (CEPA) as economic consultants with electricity markets expertise to support the development of the Project Assessment process. CEPA will support Ofgem in carrying out the MCA in Q4 2025 / Q1 2026 using inputs from NESO's analysis.

1.8 **ARUP:** Ofgem have engaged Arup as technical consultants to support with the Cost Assessment process.

1.9 **Eligible LDES Projects:** We refer to Eligible LDES Projects, or "Projects" to mean the organisation that is developing specific proposals for construction of a new LDES asset or expansion of an existing asset. Eligible Projects have been determined by Ofgem to have passed the assessment criteria at the first Eligibility stage. Projects are responsible for submitting accurate, credible, complete and up-to-date information to Ofgem according to the timescales laid out.

Next Steps

1.10 In the TDD, we set out our intention to assess all Projects with 2030 and 2033 start dates in parallel but with the option to use a 'twin track' approach if needed. Ofgem has decided to apply a single assessment process to all eligible Projects and will not follow a 'twin track' approach for its Project Assessment. Our assessment will inherently rank higher those projects that deliver earlier where they bring benefits for consumers. We may also consider how project delivery dates and overall capacities align with relevant targets and objectives, including Clean Power 2030 targets.

1.11 Whilst we have met all milestones so far in the timetable set out in the TDD, we are allowing slightly more time for a revised Project Assessment process following feedback from stakeholders. We believe this strikes the right balance between pace and robust decision making.

1.12 The publication of this MCA Framework starts the 8-week Submission Period for eligible Projects to complete and send to Ofgem their LDES Window 1 Project Assessment Data Submission Form (DSF) and associated evidence. The deadline for submission is 23.59 on 18 November 2025.

1.13 To support Projects during this phase, we will continue to use the BRAVO Q&A platform and plan to hold a series of online Q&A fora during the Submission Period. Ofgem will contact eligible Projects directly with details on how to take part.

1.14 Ofgem will share relevant information from Projects with NESO and Ofgem's advisors and will commence the Project Assessment immediately after the end of

the Submission Period. We are aiming to publish the results of the PA in Spring 2026. This will include our Initial Decision List of Projects which will be offered a C&F regime We plan to make a final decision and award of Window 1 C&F regimes in Summer 2026.

Key Related Publications

1.15 Relevant publications are hyperlinked in the text where they are referred to throughout this document.

1.16 At the same time as publishing this document, Ofgem has also published the following:

- **Eligibility Decision**: showing which Window 1 Projects will proceed from Eligibility Assessment (Stage 1) to Project Assessment (Stage 2).
- **Project Assessment Decision**: Ofgem's response to the Consultation on LDES Project Assessment which explains the MCA methodology in this document was adapted in the light of Stakeholder views.
- **NESO Cost Benefit Analysis (CBA) Methodology for System and Welfare Impacts**: this is an update to the NESO document published as part of the Consultation. It explains how NESO will conduct the market modelling which will provide key inputs to the MCA Framework.
- **Cost Guidance**: this explains how Ofgem will assess the costs submitted by Projects. It outlines how costs will be assessed at the Project Assessment stage as well as during the implementation of the C&F regime.
- **Project Assessment Data Submission Form (DSF)**: the Excel template that Projects will use to submit data as described in the MCA Framework. This includes the cost submission.
- **Financial Framework Decision**: Ofgem's response to the Consultation on LDES Financial Framework setting out the decisions made.

1.17 The main documents previously published by Ofgem in relation to the Window 1 LDES C&F are:

- Long Duration Electricity Storage Technical Decision Document (TDD)
- Consultation on Long Duration Electricity Storage Project Assessment
- Consultation on Long Duration Electricity Storage Financial Framework
- Long Duration Electricity Storage: cap and floor application window 1

Your feedback

1.18 We are keen to receive your comments about this guidance. We would also like to get your answers to these questions:

- Do you have any comments about the overall quality of this guidance?
- Do you have any comments about its tone and content?
- Was it easy to read and understand? Or could it have been better written?
- Any further comments?

Please send any general feedback comments to LDES@ofgem.gov.uk.

2. The overall assessment framework

This section covers what the Project Assessment is setting out to achieve and explains why and how we will use an in-the-round approach. It also sets out the principles guiding the framework.

Objectives of the Project Assessment

2.22 The purpose of the MCA Framework is to assist Ofgem in identifying the Projects that are (1) in the interests of existing and future consumers, and (2) appear best placed to meet the Window 1 target amount of LDES capacity.

2.23 Our assessment process is designed to avoid being overly mechanistic and will not set weightings in advance between various impacts nor between assessments. Rather, as each assessment will consider multiple Project impacts, we will take our decisions on offering C&F regimes based upon an in-the-round assessment. This aligns with our principal objective to protect the interests of existing and future consumers.

2.24 By ensuring that our decisions are informed by a broad perspective, rather than a narrow and siloed approach of prioritising one impact over others, consumers will benefit from decisions that acknowledge the trade-offs that may arise between the different impacts of a Project. Where such trade-offs arise, consumers will benefit from decisions that seek to balance those trade-offs by understanding the full impacts that result from awarding a Project a C&F regime. Consumers will also benefit from a comprehensive evaluation that looks at all relevant factors including monetised and non-monetised impacts, and the broader context around the purpose of the regime.

Key principles guiding the framework

2.25 **Aligned with Government Policy and Ofgem duties**: This MCA Framework follows the government's decision to introduce a C&F regime for LDES. Ofgem will implement the regime in line with government policy and strategic system planning led by NESO whilst meeting its duties to the protect the interests of consumers. It also aligns with the Ofgem Forward Work Programme 2025/26, which prioritises enabling a flexible, decarbonised energy system and supporting the UK government's policy objective for Clean Power 2030.

2.26 **Objectivity:** Projects of differing technologies will be compared based on an assessment of their expected financial and operational performance and the strategic benefits they bring. Evidence submitted by Projects will be subject to

scrutiny including expert review, benchmarking and comparison between Projects.

2.27 **Fairness**: The process will be conducted so that all Projects have the same opportunity at the same time to present evidence to decision-makers. Timelines for submissions will be laid out clearly, including strict deadlines. Applicants will not have an automatic right to update or expand any submission after the relevant deadline has passed. However, they must still respond to any further requests for information from Ofgem.

2.28 **Transparency**: Before confirming any decisions, Ofgem will consult on its "minded to" position in respect of each application. This consultation will set out Ofgem's provisional assessment on a project-by-project basis, together with requisite supporting information to demonstrate how Ofgem has reached each position provisionally taken. Where Projects submitted confidential information to Ofgem, this should be marked as such and will not be directly published.

2.29 **Workability**: Ofgem is required to deliver a new C&F regime for LDES to support the Clean Power 2030 goals. To achieve this, we have taken account of lessons from our successful Interconnector C&F regime and pragmatically adapted it to the specific characteristics of LDES. We have designed a robust framework with a level of analysis and assessment that examines the key impacts of each Project whilst being deliverable in the time available.

2.30 **Learning for the future:** The experience we gain in running Window 1 will benefit any future windows of the LDES C&F.

Summary of the assessment process

2.31 Ofgem will use the MCA Framework to assess each Project against a set of monetised and non-monetised impacts. It will bring together an Economic, Strategic and Financial Assessment to create the Initial Decision List of Projects. There will be no single overall score or ranking for each Project, nor will the 3 assessments be weighted. An in-the-round assessment will be made and explained alongside the Initial Decision List.

2.32 Please see Chapter 6 for more detail on how the three assessments that form the MCA Framework will work together.

2.33 We are committed to ensuring that the Project Assessment process best meets the aims of Window 1 C&F and is in line with Ofgem's statutory duties. As such we will monitor the progress of the Project Assessment process and, if required, we may adjust the in-the-round approach as described in this document. We

cannot rule out the possibility that we may be required to revisit the application of weighting criteria, the imposition of a lead criteria, or the scoring and ranking of each Project if required.

2.34 As this is the first investment window for LDES C&F (window one), we may be required to adapt our assessment process in response to the evidence provided by Projects or the volume of Projects that emerge favourably from the application of our MCA Framework. For example, whilst we have pragmatically adopted the lessons learned from our successful operation of the Interconnector C&F regime, the last investment window for interconnectors (Window 3) required that we assess only seven Projects.

2.35 Though Window 3 decisions were similarly arrived at based on an in-the-round assessment of a multi-criteria framework, there are significantly more Projects in consideration for LDES C&F with greater diversity in technology and operating characteristics. Should we be required to revisit the basis upon which we will award C&F to successful Projects we shall engage with stakeholders to ensure transparency of process and an opportunity to make representations.

2.36 Ofgem will set a target LDES capacity range which will guide the total capacity of Projects offered a C&F regime in Window 1. The range will be based upon updated advice to be provided by NESO. See 6.27 for further detail on how the target is set and applied.

Summary of information required from Projects

2.37 The Project Assessment Data Submission Form (DSF) provides an Excel workbook for Projects to submit their data which will be used in the Project Assessment. Cost data is included within the same workbook. There are 4 versions of the workbook for 4 different technology types. These are:

(1) Pumped Hydro Storage *(PSH)*

(2) Compressed Air Energy Storage *(CAES)*

(3) Liquid Air Energy Storage *(LAES)*

(4) Electro-Chemical Battery Storage *(EBS)* which includes:

a) Li-Ion battery storage

b) Vanadium Flow battery storage

c) Vanadium Flow / Zinc battery storage

2.38 Projects must submit **one form** that corresponds to the technology used in their Project. Submitting multiple templates or altering the format to fit the technology may result in the project being disqualified from the next stage.

2.39 In addition to the data submitted on the DSF, Projects should submit supplementary evidence in the form of PDF documents or spreadsheets in Excel format. The DSF provides additional guidance on the questions that require supporting evidence. Instructions will be provided to eligible Projects on how this evidence should be submitted.

2.40 Within the DSF, Projects will be required to reconfirm certain information that was provided during the Eligibility stage in June 2025. Ofgem will scrutinise any information received that contradicts the submission at the Eligibility stage, so Projects should be explicit in their submissions where and why information has changed.

3. Economic Assessment

This section outlines the Economic Assessment. It describes how monetised and non-monetised impacts are assessed and combined to form a Project ranking.

Purpose of the Economic Assessment

3.1 The Economic Assessment is designed to estimate the benefits that each Project will deliver. It will identify Socio-Economic Welfare (SEW) components and system impacts that each Project will bring relative to a counterfactual of that specific Project not being built. It will incorporate monetised and non-monetised impacts on the electricity system, as well as wider social and economic impacts. It is important that we capture these where they are material, recognising that they may not always be captured in market outcomes.

3.2 The Economic Assessment will produce a ranked list of Projects which will then be used alongside the outcomes of the Strategic and Financial Assessments to decide which Projects are offered a C&F.

Economic Assessment approach

3.3 The Economic Assessment will capture the impact of each Project on overall SEW, incorporating impacts on key actors in the electricity system:

- **Consumers**: household, commercial and industrial consumers of electricity.
- **Producers**: owners of other assets in the electricity system including generation, storage, interconnectors and other flexibility providers.
- **LDES Owners**: those with interest in the specific Project being assessed.

It will also incorporate impacts on the GB Energy System, and the wider economy where these are likely be to be material. In some cases, we will be able to clearly determine whether a specific SEW impact is directly borne by consumers, LDES Owners or producers. Where transfers between consumers and producers or between different types of producers will net to zero in terms of impacts on the overall SEW, we will separately present certain transfers between producers and consumers to better understand the overall impact on consumers.

3.4 The Economic Assessment will primarily focus on first-order effects so will not directly capture any knock-on effects, for example deferral of network reinforcement, reduced need for renewable capacity over-build to meet decarbonisation targets, and / or less investment required in conventional peaking capacity. Whilst these benefits are possible, and may improve the overall

economic case for LDES investment, they cannot be reliably attributed to individual LDES assets. We believe they are unlikely to materially affect the overall ranking of Projects once first order impacts, including non-monetised impacts, have been fully taken into account.

3.5 The Economic Assessment will be based on a Base Case that reflects:

- each Project's Base Scenario (P50) cost estimate adjusted as described in the Cost Assessment Guidance,
- the Holistic Transition pathway of NESO's Future Energy Scenarios (FES),
- and the standard 2013 weather year used in NESO's CBA.

3.6 The sensitivity of the results to different cost, FES and weather year scenarios, will be assessed and captured as part of the Strategic Assessment as explained in 4.38.

3.7 The table below summarises the impacts that will be captured within the Economic Assessment, and outlines whether they are captured as monetised or non-monetised impacts.

Table 1: Summary of impacts captured within the Economic Assessment

Category	Impact	Proposed methodology
Consumer SEW	Wholesale market costs	Monetised – NESO
Consumer SEW	Constraint management costs	Monetised – NESO
Consumer SEW	CfD support scheme costs (transfer to producers)	Monetised – NESO
Producer SEW	Wholesale market net revenue	Monetised – NESO
Producer SEW	CfD support scheme revenues (transfer from consumers)	Monetised – NESO
LDES Project Owner SEW	Wholesale market temporal arbitrage (initial commitment)	Monetised – NESO
LDES Project Owner SEW	Project costs	Monetised – Ofgem/Project
System impacts	Security of supply (cost of EENS)	Monetised – NESO
System impacts	Real-time flexibility benefits	Qualitative – Ofgem/Project
System impacts	Avoided renewable curtailment	Quantified – NESO
System impacts	System operability/system services	Qualitative – Ofgem/Project

MCA Framework – Cap and Floor Project Assessment: Long Duration Electricity Storage (window one)

Category	Impact	Proposed methodology
Wider economic and social impacts	Unpriced carbon externality cost	Monetised – NESO
Wider economic and social impacts	Natural capital, landscape, and local community	Qualitative - Ofgem/Project
Wider economic and social impacts	Skills and supply chain	Qualitative - Ofgem/Project
Wider economic and social impacts	Other Economic Growth	Qualitative - Ofgem/Project
Wider economic and social impacts	Option Value from Expansion	Qualitative - Ofgem/Project

3.8 Most of the monetised assessment of consumer and producer welfare and system impacts will be undertaken by NESO. The Cost Benefit Analysis (CBA) methodology produced by NESO provides further detail on how each of these impacts will be assessed.

Combining monetised and non-monetised impacts

3.9 The monetised impacts of relevant SEW components, in addition to impact on system costs, will be combined to provide an estimate of the overall monetised part of the impact of each Project. The Present Value (PV) of all monetised costs and benefits will be calculated and used to determine a Benefit Cost Ratio (BCR), which will allow us to normalise the SEW impacts of each Project for differences in Project size. The BCR is calculated by dividing benefit by Project cost. The BCR will be used to create the initial monetised ranking of Projects in the Economic Assessment.

3.10 The non-monetised impacts will be assessed through a combination of qualitative scoring methods and quantitative methods based on continuous scores (but which cannot be easily monetised). The non-monetised ratings will then be used to adjust the BCR produced by initial monetised assessment.

3.11 We will use a swing-weighting approach to produce an overall score for each Project and a revised Economic Assessment ranking of Projects that will inform the Project selection. This approach ensures that the weights we use reflect both the importance of a particular impact and the materiality of differences between Projects, rather than being defined arbitrarily in advance.

3.12 The swing-weighting approach to integrating non-monetised metrics into the ranking takes some aspects of the MCDA approach recommended by the Green Book for longlist option exercises, but is adapted for the specific purposes of this assessment.

LDES assets co-located with generation

3.13 Some LDES assets are co-located – i.e. share a grid connection and operate as part of the same Balancing Market Unit (BMU) – with generation assets (e.g. wind or solar farms). NESO's CBA methodology sets out how these assets will be modelled.

3.14 Shared costs will need to be apportioned between the LDES asset and the co-located generation asset. These could include grid connection costs, land or civil engineering costs, and any other costs that cannot be unambiguously attributed to either the LDES or the generation asset.

3.15 Where Projects are co-located with generation assets, we ask them to propose a methodology to split shared costs between the two assets. We will review the proposed cost allocation methodologies of all such Projects and apply a transparent, clear and consistent methodology to all co-located Projects, informed by the proposed methodologies.

Consumer welfare impacts

3.16 The assessment of consumer SEW will estimate the direct impact on electricity consumers from the development of the Project being assessed.

Wholesale market costs – monetised impact

3.17 This captures the change in wholesale market prices paid by electricity consumers due to the addition of the Project and will be estimated through NESO's CBA. Wholesale market costs will be monetised and calculated as the sum of hourly demand multiplied by the hourly wholesale market price.

Constraint management costs – monetised impact

3.18 This captures the change in system costs associated with curtailment and redispatch actions to resolve network constraints. It will be assessed through NESO's CBA, by comparing constraint management costs incurred between unconstrained and constrained models, based on inclusion of the Project and the related counterfactual.

CfD Support Scheme costs – monetised impact

3.19 Changes in wholesale market prices drive corresponding adjustments in payments between consumers and producers under the Contract for Difference (CfD) scheme designed to support Renewable Energy Sources (RES).

3.20 This impact will capture the effect of:

- Changes in wholesale market prices in periods when supported RES operators are generating, and
- Changes in the overall utilisation of RES generation,

both of which will impact the level of payments to RES operators. For example, reductions in the level of curtailment across the system may allow renewable assets to generate more and, therefore, likely receive higher CfD payments. Similarly, reductions in the wholesale prices would mean RES generators receive higher CfD payments (or make fewer repayments). From a welfare perspective, both of these examples represent a transfer from consumers to producers.

3.21 As part of NESO's CBA modelling, we will be able to quantify the projected reductions in the curtailment of renewables. This will allow us to have regard to the likely consumer benefit from these second order effects as part of the overall assessment.

Producer welfare impacts

3.22 The assessment of producer welfare will estimate the direct impact of the Project being assessed on producers (owners of other assets including generation, storage, interconnectors and other flexibility providers).

Wholesale market net revenue – monetised impact

3.23 This metric captures the change in wholesale market revenues due to changes in wholesale electricity prices and volumes minus changes in the cost of electricity production (variable operational costs, fuel, and carbon costs). This will be assessed for electricity generators and storage/flexibility operators.

3.24 This metric will also capture changes in interconnector congestion rents. For the purpose of assessing GB welfare impacts, NESO will assume that 50% of total congestion rents accrue to GB.

CfD support scheme revenues – monetised impact

3.25 As CfD support scheme payments represent a transfer between consumers and producers, any changes in support scheme payments to/from generators are also captured as a producer welfare impact. The two impacts fully offset each other so the net impact on SEW will be zero.

LDES Project Owner welfare impacts

3.26 As part of the welfare calculation, we will consider the revenues and costs incurred by the Project being assessed. This will form both part of the Economic Assessment and also the Financial Assessment discussed in the next section.

Wholesale market temporal arbitrage (initial commitment only) – monetised impact

3.27 We will estimate the gross margin revenue earned by the LDES asset from arbitraging in the wholesale market (i.e. revenues earned from selling electricity in the wholesale market minus the cost of buying electricity), derived from NESO's CBA. For the purposes of the Project assessment, we are assuming that the gross margin revenue derived from NESO's analysis reflects the revenues obtained from an Project's initial commitment.

3.28 We discuss revenues obtained by Projects from re-optimising their initial positions in the non-assessed impacts section (3.76) and in the Financial Assessment section (5.49).

Project costs – monetised impact

3.29 To capture the costs of constructing and operating the Project, we will use cost information submitted by Projects, which will describe costs in three scenarios; the reasonably optimistic (P10), the Base (P50), and the reasonably pessimistic (P90). The TDD outlines that suitably mature cost estimates will be required. The Cost Assessment Guidance provides details on these cost submissions including an explanation of maturity class of estimates and treatment of contingency.

3.30 We require Projects to submit a fair assessment of their costs. All three costs scenarios (reasonably optimistic, Base Scenario, and reasonably pessimistic) will be used in the Economic Assessment (via scenario analysis in the Strategic Assessment), and in the Financial Assessment to determine cap and floor levels. The Economic and Financial Assessments will use the Base Scenario cost estimate as the Base Case. In the Strategic Assessment we will explicitly consider the risk of cost variances based on the full range submitted by each Project.

3.31 The reasonably pessimistic case will also inform the approach to cost overruns and acts at the Project Cost Ceiling, see the Cost Assessment Guidance for more details. Subject to any specific Uncertainty Mechanisms that may have been applied to the Licence, if a Project's costs have exceeded the Project Cost Ceiling set at the Project Assessment, we expect to set Cap and Floor values based on the Project Cost Ceiling.

3.32 Any potential updated cost information submitted in Q2 2026 to support the setting of the C&F levels will also be expected to fall within the original range provided at this Project Assessment stage.

3.33 Any cost overruns (as explained in the Cost Assessment Guidance) will not necessarily lead to increased floor payments either before or after C&F regime award.

3.34 For the Economic Assessment, we will spread the cost of the Project over its useful economic life. For long-lived assets, this will imply a terminal value at the end of the 25-year appraisal period reflecting the fact that such assets will continue to provide value to consumers and to wider society beyond the appraisal period. Note that this is distinct from any residual value proposed by Projects as set out in 5.67 and the Financial Framework.

System impacts

3.35 System impacts refer to additional costs or benefits to the wider electricity system. Whilst they do not relate directly to consumer or producer welfare, over the long-term, improved system efficiency is associated with lower costs to consumers.

Security of supply – monetised impact

3.36 The security of supply component of the Economic Assessment measures the impact of the Project on the ability of the system to meet demand. It is measured in terms of the change in the cost of Expected Energy Not Served (EENS). NESO's CBA Methodology explains how change is monetised.

Real-time flexibility benefits – qualitative impact

3.37 NESO's CBA will optimise the modelled system to minimise system cost assuming perfect foresight of the energy balance over the short-term optimisation horizon. Hence, the model implicitly assumes no intraday uncertainty around demand and supply and no forecast error following initial commitment. The model effectively assumes that the market for Intraday (ID) and Balancing Mechanism (BM) clear at the same price as the Day-Ahead (DA) market, except for the impact of re-dispatching of positions due to thermal constraints (which will be modelled explicitly in NESO's constrained run).

3.38 In practice, the clearing prices in the ID market change over time as forecasts of demand and supply evolve, and BM prices deviate from DA and ID prices because of these evolutions, as well as re-dispatch requirements. Updates to forecasts of demand and intermittent generation, unplanned outages, and hard-to-predict operational requirements all impact demand and supply in real time.

3.39 Storage assets – including LDES – can provide significant benefits to the system by responding to these real-time changes. Typically, storage assets will engage in

price arbitrage in all three markets, as well as continuously re-optimising their initial position as the price curve shifts. Such re-optimisation yields incremental revenues over and above what perfect-foresight models would suggest. This increased revenue is partly a transfer from trading counterparties in the energy markets, but in part also a reflection of genuine system benefit.

3.40 Additional storage will offer the system operator additional means for managing energy imbalances, potentially at a lower cost than alternative sources of flexibility, such as curtailing renewable generation, shifting demand, or dispatching thermal generation. Furthermore, additional storage is likely to increase liquidity in the ID market, reducing bid-ask spreads, and in general reducing price volatility the ID and BM market, reducing risk and operational requirements for all participants. These benefits are likely to be significant.

3.41 The potential of individual Projects to deliver such system and market benefits may differ somewhat depending on asset characteristics, notably efficiency and duration. However, we do not have conclusive evidence on whether any such differences are likely to be material enough to affect the relative ranking of Projects in terms of the SEW welfare impacts they deliver. Furthermore, we do not believe that a sufficiently robust methodology, which will allow a consistent assessment of these benefits across different Projects, is available.

3.42 As a result, our starting position when assessing Projects will be that the benefits to the system from the provision of real-time flexibility will not differ materially from Project to Project and therefore will not affect the relative ranking within the Economic Assessment. We will allow Projects to submit evidence for why they consider their Project more likely to deliver high flexibility benefits than other Projects. This should be with reference to asset characteristics, e.g. storage capacity, duration, efficiency. Where we consider the evidence robust and material, we will include it as a non-monetised impact. Additionally, where we consider that this benefit is likely to apply to other Projects with similar asset characteristics, we will similarly include it as a non-monetised impact.

3.43 As explained in Section 5, we do intend to take account of re-optimisation revenues across the ID and BM markets as part of the Financial Assessment.

Avoided renewable curtailment – impact on CfD costs – non-monetised, quantified impact

3.44 This impact captures the change in renewable curtailment following the addition of the Project. Reduced curtailment may reduce the strike prices that renewables projects need to bid in CfD auctions to achieve their target hurdle rate. It may

also reduce the volume of renewable capacity needed to hit decarbonisation targets, due to better integration of renewable sources on the system.

3.45 This indicator will be quantified but will be assessed as a non-monetised impact. It provides information about the potential for wider consumer benefit not quantified in the assessment. We will not capture these within the monetised assessment due to the high degree of uncertainty and modelling complexity involved. For example, while reduced renewable curtailment may lead to a reduction in strike price bids for future CfD auction rounds, this will depend on the level of competition in those auction rounds. Similarly, while higher renewables utilisation may mean that less renewable capacity needs procuring through future auction rounds, this will depend on whether decarbonisation targets can be met with less renewable procurement and on other government policy choices. Capturing any second-order benefits of reduced renewable capacity would also require an iterative approach since reducing the renewable capacity on the system would have a knock-on impact on wholesale prices and therefore on the LDES arbitrage revenues modelled in our assessment.

System operability – qualitative impact

3.46 LDES assets may contribute to system operability by providing system support, for example through balancing and stability services, restoration and reactive power/voltage support, etc. It is not always possible to robustly monetise the full contribution a Project makes to system operability. We will therefore carry out a non-monetised assessment of the system operability contribution of each Project.

3.47 A score will be assigned to each Project. The score will be determined by a qualitative assessment of the system operability benefits of the Project. The score will consider the Project's technical capability, location and strategic value with respect to operability. This assessment will be based on the Project's characteristics as provided by the Project in the Data Submission Form.

3.48 The Project's capability for each service will be scored considering characteristics relevant for each operability benefit, such as response time, ramping speed, duration of provision of service and other factors. Projects that are more capable of providing operability benefits will be scored higher.

3.49 For services whose value is locationally dependent, the score will be adjusted by a locational factor. This factor will adjust the score based on the local system need, and it will be determined by the magnitude of the service requirement at a given location based on inputs and advice from NESO. Areas with higher identified needs will receive a proportionally higher value.

3.50 Where we are confident that we have reliable data, the score will also be adjusted by an availability factor, representing the percentage of settlement periods that the Project is available to provide the service. The availability will be scaled to consider technical unavailability for periods of planned or unplanned outage. It will also consider, where relevant, the number of settlement periods in an average year when the asset is charging or discharging active power, based operational data from NESO's CBA modelling.

3.51 The score will finally be adjusted by a strategic operability factor, which will reflect broader considerations about the Project's potential to deliver system operability benefits in the long term, beyond its immediate technical and locational characteristics. It will capture our assessment of the Project's relative contribution to operability within the wider system context, taking into account factors that may influence the persistence, distinctiveness or comparative value of its operability benefits over time.

3.52 The scores for each system service will be weighted by a factor that considers NESO's system need and the relative benefit of each service in contributing to overall system operability.

3.53 The weighted scores will then be adjusted to take into account the quantity of the service that the Project can provide, and the result for all services will be combined into a single metric of system operability benefits.

Wider economic and social impacts

Unpriced carbon externality cost – monetised impact

3.54 The estimates of consumer and producer welfare capture the monetary cost of emissions through the assumed UK ETS carbon price (or market price), which affects the cost of electricity generation and the wholesale market price. Technically, these carbon costs are a transfer between the power sector and other sectors of the economy, as there is a fixed number of UK ETS allowances. However, modelling other sectors of the economy directly goes beyond the scope of this assessment.

3.55 In addition, the most recent guidance Valuation of greenhouse gas emissions: for policy appraisal and evaluation - GOV.UK on appraising reductions in greenhouse gas emissions recommends that reduced carbon emissions be appraised using a Marginal Abatement Cost or "target-consistent" approach. This involves setting the wider social cost of carbon (carbon appraisal price) at a level that is consistent with the decarbonisation targets adopted by the UK. Since these

appraisal values are higher than the UK ETS carbon price, an adjustment must be made for the full benefit of reduced carbon emissions.

3.56 To account for this, we will estimate the social cost of carbon not implicitly captured in the electricity price, by multiplying the volume of carbon emissions by the differential between the carbon appraisal value and the assumed UK ETS carbon price used in NESO's CBA. This ensures that we do not double-count emissions-related benefits in line with Green Book guidance referenced above.

Natural capital, landscape, and local community impacts – qualitative impact

3.57 In cases where significant negative impacts are possible, we expect the relevant planning authorities to establish these impacts and any mitigation costs to be included in submitted Project costs. As a result, we will assume neutral or immaterial impacts on natural capital, landscape, and local communities, provided that Projects can show that they have complied or will comply with relevant requirements and received appropriate authorisations.

3.58 There might be a case, for individual Projects, to consider any significant positive impacts on natural capital, landscape, or local communities. Where Projects believe that there is a strong case for such additional benefits to be considered in the assessment, they should provide appropriate evidence in the form of proportionate analysis carried out in line with Green Book guidance and other relevant guidance for this type of appraisal. For example, if payments are made to local communities, it should be demonstrated that these are not transfer payments.

3.59 We expect to assess any Project-specific evidence of this type qualitatively, although in some cases it might include ad-hoc quantitative analysis.

Skills and supply chain – qualitative impact

3.60 We will not assess the direct impact of each Project in terms of jobs supported or created, in a mechanistic manner. While some Projects may yield new employment opportunities across the construction or engineering sectors, such employment may simply displace similar jobs in other parts of the economy. In addition, we are not convinced that such impacts could be calculated and compared between different Projects following a robust and consistent methodology.

3.61 However, we recognise that some Projects may have a positive impact on local labour markets and supply chains, through investment in specialised skills, or their commitment to source workers and materials from local markets and

domestic supply chains, or by supporting the stimulation and export potential of UK-developed technology. Where this is the case, we will consider any evidence put forward by Projects and consider it as part of the qualitative assessment of wider economic and social benefits.

3.62 The focus on skills and supply chains is in line with the government's statutory guidance on the Growth Duty for Regulators, particularly relating to Drivers 4, 5, and 6. It is also consistent with the type of information that the government is requesting for large-scale Projects bidding into recent CfD allocation rounds, such as that included in AR7 Supply Chain Plan Guidance. In putting forward proposals for our consideration, we also invite Projects to consider the relevant Green Book and other relevant appraisal guidance.

Impacts on economic growth through other mechanisms – qualitative impact

3.63 Our assessment of monetised benefits includes the direct impact of each Project on the economy, which will therefore be consistent with the wider objectives of economic growth.

3.64 Additionally, the non-monetised assessment of the wider economic and social impacts discussed in this section will consider some of the most important ways in which Projects can contribute to economic growth beyond the direct impacts it will have on the energy system. This is particularly relevant for the assessment of the impact of each Project on skills and domestic supply chains.

3.65 It is possible that individual Projects could have additional macro-economic effects through different pathways, depending on the technology used and the process used by Projects to procure, build and operate the relevant assets. Similarly to the impact on jobs supported or created, we do not believe that these additional impacts are likely to significantly differ between different Projects – once adjusted for scale.

3.66 We therefore will not calculate impacts on economic growth separately from the impact captured by the other metrics discussed above. For example, we will not calculate top-down, multiplier-based estimates of the impacts of Projects on economic growth, which would be less transparent and risk double counting other impacts considered in the MCA.

3.67 However, where Projects believe that their Projects will contribute to economic growth through a mechanism that is not already captured in our proposed MCA criteria, we will consider any evidence submitted to this effect and consider assessing it as part of an additional criterion if appropriate.

Option Value from potential expansion – qualitative impact

3.68 Where Projects believe there is potential to significantly increase the benefits of the Project at a relatively low cost, for example by expanding capacity in a future phase of the Project, they should provide evidence of this in their submission. This evidence should include planned new capacity, incremental cost, timings and an assessment of risk and likelihood of achieving this expansion.

3.69 We may conduct a technology-based assessment of expansion potential as part of this, looking at the inherent ability for some technologies to expand (e.g. BESS expanding storage capacity) vs. other that are generally more fixed in nature, but may provide evidence of expansion potential at the Project-specific level.

3.70 Taking the Economic Assessment ranking as a starting point, we will estimate the total expansion potential from Projects in the list. Where there is significant expansion potential from particular Projects at a relatively low cost, we will consider scoring these Projects accordingly. In making this assessment, we will weigh up the overall cost of the expanded asset base against delivery risk and expected timing of these expansions.

Not captured within the Economic Assessment

3.71 There are several impacts that we considered when devising the MCA Framework but we decided should not be captured. The following section explains and justifies these decisions.

Capacity market impacts on consumer welfare

3.72 While the total volume of de-rated capacity procured through the capacity market is assumed to remain constant, Projects may impact the clearing prices delivered by the capacity market clearing in multiple opposite ways:

- The Project will act as a price taker in the capacity market and may push the (otherwise price setting) marginal plant out of the auction merit order, thus potentially reducing the clearing price.
- The addition of the Project may reduce the frequency and magnitude of high price events, reducing the expected earnings of existing peaking plants and hence increasing the "missing money" problem. In turn, this might result in such capacity increasing their bids in the capacity market, and thus potentially higher clearing prices.

3.73 We take the position that capacity market prices will remain unchanged relative to the counterfactual. Considering that the volume of capacity to be procured

through the capacity market also remains unchanged, this means that overall capacity market costs for consumers would not change.

3.74 We do not believe that the impact of an individual project on the capacity market will vary materially from project to project, once normalised by scale. As such we will not assess this as an impact.

Second-order impacts on network reinforcement costs

3.75 We will not capture the impact of individual Projects on network reinforcement costs within the Economic Assessment. Instead, any impact on the network will be implicitly captured in the assessment of constraint management costs. While investment in Projects in general may reduce or defer the need for network reinforcement, it is unlikely that a single Project will significantly avoid or delay a particular grid reinforcement project.

LDES Capacity Market and ID/BM re-optimisation revenues

3.76 As discussed above, we assume that the consumer impact from Project participation in the Capacity Market (CM) will be neutral. Hence, the CM revenues earned by LDES assets are assumed to result in an equal loss of CM revenues for other capacity providers. This means the net impact on SEW will be neutral.

3.77 Similarly, revenues from normal commercial optimisation of LDES assets through trading in the intra-day markets (ID) and energy actions in the BM are not directly included in the Economic Assessment. These revenues represent a transfer between other producers and the Projects and are therefore not a net benefit to consumers.

3.78 By the same token, the Economic Assessment will take account of genuine net consumer benefits accruing from provision of BM non-energy actions as well as the system value of increased physical flexibility:

a) We capture the benefit to consumers from Project participation in the Balancing Mechanism through the provision of non-energy actions (see 3.18); and

b) We are capturing the system benefit from Projects providing real-time flexibility through ID and BM (energy) trading, where Projects can demonstrate that their asset will be able to deliver a higher benefit than other Projects (see 3.37).

3.79 While CM and optimisation revenues are excluded from the Economic Assessment, they are accounted for in the Financial Assessment of each individual Project (see 5.49 and 5.61).

Second order effects on other assets receiving C&F support

3.80 Some interconnector revenue or revenue from other LDES projects may be cannibalised by the Project being assessed. While typically this would represent a transfer between the Project and other producers, as interconnectors and other LDES projects would typically be in receipt of Cap and Floor support, a reduction in their revenues could result in more floor payments or fewer cap re-payments than in the counterfactual. Any change in cap and floor payments represent a welfare transfer between consumers and interconnector/LDES and will not affect overall SEW.

3.81 We do not intend to capture this within the Economic Assessment as it does not affect overall SEW. While assessing this impact may be helpful in understanding the full range of impacts on consumers, it would involve individually modelling the revenues of each asset in receipt of Cap and Floor support. We do not consider this proportionate to the additional information we would receive from the assessment.

4.Strategic Assessment

This section provides further details on the Strategic Assessment and how it is used in the overall Project Assessment.

Purpose of the Strategic Assessment

4.22 The Strategic Assessment uses scenario analysis to look at the risks and opportunities involved in selecting a Project beyond the immediate social and economic impacts. This includes considerations around Project-specific risks and interdependencies, and around the overall portfolio of Window 1 Projects which will be selected. It is intended to reflect wider strategic and policy objectives that cannot be fully accounted for in the Economic and Financial Assessments, which are based on a relative assessment of each Project individually.

Strategic Assessment approach

4.23 As with the non-monetised impacts of the Economic Assessment, each criterion within the Strategic Assessment will be assessed through a combination of qualitative scoring methods (such as Red-Amber-Green ratings) and quantitative methods based on continuous scores. This is described in further detail within the sections below.

4.24 We intend to adopt a similar swing-weighting approach to weight and aggregate the scores of each criterion within the Strategic Assessment that avoids us setting arbitrary weightings in advance. This will produce an overall score that will enable us to assess the materiality of these strategic considerations in the context of the results of the Economic and Financial Assessments.

4.25 This overall score will not be combined mechanistically with the Economic and Financial Assessment scores. Instead, it will be used to inform the in-the-round decision on which Projects form the Initial Decision List. Where the Strategic Assessment has materially influenced which Projects are selected, this will be disclosed and described when the Initial Project List is published.

Criteria within the Strategic Assessment

Technology diversity

4.26 We expect it could be in the long-term interest of consumers that we limit over reliance on a narrow set of LDES technologies. There may also be societal benefit from insight derived from the relative performance of different LDES technologies. As part of the Strategic Assessment, we will consider the overall

portfolio of assets that perform strongly within the Economic and Financial Assessments and its measure its technological diversity.

4.27 The Economic Assessment will not, on its own, fully capture the benefits of a diverse portfolio of LDES assets. For example, while we will capture the system operability benefit of individual Projects, we will not capture the diminishing returns if multiple Projects of the same technology all deliver the same type of system operability benefit.

4.28 Each Project being assessed will be asked to specify on the Data Submission Form one of the following technology types:

- Pumped Storage Hydro (PSH)
- Compressed Air Energy Storage (CAES)
- Liquid Air Energy Storage (LAES)
- LAES + Li-Ion Battery hybrid
- Battery - Li-Ion
- Battery - Vanadium Flow

4.29 We will analyse the ranking produced by the Economic Assessment and the scores produced by the Financial Assessment to determine the MW capacity against each of these technology types for an Initial Decision List where Technology Diversity has not been considered.

4.30 We will not necessarily aim for an outcome where all of the technologies listed in 4.28 are included in the Initial Decision List and do not rule out an outcome where only one technology is represented.

4.31 If we consider that technology diversity is not already achieved in the ranking produced by the Economic Assessment, we will look at the next highest ranked Project(s) to determine if swapping in a different Project would improve technology diversity. We will only do this if the Project swapped in passes the minimum threshold in the Financial Assessment.

4.32 The technology thresholds are not hard criteria and we will not rigidly impose them at all costs. We will assess the SEW impact of swapping in lower ranked Projects to achieve greater technological diversity. If the Economic Assessment shows a clear SEW benefit of one technology over others, we will consider whether technology diversity is desirable given the reduction in modelled SEW it would bring.

Locational diversity

4.33 Some of the location-specific benefits assessed on a Project-specific basis may not scale linearly when all Projects are considered as a portfolio. This is particularly true for benefits related to the Projects' contribution to system operability at specific locations (as assessed in the Economic Assessment): some Projects may have been scored highly for system operability due to their ability to offer a system service at a location where it is particularly valuable. However, if a large number of assets offering the same service are selected at that location, the value of that service for each of them may not be as high as the Project-specific assessment in the Economic Assessment would suggest.

4.34 As a result, we may adjust some Project-specific scores, particularly regarding system operability benefits, following our review of locational diversity across the selected portfolio of Projects.

Interdependency between Projects

4.35 We are asking Projects to indicate in their Data Submission Form if their Project has any interdependency on any other eligible Projects. For example, there may be PSH Projects that share the same water resource. We will only consider this impact for the Projects that have indicated an interdependency.

4.36 Depending on the nature of the interdependency, we may engage with the Projects affected to request additional information in order to carry out this assessment.

4.37 We will establish the nature of the interdependency, how it can be managed or mitigated and whether it places additional risk on Deliverability of the Projects.

Flexibility across scenarios

4.38 The Economic and Financial Assessments will be repeated under each alternative modelling scenario, with a separate ranking produced for each scenario. This analysis is intended to ensure that Projects offered a C&F regime in Window 1 represent a low-regrets LDES asset portfolio, taking into account uncertainty about the future energy system.

4.39 As described in its CBA methodology, NESO will carry out the market modelling for each Project using two additional FES pathways and two additional weather years. The monetised assessments of each Project's SEW (in the Economic Assessment) and revenue (in the Financial Assessment) will inevitably be sensitive to the choice of scenario, so the ranking of Projects is likely to change across scenarios.

4.40 Therefore, while the primary ranking of Projects in the Economic Assessment will be based on their performance in the Base Case, under this criterion we will rate each Project based on how sensitive its position in the BCR ranking is to the choice of scenario. Projects with very stable ranking positions across scenarios will receive a more favourable rating.

4.41 Similarly, while the Financial Assessment will be carried out based on the same Base Case, we will score each Project based on how robust the outcome of the Financial Assessment is to the choice of modelling scenario. As part of this assessment, we will also consider how sensitive the outcome of the Financial Assessment is to the choice of revenue scenario, i.e. considering the impact of using the low or high sensitivities for each revenue assumption alongside the impact of using different modelling scenarios.

Risk of cost overruns

4.42 The Economic and Financial Assessments will be carried out using Projects' Base (P50) cost estimates adjusted following our cost assessment. There is material uncertainty around outturn costs for each Project, and the risk of cost overruns is likely to vary across Projects – both due to differences in Project maturity and due to differences in exposure to construction cost risk. As part of the Strategic Assessment, we will therefore consider the extent to which a Project's position in the Economic Assessment ranking might change as a result of cost overruns. We will also re-run the Financial Assessment to assess how outturn costs in the reasonably pessimistic (P90) scenario would affect the risk that consumers will need to fund substantial floor payments.

4.43 To assess the impact of cost overruns on the Project's position in the Economic Assessment ranking, we will compute the BCR for each Project under its reasonably pessimistic cost scenario. Each Project will then be rated based on the change in its position in the BCR ranking when the reasonably pessimistic cost scenario is used.

4.44 We will carry out a similar assessment of the impact of potential cost overruns on expected cap and floor payments as assessed in the Financial Assessment. Each Project will be assessed based on how resilient its Financial Assessment score is to changes in the cost assumptions (reasonably pessimistic and reasonably optimistic cost scenarios).

4.45 This is likely to be a key part of the Project Assessment given our decision to transfer significant cost risk from Projects to consumers as part of the overall

financial policy framework. This criterion also underpins the need for Projects to provide cost ranges that accurately reflect the risk of cost overruns they face.

Deliverability

4.46 Eligibility for the LDES cap and floor regime is based upon the evidence provided at the time of application. Whilst Ofgem may choose to revisit Eligibility if there is a material change to the evidence upon which the original eligibility decision is based (for example permits or planning permission), we have elected not to revisit where the material change relates solely to revised connection dates or queue positions resulting from NESO's ongoing Connections Reform. It is our view that consumer interests are better served by allowing such Projects to proceed from Eligibility to the Project Assessment stage.

4.47 However, we expect Projects to engage with NESO in order to clarify whether they remain deliverable against their programme plan on the basis of their expected **connection date**. If the expected connection date remains unclear at the point of awarding a C&F, Ofgem may award the C&F subject to deliverability conditions where it is in consumer interests to do so.

4.48 We will assess the probability of the Project being able to complete construction and deliver an operational asset to the timescale assumed in the Financial Assessment. Projects will be required to submit their latest **programme plan and risk schedule**. We will consider both deterministic and probabilistic schedules and will assess these commensurate with the maturity of the Project.

4.49 As part of this assessment will consider relevant factors including e.g. the expected timeline for securing funding and expected timing for financial close as well as project supply chain. This may be particularly relevant where a single developer is proposing to build multiple projects relying on the same sources of financing, equipment or personnel.

4.50 We will review evidence that Projects submit to demonstrate the developers' **track record** in developing similar projects, which we refer to as Reference Projects. We will review how closely related the party developing the Reference Project is to the party submitting the Project for LDES C&F Window 1. We will also review how closely related the Reference Project is to the Project being proposed.

4.51 To address the Project's **cyber security**, we will assess the Information Technology and Operational Technology security measures the Project plans to implement alongside the proposed approach to security assurance. The Project is required to justify why it considers its security measures and assurance approach are appropriate and proportionate.

MCA Framework – Cap and Floor Project Assessment: Long Duration Electricity Storage (window one)

4.52 We will apply a single assessment process to all eligible Projects under a parallel assessment approach**.** This means that Track 1 (Projects deliverable by 2030) and Track 2 (Projects deliverable by 2033) will be assessed concurrently. Projects will be assessed based on how well-prepared a developer is to bring their Project into operation by the relevant date.

4.53 In making the Deliverability assessment we may revisit the evidence provided and the assessment undertaken during the Eligibility stage. Projects should ensure that they use this opportunity to update any information previously submitted where that information has materially changed and make that clear to us when providing the submission for the Project Assessment stage.

5. Financial Assessment

This section sets out how the Financial Assessment (FA) is used to assess Projects' financial viability and how Projects below a financial viability threshold will be screened out.

Purpose of the Financial Assessment

5.22 Projects should expect to operate within the cap and floor corridor in normal circumstances. The Financial Assessment (FA) aims to ensure that we select Projects that meet this expectation. Projects which are assessed as having a high risk of operating persistently below the floor will not be awarded a C&F contract to avoid imposing excessive costs on consumers.

5.23 Projects that are forecast to operate consistently above the cap will receive the maximum score for that aspect of the Financial Assessment.

5.24 The FA process allows long-lived Projects to propose:

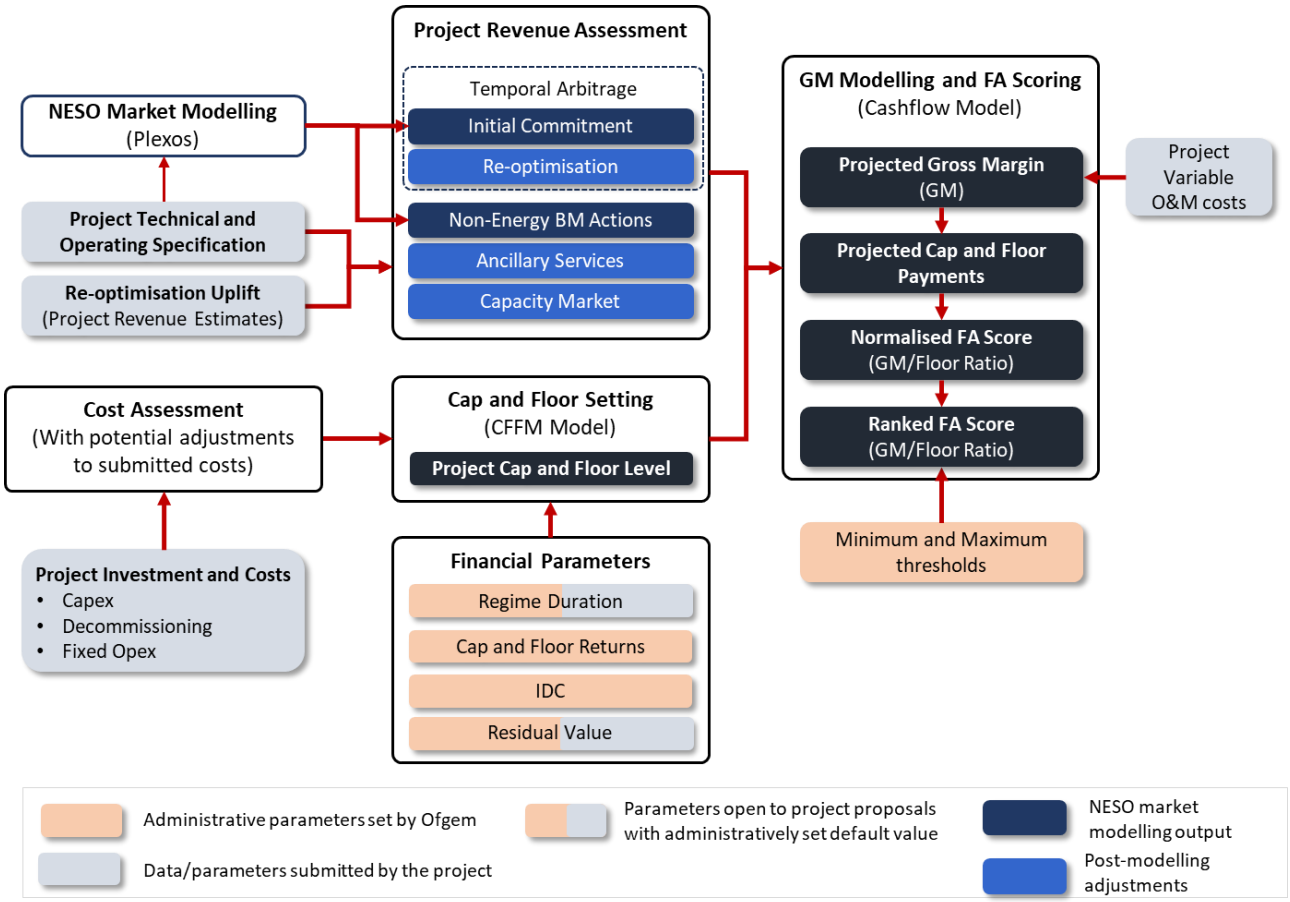
- a longer regime duration than the administrative default; and
- a Residual Value to account for post-regime earnings to the extent the Project does not require complete capital recovery over the regime duration.

5.25 Such proposals, which are described more fully in the Financial Framework, have the potential to lead to lower expected real floor payments and may therefore result in a more favourable outcome in the Financial Assessment. However, because the floor is indexed to inflation, a longer regime may result in a higher nominal floor over time due to compounding effects. As such, the Financial Assessment will consider the overall consumer risk associated with longer regime proposals.

Financial Assessment approach

5.26 The figure below summarises the Financial Assessment process for a single LDES asset and a particular market and capex scenario (e.g. Base Case):

MCA Framework – Cap and Floor Project Assessment: Long Duration Electricity Storage (window one)



5.27 As illustrated in the figure, the FA process can broadly be divided into four overall steps:

- **Cost Assessment:** All costs submitted by the Project will be assessed and potentially adjusted. This is further described in the Cost Assessment Guidance which is published alongside this document.
- **Revenue Assessment:** Assessment of all potential Project revenue earned through the energy, ancillary and capacity markets as well as provision of non-energy BM actions based on the Project's technical and operational characteristics;
- **Cap and Floor Setting:** Setting the level of the Project cap and floor as calculated by the Cap and Floor Financial Model (CFFM). This model applies Project investment and cost data to the financial regime parameters for the technology in question including any alternate bids to regime duration and/or residual value proposed by the Project;
- **GM Modelling and FA Score:** Modelling of the Project's gross margin based on the assessment of revenues and the Project's variable O&M cost parameter and assessment of likely C&F payments against the cap and floor levels set by

the CFFM model. In turn, this enables computation of the FA Score and Ranking as explained below.

5.28 The Revenue Assessment and the setting of Project cap and floor levels are explained in more detail later in this section.

Scoring Projects

5.29 The key metric which determines a Project's FA Score is the projected annual average revenue (in £, before considering any cap or floor payments) as a percentage of the Project's floor level (in £). This metric ensures that the assessment of expected cap and floor payments are normalised to account for the size of the Project. It means common thresholds are set for all Projects based on the likelihood of each Project needing floor payments. For example, an FA Score of 90% means that projected revenue is 10% lower than the floor, regardless of Project size, whereas a normalised FA score of 120% means that projected revenue is 20% higher than the floor (and thus there are no expected floor payments).

5.30 The floor level is determined by the CFFM using the administratively set floor level. Project-financed Projects which may have an Actual Cost of Debt (ACOD) floor will be assessed using the administratively set floor. This is to ensure comparability across Projects, and because any ACOD floor repayments above the administrative floor are eventually returned, as explained in the Financial Framework.

5.31 In some cases, Projects may face exceptional circumstances, and a higher floor rate of return may be approved by Ofgem. In this case, the higher floor rate will be used in the Financial Assessment rather than the administratively set floor. This will lead to higher floor payments and therefore a lower FA score, all else being equal.

5.32 The initial FA Scores will be calculated and assessed against two thresholds:

- A minimum threshold at or around the floor level itself; and
- A maximum threshold at or around the cap level.

5.33 We expect that Projects scoring below the minimum threshold will not be offered a C&F regime. Projects scoring above the maximum threshold will receive the maximum score.

5.34 All Projects with a score above the minimum threshold will be ranked according to their adjusted FA Score, with Projects at or above the maximum threshold jointly ranked first.

5.35 In line with regulatory practice, we will not define the minimum and maximum thresholds in advance of the assessment but will be fully transparent in disclosing them when publishing the Initial Decision List.

Base Case and Scenarios

5.36 The Financial Assessment and resulting Project FA scores and ranking will be based on:

- **NESO's Central Case**, which will be based on the 'Holistic Transition' FES pathway from FES 2025, applying the 2013 weather year. Further detail is available in NESO's CBA methodology; and
- **Medium (P50) capex and cost data** as submitted by the Project and adjusted through the cost assessment process (see Cost Assessment Guidance).

5.37 In addition to this Base Case, we will also carry out scenario analysis within the Strategic Assessment described in Section 4. To support this assessment, we will rerun the FA process and accompanying models for:

- The FES pathways (including the Holistic Transition central case) modelled by NESO as part of the monetised Economic Assessment as described in Section 3 and NESO's CBA methodology; and
- The reasonably pessimistic (P90), base (P50) and reasonably pessimistic (P10) cost estimates submitted by the Projects as adjusted by the cost assessment.
- The High, Medium and Low Revenue estimates.

Revenue Assessment

5.38 The Revenue Assessment covers the following distinct revenue components:

- **Temporal Arbitrage:** Energy market revenues from arbitraging temporal (peak/off-peak) spreads and re-optimising positions in the Day-Ahead (DA) and Intraday (ID) markets as well as (non-locational) energy actions in the Balancing Mechanism;
- **Non-Energy BM Actions:** Revenues from non-energy actions resulting from an LDES asset's location relative to network thermal constraints;
- **Ancillary Services:** Revenues for both balancing services (frequency response and reserve) and non-balancing service (inertia, short circuit level, restoration, reactive power); and

- **Capacity Market:** Revenues from Capacity Market contracts.

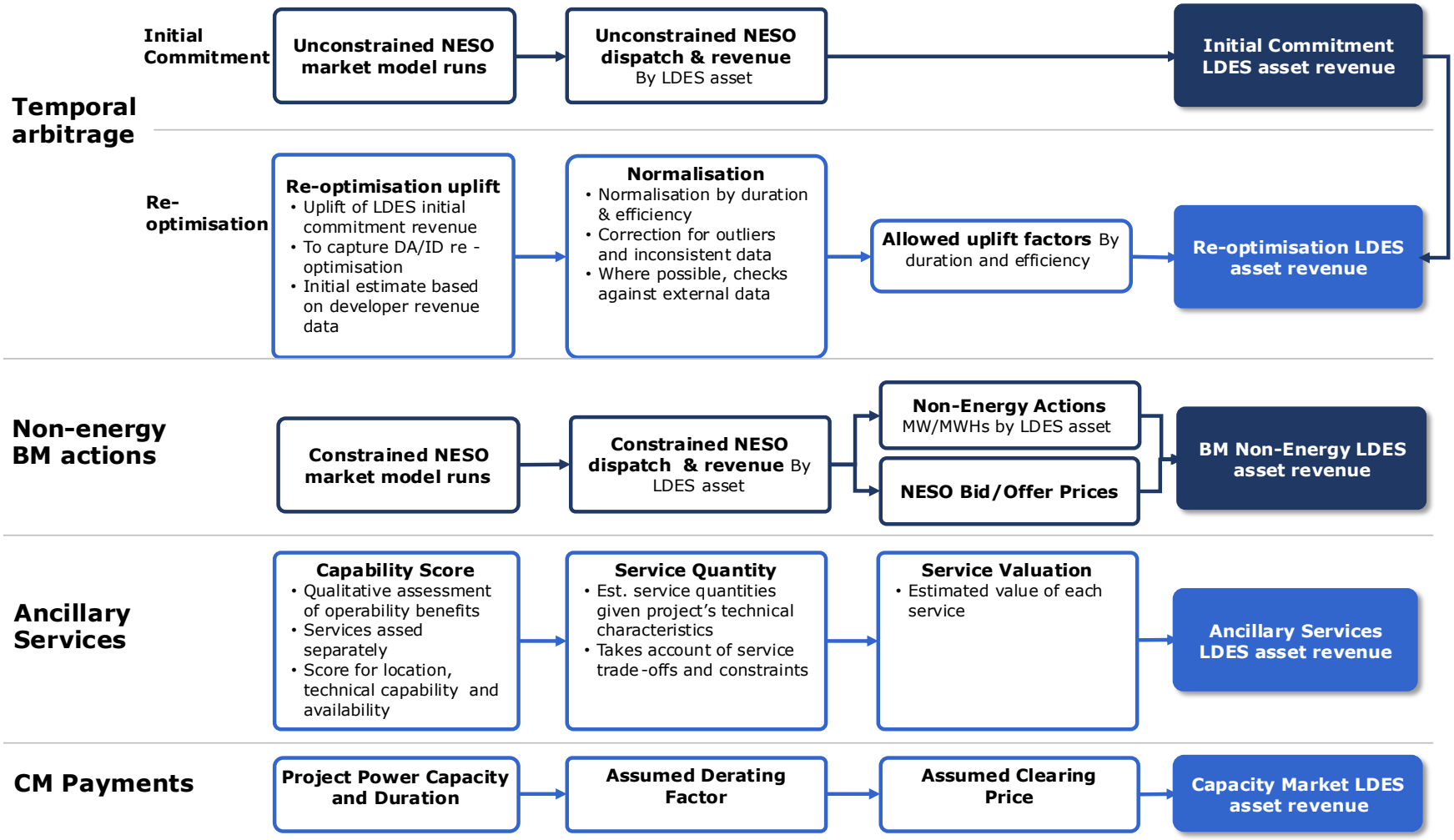
5.39 We will compute all revenue components included in the Financial Assessment based on NESO's market modelling and our own calculations. Calculations will be based on a clear and transparent methodology and reflect the asset characteristics as represented by the technical and operational data submitted by the Project (e.g., such as round-trip efficiency and duration).

5.40 We are also requesting that Projects provide us with their own revenue estimates for each of the above components. While these inputs will not directly feed into the revenue assumptions as part of the assessment, they will be used to calibrate the Re-optimisation uplift explained below as well as provide a means of comparing the Projects' expectations with our revenue assessment.

5.41 We are assuming within the Financial Assessment that all revenues come from the 4 components listed in 5.38 and that the Project does not have any separate arrangements (such as a PPA) or any other uses for the electricity that it discharges.

5.42 The figure below summarises the assessment approach for each of the four revenue components included in the Financial Assessment:

Figure 1: Revenue Components



5.43 The remainder of this section sets out our approach to assessing each of the four revenue components.

Temporal arbitrage

5.44 Arbitraging temporal (peak/off-peak) spreads between energy prices is the primary source of wholesale revenue for LDES assets. These spreads drive most of the trading and optimisation decisions across the Day-Ahead (DA) and Intraday (ID) markets as well as (non-locational) energy actions in the Balancing Mechanism.

5.45 For the purpose of quantifying the potential revenue from the LDES assets trading and optimisation activities, we distinguish between:

- The initial (first) commercial commitment of the storage in terms of charging and discharging schedule and accompanying traded positions or expected BM dispatch for upcoming delivery periods; and
- The subsequent re-optimisations of this initial position in response to fluctuating prices in the intraday markets and value of BM energy flexibility closer to delivery.

Initial Commitment

5.46 The initial commercial commitment of an LDES asset will often take place in the day-ahead auction or intraday markets. Some LDES operators may choose not to commit the asset in the wholesale markets for some delivery periods, and may arbitrage across wholesale markets and the BM (e.g. buying day-ahead combined with BM offers). We define the initial commitment revenue as the gross margin contribution delivered through the first commercial commitment of the LDES asset, regardless of the market(s) in which this initial commitment is made.

5.47 As part the Economic Assessment, NESO will estimate the wholesale revenues the LDES asset can earn, given the modelled hourly wholesale prices and accompanying temporal spreads. As explained earlier, NESO's CBA implicitly assumes perfect foresight. As such, it does not capture the impact of supply and demand imbalances as the position moves closer to delivery. We therefore consider the LDES revenues projected by the NESO's unconstrained market modelling a reasonable proxy for the gross margin earned through the initial commitment of an LDES asset.

5.48 In estimating the initial commitment gross margin, we will apply NESO's unconstrained model runs (i.e. before taking account of network constraints). NESO will also produce model runs on a constrained basis which take account of network thermal constraints. The value of non-energy actions in the BM are distinct and are not a result of commercial optimisation of temporal spreads – as such they are addressed separately later in this section.

Re-optimisation

5.49 The flexibility provided by LDES and other storage assets allow them to respond rapidly to intraday price volatility as actual weather, intermittent generation, demand and system conditions become known closer to real time. In responding to such price volatility, LDES operators will typically continually re-optimise the initial charging and discharging schedule as well as accompanying traded positions for upcoming delivery periods. We define re-optimisation revenue as the incremental gross margin earned from all adjustments to the initial market commitment of the LDES asset through trading in the intraday markets and energy actions in the BM.

5.50 We will estimate this component by applying a single consolidated uplift assumption to the initial commitment revenue. For example, for an uplift of 0.3 means that the gross margin contribution from re-optimisation activities are estimated as 0.3 times the estimate of revenues from NESO's unconstrained market modelling.

5.51 The uplift assumption will express the gross margin contribution for all re-optimisation activities across all intraday markets (auctions and continuous trading) as well as BM energy actions. While intraday trading and BM energy bidding are distinctly different activities, it is not meaningful to try to estimate these revenues separately. The commercial optimisation across these revenue channels is very dynamic and the share of revenue earned through particular channels is likely to be highly variable. Furthermore, the scope for acting in the BM will in part depend on, and be constrained by, preceding actions in the DA and ID markets. We therefore consider a single consolidated uplift assumption more appropriate.

5.52 As set out in the overview figure above, the process for determining the uplift assumptions will involve the following steps:

- Each Project submits their annual estimates over the assessment horizon for temporal arbitrage revenue, broken down by initial commitment and re-

optimisation revenues as described above. We then calculate the annual re-optimisation uplift factors for each Project as the ratio of these two values;

- The set of re-optimisation uplift factors for all Projects is cleaned for clear outliers and inconsistent data points; and
- The cleaned dataset is normalised to derive average uplift assumptions as a function of efficiency, duration, and delivery year.

5.53 The normalised average uplift assumptions are then applied to individual Project's projected initial commitment revenues to derive estimates of the gross margin contribution from all re-optimisation activities.

Non-energy BM actions

5.54 In addition to energy actions (buying and selling energy to maintain system balance energy actions), NESO also uses the BM to manage network thermal constraints (non-energy actions). We define BM non-energy revenue as the potential gross margin contribution from such actions, which are a function of an LDES asset's location relative to network constraints. This component is separate and additional to the value of (non-location specific) energy actions, which are included within the estimates of re-optimisation revenues as explained above.

5.55 An estimate of this BM non-energy action revenue is obtained by NESO from the market modelling. Each asset's hourly dispatch from the unconstrained (DA) run is re-dispatched in the constrained model run to alleviate network thermal constraints while minimising total redispatch costs, considering assumed BM bid and offer prices for the asset.

5.56 The Project's re-dispatched quantities valued at its bid and offer prices determine its BM non-energy revenue component.

Ancillary services

5.57 The ancillary services component of the revenue assessment will consider a Project's revenue potential from the provision of balancing, stability (inertia and short circuit level), voltage, frequency response and reserve, and restoration services.

5.58 We will estimate revenues for ancillary services based on the quantity of the service that can be provided by the Project, and the estimated service value (£/year earned for provision of the service).

5.59 The service value, which for each service is the same for all Projects, will be estimated and will consider a number of factors, including, where applicable,

recent results of long-term tenders (such as pathfinders), historical market prices for the service, and NESO's estimates of the future system need for each service. We recognise that there is considerable uncertainty around these values, and will estimate a high and a low case alongside the central value to reflect this uncertainty.

5.60 The ancillary services component of the revenue assessment will be the total of the estimated revenues for each service.

Capacity market

5.61 Capacity market (CM) revenues are earned in addition to energy market revenues. To estimate these revenues, we will make assumptions about:

- The derating curve for the notional capacity auction in which these assets will participate, and
- A clearing price for the auction.

5.62 Our assumed derating curve will be largely based on the actual curves from recent capacity auctions, with scope for adjustments following discussions with NESO regarding their security of supply modelling and the future distribution of loss of load events in the relevant years. The assumed clearing price may be based on historical clearing prices, publicly available forecasts, or an informed assumption based on discussions with NESO.

5.63 We will then derive the forecasted CM revenue for each asset by multiplying the derated capacity by the clearing price.

5.64 By making optimistic or conservative assumptions for the derating curve and the clearing price, we will obtain a high case and a low case scenario for the forecasted CM revenue, in addition to the central case. These will be used as further sensitivities, and each Project's performance across these sensitivities will be considered as part of the Strategic Assessment.

Setting cap and floor level

5.65 The Cap and Floor levels will be calculated using the Cap and Floor Financial Model (CFFM), once it has been completed with the necessary inputs. Some of the inputs such as rates of return or inflation assumptions, will be set by Ofgem in line with the Financial Framework. Other inputs, including costs, will be provided by project developers as part of their submissions.

Investment and operating costs

5.66 We expect Project developers to be careful and realistic in their submissions of the cost ranges and accompanying confidence level indications. Further detail is in the Cost Assessment Guidance. As part of our Cost Assessment, we will review and scrutinise Projects' submissions to ensure that projected Project costs are economic and efficient.

Bid Parameters

5.67 As described in the Financial Framework, Projects may bid on two financial parameters:

- **Regime Duration:** We recognise that the default regime duration of 25 years may not be suitable for all Projects, and that Project-specific characteristics may warrant consideration of alternative durations. If Projects propose an alternative to the 25-year administrative benchmark, such proposals will be evaluated through the Financial Assessment.
- **Residual Value:** Similarly, Projects may propose a non-zero residual value. This residual value will reflect the potential for a Project to earn revenues following the end of the C&F regime and so, may not require full capital recovery over the C&F regime duration. Including a non-zero residual value will reduce the cap and floor levels, and its impact will be assessed as part of the Financial Assessment.

5.68 Any Project that bids an alternative regime duration or a non-zero residual value, or a combination of the two, should include this in their Data Submission Form. The project should also use the relevant inputs in the Cap and Floor Financial Model (CFFM) to reflect these changes and generate the associated cap and floor levels.

6. Decision making process

This section sets out more detail on how the 3 assessments are brought together to make decisions on which Projects will be offered a C&F regime.

Decision making approach

How the Economic, Strategic and Financial Assessments will work together

6.22 The MCA Framework will combine the Economic, Strategic, and Financial Assessments. We do not plan to apply fixed weightings across these assessments, as doing so could lead to an excessively rigid, score-driven approach. Instead, we will take a balanced view of each Project, similar to our approach for Interconnectors. We will use swing-weighting within the Economic Assessment to help us compare and consider non-monetised impacts in a consistent and transparent way as described in 3.11. We also intend to the use swing-weighting to incorporate Project-specific components of the Strategic and the FA Score.

6.23 The Economic Assessment will first produce a ranking based on monetised impacts, using SEW modelling from NESO. This will be normalised by total Project cost to produce a benefit-cost ratio (BCR). We will then adjust this ranking to reflect non-monetised impacts as described in 3.9.

6.24 In parallel with the Economic Assessment, the Financial Assessment will produce expected revenue as a percentage of the Project's floor level. Projects that fall below a minimum threshold in the central case are removed, as these Projects are deemed to need excessively high floor payments from consumers. For those that pass, the Financial Assessment will help us understand the likely level of consumer support required. All else being equal, Projects requiring higher levels of consumer support will be ranked lower in the Financial Assessment.

6.25 The Strategic Assessment will look at the risks and opportunities associated with each individual Project and with the overall portfolio of selected Projects, such as technology diversity and shared resource constraints. A swing-weighting approach will enable us to assess the materiality of these strategic considerations in the context of the results of the Economic and Financial Assessments.

6.26 As described in 2.33, we cannot rule out the possibility that we may be required to revisit the application of weighting criteria, the imposition of a lead criteria, or the scoring and ranking of each Project if required. Should we be required to revisit the basis upon which we will award C&F to successful Projects we will

engage with stakeholders to ensure transparency of process and an opportunity to make representations.

Setting the LDES Capacity Target for Window 1

6.27 Ofgem will set a target capacity range in MW for Window 1, based on updated advice from NESO. We may also separately define a minimum MWh threshold depending on the nature of the advice. The range will guide the total capacity of Projects offered a cap and floor regime, without splitting it by technology type.

6.28 We recognise that not all Projects in the Initial Decision List will proceed to completion, as they may not be able to raise finance or face insurmountable problems during construction. We will set an attrition rate which will slightly increase the final range. The total capacity of the Initial Decision List of Projects will fall within this final range.

6.29 The final award of C&F regimes to Projects will be made in accordance with our Principle Objective and other legal duties. Therefore, we will not commit to offering C&F awards solely to meet the target LDES capacity range stated by NESO. Rather, in order to make an award, Ofgem must conclude that such an exercise of its regulatory functions is (1) best calculated to protect the interests of existing and future consumers, and (2) otherwise compliant with Ofgem's other statutory and public law duties (e.g. the Growth Duty). Where such a conclusion cannot be reached, an award will not be made.

How non-monetised impacts are incorporated to achieve final ranking

6.30 Non-monetised criteria will be assessed using one of the following approaches:

- Normalised Quantitative Assessment (with quantified impacts normalised by the present value of total Project costs, to maintain consistency with monetised metrics);
- 5-point rating;
- Positive-only rating (where Projects which demonstrate additional benefits can receive a more positive rating).

Final determination and cap and floor awards

6.31 The Initial Decision List will be the output of the Project Assessment and is expected to be published in Spring 2026 along with the analysis undertaken to make this assessment. This will be subject to public consultation, with all stakeholders invited to respond.

6.32 Projects that have been offered a C&F will need to confirm that they want to proceed to be awarded a C&F for Window 1.

6.33 The Gas and Markets Authority (GEMA) is Ofgem's senior decision-making body and will take the final decision on which Projects are awarded a C&F. This is planned to complete in Summer 2026.