Public

CMP448 Introducing a Progression Commitment Fee to the Gate 2 Connections Queue

Workgroup Meeting 7, 30 April 2025

Online Meeting via Teams

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Welcome and Agenda

Agenda

WG7

#	Topics to be discussed	
1.	Welcome and Agenda	Chair
2.	Action and Query Logs	Chair
3.	Updated Positions on: a) 6-month targeted exemption b) Trigger threshold	Proposer
4.	Hybrid and Staged Project clarifications	Proposer
5.	Safeguarding analysis recap	Proposer
6.	Alternatives Discussion - Clarified Alternatives - Alternative Vote	Chair
7.	Plan for next workgroups	
8.	Any Other Business	Chair
9.	Close	Chair

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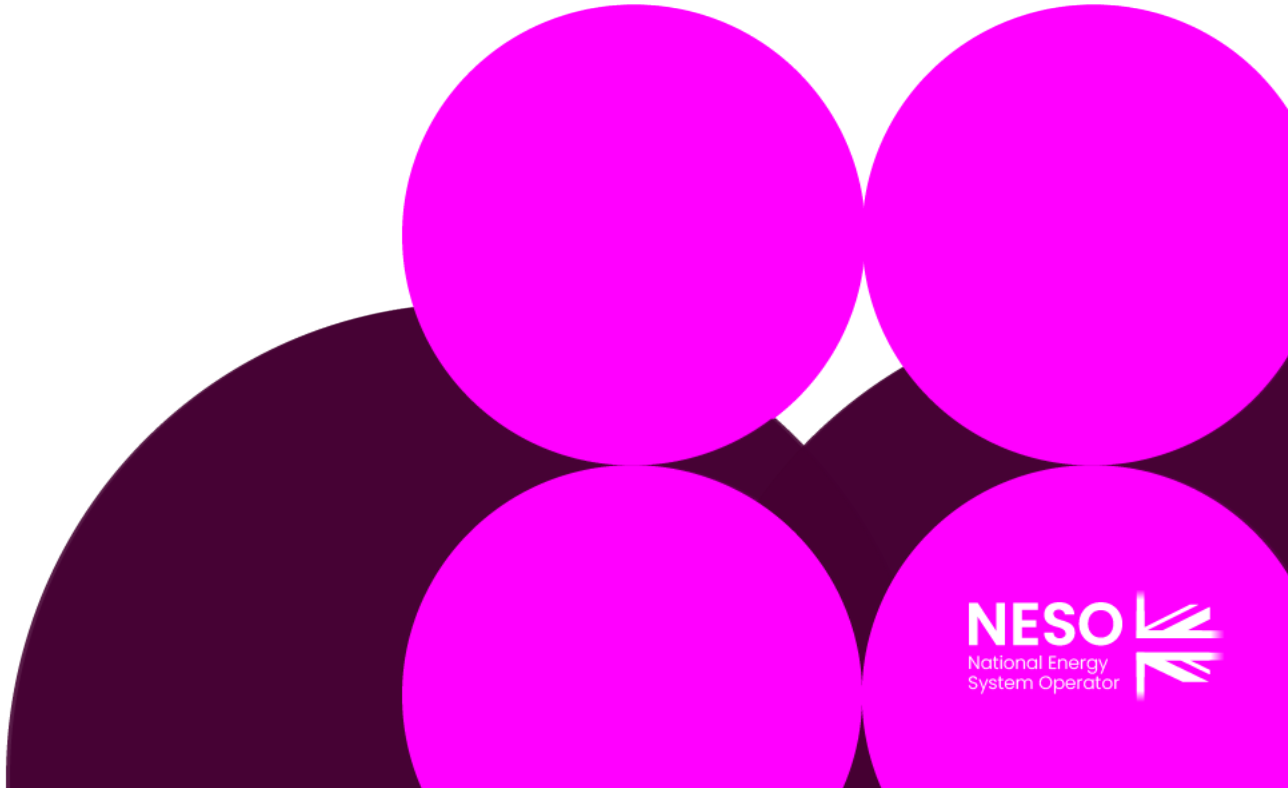
Action and Query Logs

Workgroup Chair - NESO



Updated Positions – 6 Month Targeted Exemption and trigger threshold

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New exemption for projects with less than 6 months to M1

All projects with M1 dates less than six months from the date the PCF would become applicable to them will be excluded from the PCF

Challenge:

- Due to its six-monthly cadence, the PCF provides minimal incentive for developers with less than 6 months from Gate 2 entry to M1 to regularly reassess the viability of their projects
- For such projects, the PCF creates an additional administrative burden on developers, DNOs and NESO whilst providing little benefit
- This is particularly relevant to embedded projects that do not require an EIA where M1 dates are 2 months as standard

NESO is proposing the following change to the Modification:

- All projects (both transmission and distribution connecting) with M1 dates less than six months from the date the Gate 2 contract is counter-signed by NESO will be exempted from posting a PCF security
- Where M1 dates are not known at the time of Gate-2 contract counter signature customers have three months from time of Gate 2 contract counter signature to confirm M1 date(s) and whether they are exempt from the PCF
- For the avoidance of doubt, projects that have less than 6 months to M1 will still contribute towards the trigger metric if they are terminated for failing to meet M1

Addressing specific scenarios for projects with less than 6 months to M1: M1 date not assigned (1/2)

The introduction of the 6-month exemption prompts questions about application of the PCF in cases where there is uncertainty regarding a project's M1 date.

	Scenario	NESO Approach to Apply PCF
1	**M1 date not assigned at time of Gate 2 entry[1]** • DNOs agree Milestone 1 dates with their customers after the Gate 2 contract has been signed. In some cases, there is a delay to determining whether a project will require an environmental impact assessment or other pre-planning studies, which would impact their M1 date. • In these cases, the M1 date is unassigned in the contract and treated flexibly by DNOs • An embedded project signs the contract from the DNO and enters Gate 2	**Approach** • We propose that DNOs will have three months[2] from when NESO counter-sign Gate 2 contract to provide the M1 dates for their embedded generation customers to NESO • Once M1 dates are known, the PCF would then apply to any project with more than 6-months to M1 from when Gate 2 contract was counter-signed by NESO • For projects where the PCF applies, the liability would begin once M1 dates are confirmed to NESO and end with their respective M1 date. (i.e. the M1 date confirmation would trigger the PCF securities process)

Notes:
1. This challenge was raised by DNOs for embedded generation customers during ENA workgroup sessions
2. It will be known at the three-month mark whether projects require additional planning and therefore require a later M1. Therefore, we assume all M1 dates are known at this point.

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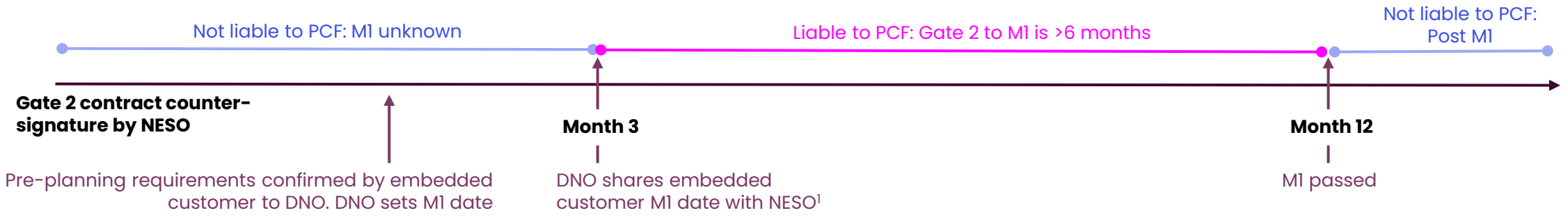
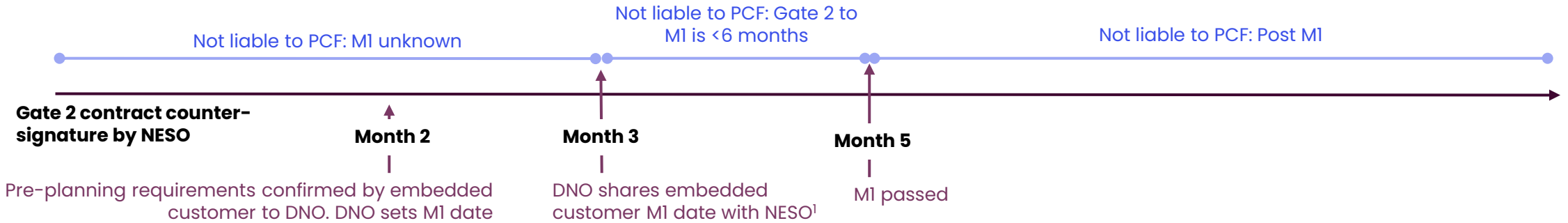
Addressing specific scenarios for projects with less than 6 months to M1: M1 date not assigned (2/2)

****Timelines not to scale*

Worked Example 1: M1 date not initially known, then set as 12 months post Gate 2 entry by DNO after pre-planning requirements confirmed



Worked Example 2: M1 date not initially known, then set as 5 months post Gate 2 entry by DNO after pre-planning requirements confirmed



Notes:

1. Specific data sharing requirements between DNOs and NESO are currently being discussed through the ENA forum with DNOs. Therefore, the requirements and mechanism for data sharing between DNOs and NESO is TBC

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Addressing specific scenarios for projects with less than 6 months to M1: M1 date change

The introduction of the 6-month exemption prompts questions about application of the PCF in cases where there is a change to a project's M1 date.

	Scenario	NESO Approach to Apply PCF
2	**M1 date change** • A project is given an M1 date within 6 months of contract signature • They are therefore exempted from the PCF • However, between entering Gate 2 and passing M1, their M1 date is extended beyond 6 months (e.g. to 8 months after the Gate 2 offer was signed)	**Approach** • If the new M1 date is more than 6 months after the Gate 2 offer was counter-signed by NESO, then the customer would need to post security for the PCF. If a Mod App is accepted which changes the M1 date, then NESO will issue an updated security statement to the customer which includes the PCF.

Updated Position on Trigger Threshold Level

NESO is proposing to increase the PCF threshold value from 6GW to 6.5GW

Recap:

- The 6GW threshold was based on the previous assumption that replacements would not contribute towards the trigger metric
- Given NESO plans to remove replacements from the proposed Mod, Workgroup suggested the threshold be increased to reflect that total MW's contributing to the PCF Trigger Metric will now be higher without replacements, all else being equal

Proposed Modification & Rational:

- Considering this feedback and re-evaluating the underlying logic of the threshold value, NESO proposes to increase the value from 6GW to 6.5GW.
- To determine the level of increase in the threshold, we assume an appropriate range of expected replacement rates is 5-10%. This is 300-600MW of projects that may have previously been replaced and not contributed towards the trigger metric
- Based on this logic, increasing the threshold by 500MW should largely offset any potential effects of excluding replacements from the metric

Updated Trigger Threshold Activation Analysis

Estimated Gate 2 Queue Average Attrition Rates Required to Trigger a 6.5GW Threshold in Each Time Period Until 2030[1] (No Replacements[2])

Period When PCF Triggered		1H26	2H26	1H27	2H27	1H28	2H28	1H29	2H29	1H30	2H30
Estimated Average Attrition Rate[4] to Trigger 6.5GW Threshold	Base Case[3] Gate 2 Queue	33%	26%	18%	10%	10%	10%	9%	8%	8%	8%
	High Case[3] Gate 2 Queue	34%	27%	15%	8%	8%	8%	7%	6%	6%	6%

Threshold Value Validation

- **Immediate trigger:** Threshold only met within 6-months if queue attrition is >33%, indicative of a very unhealthy queue
- **No trigger:** An average attrition rate below 8% would be required for the PCF not to be activated within the initial 2026-2030 measurement period, indicative of a healthy queue

Notes:
1. Analysis is based on Impact Assessment Data (December 2024), filtered for allowed capacity for each technology type in 2035 as set out in CP30, project maturity and connection dates
2. Given that replacement is removed, the analysis assumes the trigger threshold can be met within the first time period, as no 6-month period is required to identify replacements
3. % of estimated Gate 2 queue in scope of PCF: Base Case - 49% (86.6GW), High Case – 65% (115.5GW). The high case assumes a lower success rate of projects moving from current queue to Gate 2.
4. Attrition rates = The average Gate 2 queue attrition rate from 1H26 up until the specified time-period that would lead to 6.5GW of cumulative attrition.

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Hybrid and Staged Projects

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PCF Application Principle for Hybrid & Staged Projects

Key Principles

- The PCF is a security that is being added to existing contracts, the Gate 2 offer
- The key information within each contract that allows for the PCF to be applied is **TEC MW** (or interconnector capacity or developer capacity) and **M1 status**
- Wherever NESO does not have **both** pieces of information within contracts we cannot apply the PCF

Hybrid & Staged Project Overview

Staged Project[1]

- Definition of a staged project: A project where the capacity will be connected at different times is referred to as a staged project. Different stages of the same project are assigned separate connection dates, M1 dates, and TEC.
- Principle: Individual stages are treated separately with respect to queue management. The PCF applies to each individual stage, based on TEC.

Illustrative example of staged project data:

	Contract Date	Connection Date	M1 Date	TEC MW	Technology
Overall Project Contract	Dec 2027	Multiple	Multiple	300MW	Solar
Stage 1	-	Jan 2030	27 H1	200MW	Solar
Stage 2	-	Jan 2033	29 H1	100MW	Solar

Hybrid Project

- Definition / explanation: A project that contains multiple technologies (e.g. solar, batteries, wind)
- Principle: PCF applies to entire stage (or full project if it only has one stage), including all technologies within the stage, based on TEC.

Illustrative example of hybrid project data:

	Contract Date	Connection Date	M1 Date	TEC MW	Technology
Overall Project Contract	Dec 2027	Jan 2030	Jan 2030	300MW	Multiple
Technology 1	-	-	-	-	Solar
Technology 2	-	-	-	-	Battery

Notes:
1. Projects can also be staged and hybrid, we have separated them here for simplicity

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PCF Application Scenarios for Hybrid Projects

Challenge:

- Hybrid projects don't have an associated TEC MW value at the **individual technology level** but only at the stage and project level
- This raises the question of how we would apply the PCF to different technologies within the same project/ stage. Two scenarios require clarification:

#	Scenarios	Approach to Apply PCF
1	One technology drops out of the project between Gate 2 and M1, or fails M1	Customer to update TEC for the new project. PCF will be collected for the reduction and will still apply for remaining TEC MW pre M1
2	One technology has passed M1 *criteria* – a planning application has been submitted for one technology, but not *yet* for the other technology[1]	Different technologies are not treated individually because TEC is assigned at a project/stage level, and not by technology. The whole stage only passes M1 when all technologies within the stage have met the M1 criteria. ***(For the avoidance of doubt, this approach has not changed since WG7)***

Notes:
1. This scenario is unlikely as it would imply that two technologies with the same M1 date would go through planning separately

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Safeguarding Analysis Recap

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Approach to PCF Value Determination

Overview

- Suppose a developer estimates that the NPV of a project is slightly negative, i.e., the present value of all expected future operational cashflows after project commissioning is slightly less than the present value of the expected remaining DEVEX and CAPEX required to commission the project.
- Future CAPEX costs and future operating revenues are uncertain. The price of construction materials may change, or the developer may update the estimate of future revenues based on regulatory change or market developments.
- The developer's estimate of the project NPV may therefore change over time, either favourably or unfavourably.
- A project with a negative NPV at a point in time can either: proceed with development, exit the queue, or "delay" the decision to exit or proceed.
- The option to delay will be the optimal action if there is a low cost to remain in the connections queue. A PCF with sufficient value will make room in the queue for developers with more viable projects by changing the optimal action from "delay" to "exit".
- We use a scenario-based approach to estimate the value of the PCF.

Developer Options

- A project is in the gate 2 connections queue, prior to milestone M1.
- The developer estimates that the NPV of future cashflows is slightly negative.
- The developer's estimate of the project NPV may change over time, either favourably or unfavourably.

Option 1: Continue with project development

This is **unlikely** to be optimal as a developer will likely try to minimise or delay project spend.

Option 2: Exit the queue now

This is likely to be the optimal action if there is an **increasing cost** to remain in the queue.

Option 3: Minimise Devex and re-evaluate after 6 months

This is likely to be the optimal action if there is a **low cost** to remain in the queue.

The PCF makes room in the queue for developers with more viable projects by changing the optimal action from Option 3 to Option 2.

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Methodology

Real Option Analysis

- Real option analysis is a financial evaluation methodology that assesses the value of flexibility and strategic decision-making within uncertain business environments. It can be applied to evaluate the value of the choice to continue or abandon a project in the future, depending on changing market conditions.
- Real options are typically valued using models for financial option pricing, adapted to incorporate the specific characteristics of the underlying real asset and the relevant uncertainties.
- The value of a financial option is related to the potential of an underlying market variable to change. In this case, a project's underlying costs and revenues can change over time.
- We value the "option to delay", i.e. the value of not being required to commit now to a project, but instead having the option to decide whether or not to invest after 6 months. We then set the value of the PCF to be greater than the value of this option.

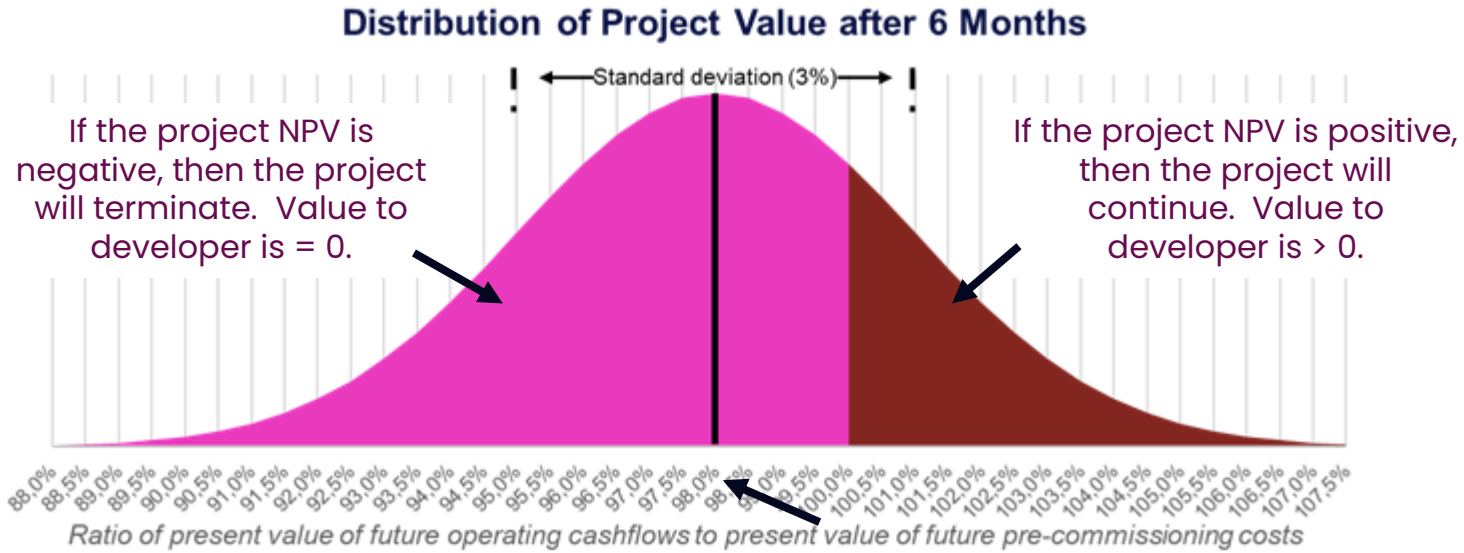
Scenario Assumptions

Negative Project Value

- Suppose that the present value of future operating (post-commissioning) cashflows, discounted at the project's WACC, is equal to 98% of the present value of pre-commissioning costs.
- NPV is therefore negative by 2% of CAPEX
- Further DEVEX is paused.

Change in Project Value

- The project's NPV may change over the coming 6 months. Expected costs may decrease or expected revenues may increase.
- Changes in NPV over 6 months are normally distributed with mean 0 and standard deviation of 3% of the project's pre-commissioning costs.



At time t = 0, the present value of all future operating cashflows = 98% of the present value of future pre-commissioning costs

Some future outcomes have termination value = 0 and some outcomes have continuation value > 0. The expected (i.e., probability-weighted) value to delay is therefore positive.

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Note: Original slide presented in WG 4

Option Valuation Results and PCF Value

Valuation Assumptions

- Suppose a project's **discounted operating cashflows are 98% of the discounted pre-commissioning costs.**
- Additional **DEVEX is paused.**
- Suppose that these operating cashflows and pre-commissioning costs can **change over 6 months** so that the change in the project's NPV **is normally distributed with mean of 0 and standard deviation of 3%**.
- The project will continue if discounted operating cashflows are > 100% discounted pre-commissioning costs after 6 months, and it will be abandoned otherwise.
- Suppose the project's **remaining required pre-commissioning costs (DEVEX and CAPEX) are £500,000/MW.**

Valuation Results

- Applying a financial option pricing methodology, **the value of the "option to delay" is £0.0044 per pound of pre-commissioning costs**.
- On a per MW basis, **the value of the "option to delay" is £2,218.65/MW.**
- A PCF with a value of **£2,500/MW per 6 months** is sufficient to incentivise the developer to abandon this project without a delay.

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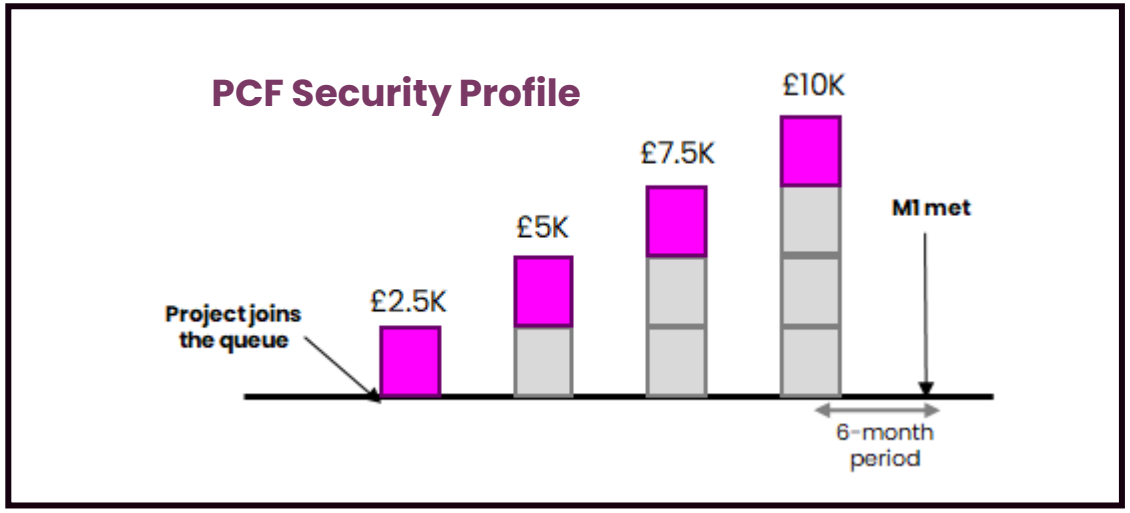
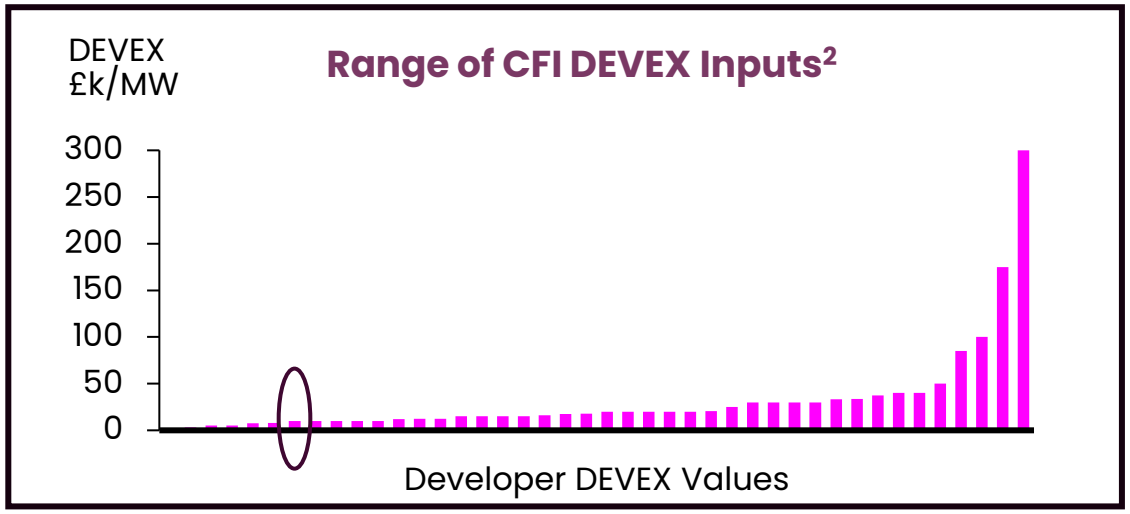
Safeguarding





The value of the PCF should be low enough so as not to unduly impact a project's viability.

Scenario to illustrate the cost of financing the PCF, including as a proportion of project DEVEX

Scenario assumptions:

1. **Security Financing Rate**[1]: 8% per annum
2. **Financing Period:** 24 months from joining the Gate 2 queue to passing Milestone M1.
3. **DEVEX**[2]**:** CFI responses reported a significant range for DEVEX. We selected £10k/MW.

With these assumptions, the estimated additional cost of financing the PCF is **£1000/MW or 10% of DEVEX.**

NESO's previous proposal for the PCF, (i.e., £20k/MW before Milestone M7), would have an estimated cost of £6,400/MW (assuming 4 years in queue before M7 and an 8% financing rate).

Notes:
1. Most of the CFI responses that quoted overall cost of capital ranged from 7% to 13%, excluding outliers. We believe financing costs for acceptable securities would be based on cost of debt, and thus 8% is a conservative estimate.
2. CFI DEVEX estimates for Batteries, Solar, Onshore Wind and Offshore Wind.

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Note: New slide developed as per Workgroup request

Additional safeguarding analysis

Based on a range of security financing rates (6-14%)[1] and financing periods (0.5-5 years)[2], the estimated PCF security financing costs range from £75/MW to £5950/MW.

Key
Original Estimate
Lower Financing Cost
Higher Financing Cost

Financing Cost (£/MW)		Security Financing Rate (%)								
		6%	7%	8%	9%	10%	11%	12%	13%	14%
Financing Period (Years)	0.5	75	88	100	113	125	138	150	163	175
	1.0	225	263	300	338	375	413	450	488	525
	1.5	450	525	600	675	750	825	900	975	1050
	2.0	750	875	1000	1125	1250	1375	1500	1625	1750
	2.5	1050	1225	1400	1575	1750	1925	2100	2275	2450
	3.0	1350	1575	1800	2025	2250	2475	2700	2925	3150
	3.5	1650	1925	2200	2475	2750	3025	3300	3575	3850
	4.0	1950	2275	2600	2925	3250	3575	3900	4225	4550
	4.5	2250	2625	3000	3375	3750	4125	4500	4875	5250
	5.0	2550	2975	3400	3825	4250	4675	5100	5525	5950

Notes:
1. Most of the CFI responses that quoted overall cost of capital ranged from 7% to 13%, excluding outliers; we chose an expanded range of security financing rates as requested by workgroup members
2. The financing period ranges from 0.5 – 5 years, representing an expanded range as requested by workgroup members

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Alternatives

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Current Alternatives

Alternative Proposer	How Alternative Differs from the Original	Changes since WG7	Confirmed?	Alternative Number for Vote
ENWL (1)	PCF without Trigger Metric	No	Yes	1
Innova	Reduces PCF value by a factor of 10	Yes - have introduced an initial 6-month period where the PCF is £0/MW	Yes	2
Arven	Exclusion of Offshore Projects	No	No	3
Lightsource BP	"Simplified" GB Wide PCF"	Yes – Fee changed to £10k/MW	Yes	4
Scottish Power Renewables	Self Termination PCF Discount	Yes – PCF applied 90 Days Prior to M!	Yes	5
ENWL (2)	Embedded Exemption from PCF	No	Yes	6
NGED	PCF does not apply to projects within 18 months from the acceptance of a Gate 2 Offer	No	Yes	7

NB – No Alternative Form received from Island GP as yet.

What is the Alternative Request?

What is an Alternative Request? The formal starting point for a Workgroup Alternative Modification to be developed which can be raised up until the Workgroup Vote.

What do I need to include in my Alternative Request form? The requirements are the same for a Modification Proposal you need to articulate in writing:
- a description (in reasonable but not excessive detail) of the issue or defect which the proposal seeks to address compared to the current proposed solution(s);
- the reasons why the you believe that the proposed alternative request would better facilitate the Applicable Objectives compared with the current proposed solution(s) together with background information;
- where possible, an indication of those parts of the Code which would need amending in order to give effect to (and/or would otherwise be affected by) the proposed alterative request and an indication of the impacts of those amendments or effects; and
- where possible, an indication of the impact of the proposed alterative request on relevant computer systems and processes.

How do Alternative Requests become formal Workgroup Alternative Modifications? The Workgroup will carry out a Vote on Alternatives Requests. If the majority of the Workgroup members or the Workgroup Chair believe the Alternative Request will better facilitate the Applicable Objectives than the current proposed solution(s), the Workgroup will develop it as a Workgroup Alternative Modification.

Who develops the legal text for Workgroup Alternative Modifications? NESO will assist Proposers and Workgroups with the production of draft legal text once a clear solution has been developed to support discussion and understanding of the Workgroup Alternative Modifications.

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Not for SQSS

Can I vote? And What is the Alternative Vote?

To participate in any votes, Workgroup members need to have attended at least 50% of meetings. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference)

Stage 1 – Alternative Vote

- Vote on whether Workgroup Alternative Requests should become Workgroup Alternative CUSC Modifications.

- The Alternative vote is carried out to identify the level of Workgroup support there is for any potential alternative options that have been brought forward by either any member of the Workgroup OR an Industry Participant as part of the Workgroup Consultation.

- **Should the majority of the Workgroup OR the Chair believe that the potential alternative solution may better facilitate the CUSC objectives than the Original then the potential alternative will be fully developed by the Workgroup with legal text to form a Workgroup Alternative CUSC modification (WACM)**and submitted to the Panel and Authority alongside the Original solution for the Panel Recommendation vote and the Authority decision.

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Can I vote? What is the Workgroup Vote?

To participate in any votes, Workgroup members need to have attended at least 50% of meetings. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference)

Stage 2 – Workgroup Vote

- 2a) Assess the original and Workgroup Alternative (if there are any) against the relevant Applicable Objectives compared to the baseline (the current code)
- 2b) Vote on which of the options is best.

TO BE CONDUCTED AT END OF WG

Alternate Requests cannot be raised after the Stage 2 – Workgroup Vote

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Plan for Future Workgroups

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Plan for upcoming Workgroup sessions

Workgroup Session	Date	Session topic	Topics to cover
Workgroup 7	30 April 2025 (today)	Securities, replacements & alternatives	• Overview of the PCF security will work • Updated position on replacements in the trigger metric • Discussion on alternatives
Workgroup 8	07 May 2025	Alternatives & Voting on WACMs	• Discuss questions raised from workgroup consultation • Discuss any further updates to the Mod Proposal • Vote on WACMs
Workgroup 9	12 May 2025	Wash-up on questions	
Workgroup 10	14 May 2025	Legal text review part 1	
Workgroup 11	19 May	Workgroup report & legal text	• Review Workgroup report • Review legal text
Workgroup 12	27 May 2025	Workgroup report & Workgroup Vote	• Finalize Workgroup report • Workgroup vote on what option they think is best

Next Steps and AOB

Workgroup Chair – NESO