# ELEXON

# CAPACITY MARKET RULES CHANGE PROPOSAL REPORT: CP372 - 'CHANGE TO RULE 4.4.4'

This Change Proposal (CP) seeks
to amend Rule 4.4.4 to allow
Capacity Market Units to change
their Fuel Type, Generating
Technology Class, Metering
Arrangement and Connection
Capacity.

**Public** 

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# **About this Document**

This is the CP372 'Change to Rule 4.4.4' change proposal report that the CMAG is submitting to Ofgem for consideration in its Statutory Consultation.

In this document, capitalised terms used are defined in the Capacity Market Rules unless expressed otherwise.

Not sure where to start? We suggest reading the following sections:

- Have 5 mins? Read the executive summary
- Have 15 mins? Read the issue, solution and impact and costs sections
- Have 30 mins? Read all sections
- Have longer? Read all sections and the annexes and attachments

# **Executive Summary**

CMAG raised CP372 on 18 July 2023, following agreement that it was a key priority area of change for CMAG at Meeting 2. CMAG Members agreed to consider CP372 as part of a wider review of Secondary Trading arrangements and Rule 4.4.4, with Ofgem and DESNZ, as there are key policy intent considerations required and a holistic approach in order to make a change in this area most effective. CP372 is therefore no longer being developed by CMAG, a summary of discussions to date is noted in this report.

#### **Issue**

Rule 4.4.4 was identified as a high priority area for change by CMAG Members. CMAG Members highlighted that Rule 4.4.4 is unclear as to what is considered 'configuration' compared to maintenance and refurbishment, and therefore it is not understood what changes a Capacity Provider can make to the Generating Units that comprise their Capacity Market Unit (CMU) to ensure effective delivery throughout their Capacity Agreement length.

Rule 4.4.4 was further identified as a possible barrier to net zero, as older plants cannot change Generating Units within their CMU to adopt new, low carbon technologies on site. This is viewed as a larger issue for storage CMUs such as batteries, which may need to change their configuration over time to account for degradation.

#### **Solution**

CP372 seeks to amend Rule 4.4.4 to allow a CMU to change its configuration after Prequalification, so long as it does not lower its De-rated Capacity, and continues to meet its Auction Acquired Capacity Obligation (AACO).

#### Recommendation

The CMAG has agreed to not continue development of CP372, due to possible inconsistencies with the Regulations and interdependencies with Secondary Trading arrangements, which are subject to policy review in future DESNZ consultations.

The CMAG is submitting this report to Ofgem with the recommendation that Ofgem note the contents of this report as part of a wider review of Secondary Trading arrangements and Rule 4.4.4.

## **Issue**

Rule 4.4.4 states "The configuration of Generating Units that comprise a CMU must not be changed once that CMU has Prequalified".

CMAG Members highlighted that Rule 4.4.4 is unclear as to what is considered 'configuration' compared to maintenance and refurbishment, and therefore it is not understood what changes a Capacity Provider can make to the Generating Units that comprise their CMU to ensure effective delivery throughout their Capacity Agreement term. Capacity Providers may therefore interpret this Rule differently when enacting their Capacity Agreements, as some interpret it to allow battery cell refresh as maintenance whilst others do not.

Rule 4.4.4 was further identified as a possible barrier to net zero, as older plants cannot change Generating Units within their CMU to adopt new, low carbon technologies on site. This is viewed as a larger issue for storage CMUs, which may need to change their configuration over time to account for battery degradation. CMAG have noted that this issue has been covered within the DESNZ CM 2023 Part 2 Consultation, with a policy position expected in 2024. Various technologies, including Combined Cycle Gas Turbine (CCGT), may wish to decarbonise throughout a long-term Capacity Agreement and could do so effectively through a change to Rule 4.4.4.

### **Solution**

The solution for CP372 seeks to allow Capacity Providers to make changes to the configuration of Generating Units that comprise their CMU after Prequalification, so long as they do not alter their AACO and can continue to meet performance test requirements.

The CMAG Secretariat drafted initial legal text, based on the outputs from Ofgem's five year review of the Capacity Market (CM). This was presented to CMAG at Meeting 8 for consideration. Following CMAG feedback, an updated legal text was presented at Meeting 10, where CMAG agreed that additional consideration of scenarios, and specific change proposal questions was needed in order to determine the scope of the change.

Full redlining for legal text for CP372 can be found in Appendix 1.

#### **Legal Text for CP372**

#### Option 1 - presented at CMAG Meeting 8

Option 1 seeks to allow a Capacity Provider to change its Fuel Type, Generating Technology Class, Metering Arrangement and Connection Capacity after Prequalification.

Option 1 proposed to include a new Rule 4.4.4A, which states that changes must be made before the start of the relevant Delivery Year and should not result in any change to the De-rated Capacity of the CMU.

Option 1 further proposed to include new Rule 4.4.4B, which subjects any changes to a CMU to necessary assurances, including but not limited to obtaining Relevant Planning Consents and Connection Agreements.

#### Option 2 - presented at CMAG Meeting 10

Following feedback at CMAG Meeting 8 on Option 1, the CMAG Secretariat drafted Option 2 of the legal text with the intention of simplifying the solution. Members noted that the assurance requirements proposed in new Rule 4.4.4B under Option 1 would result in duplication within the Rules and possibly lead to confusion and disparity in the future. Members highlighted that any CM Rules changes should seek to change the Rules in a way that is clearer and simpler rather than add complexity.

Option 2 seeks to allow a Capacity Provider to change its CMU comprised of Generating Units such that it does not lower its De-rated capacity or AACO. Option 2 states that where there is a change in Generating Technology Class (GTC), the CMU must use the most recent De-rating Factors for that GTC.

# **CMAG Development/Discussions**

The CMAG discussed CP372 at:

- Meeting 6 (21 March 2023);
- Meeting 7 (18 April 2023);
- Meeting 12 (21 September 2023); and
- Meeting 14 (23 November 2023).

A summary of discussion is noted below.

#### History and Policy Intent of Rule 4.4.4

At the first CMAG Meeting, Members were asked to confirm their top priorities for areas of change within the CM Rules. Five Members identified Rule 4.4.4 as a high priority, the second highest rated area (after Secondary Trading).

At CMAG Meeting 6 Members had initial discussions about Rule 4.4.4 and requested that Ofgem confirm the history and policy intent of Rule 4.4.4. At CMAG Meeting 7, Ofgem confirmed its current position is that Rule 4.4.4 should be modified such that the following aspects of a Generating CMU's Components can be altered, to the extent that none of these changes leads to a lower AACO for that CMU. Those aspects that Ofgem are minded-to allow to change are:

- Fuel Type;
- Generating Technology Class;
- · Metering arrangement; and
- Connection Capacity.

Ofgem noted assurance should be provided with:

- Declaration that changes have not affected previous milestones;
- All outstanding milestones to be completed;
- Planning Consents (3.7.1);
- Connection Agreements (3.7.3);
- Metering change confirmation from Settlement Body (8.3.3);
- New Components meet low carbon requirements as necessary (3.4.7);
- · Relevant updated Exhibits are provided;
- Declaration that added or removed Components won't be used to ensure another unit meets Capital Expenditure thresholds.

Ofgem further noted they do not hold a view on a deadline for changes, as termination and penalties may provide enough assurance that capacity will be delivered.

DESNZ took an action to confirm what they consider constitutes a change of configuration in Rule 4.4.4 and the policy intent behind this Rule. DESNZ confirmed at CMAG Meeting 4 that this action is under consideration as part of DESNZ's plans for communicating policy intent via formal publication (e.g. Consultations).

#### Ofgem 5 Year Review of the CM

Ofgem consulted on three CM Rules Change Proposals (<u>CP272</u>, <u>CP281</u> and <u>CP306</u>) as part of its <u>2018 Rules change process</u>. Each of these proposals sought to amend/delete Rule 4.4.4 to allow Capacity Providers to change the configuration of Generating Units, with a view to increasing flexibility for CMUs. In its decision, Ofgem rejected these Change Proposals and concluded that further consideration was required to ensure any change to Rule 4.4.4 had the necessary assurances in place and was fit for purpose.

Ofgem sought stakeholder views on proposed amendments to Rule 4.4.4 in the <u>2019 Ofgem 5 year review</u> of the Capacity Market Rules. Following this, Ofgem proposed a change to Rule 4.4.4 as part of the <u>Ofgem July 2020 Consultation</u>, noting they were minded to allow changes to fuel type, Generating Technology Class, Metering arrangement and Connection Capacity. The reasoning Ofgem provided for this policy view is as follows:

"It is necessary to allow metering arrangements to be changed in order for any change to Generating CMUs to be permissible. We are proposing to allow changes to Connection Capacity to match the policy intent set out in paragraph 2.11. If either Fuel Type or Generating Technology Class can be changed, then it will be required to adapt the Connection Capacity to ensure that the same (or higher) De-rated Capacity can be provided."

The change process however was paused in the Ofgem 2021 Statutory Consultation, due to the requirement for a system change to deliver a solution for Rule 4.4.4, as the Delivery Body was implementing its new portal.

#### EMR DB view on change to Rule 4.4.4

At CMAG Meeting 10 in July 2023, EMR DB presented their response to Ofgem's 2020 CM Consultation, where EMR DB identified a number of issues with a change to Rule 4.4.4 for consideration.

EMR DB noted they are supportive of the proposed changes to Rule 4.4.4 in Ofgem's Consultation, where they applied to new builds in advance of the Delivery Year, as otherwise Rule 4.4.4 creates an incentive for them to submit limited information in their Application in order to be able to build on the same site in a different way (e.g. moving from two 5MW assets to one 10MW asset).

EMR DB highlighted that allowing a New Build to switch to another site to deliver its Capacity Obligation goes further than what was contemplated for Demand Side Response (DSR) and would require a "mini" Prequalification process to provide delivery assurance. There is also a lack of clarity of the value of allowing changes during a Delivery Year, as CMUs are able to trade away their obligations. Allowing a CMU to change components would adversely impact on the Secondary Trading market.

EMR DB sought clarification from Ofgem regarding if the proposal would allow change to configuration both within and prior to the Delivery Year and if it would apply for existing Generating CMUs with multi-year Capacity Agreements, as this would have implications for ongoing agreement management, in addition to Pregualification.

EMR DB noted that the proposed level of assurance suggested by Ofgem in its <u>July 2020 Consultation</u> would be sufficient, provided they are in advance of the Delivery Year. However, if changes are possible within Delivery Year, then further assurances may be required, such as provision of metering evidence against a CMUs obligation in the form of Satisfactory Performance Days or generating history.

EMR DB highlighted that holding Capacity Payments the same where AACO has increased could have consequences, such as, during a stress event, the CMU would be required to deliver AACO greater than the payments it would receive or, in a secondary trade, and they would need to trade away an AACO greater than the payments it receives.

There should be a deadline to allow time for the EMR DB (and CMSB) to validate and complete a change and provide assurance. The example given was that a change of location allows 10 Working Days for the EMR DB to review.

#### **Solution Development**

In their 2020 consultation, Ofgem identified a list of requirements that a Capacity Provider needed to meet in order to change the configuration of a CMU (proposed in Elexon's initial drafting to be added in 4.4.4B), which CMAG have indicated they do not consider to be necessary at Meeting 8, as many identified it would result in duplication of assurance requirements for Capacity Providers and make the CM Rules more complicated and complex to navigate.

Members noted that whilst it is important to have delivery assurance measures in place for a change to configuration, this should not be overly complex and instead reference assurance measures already within the Rules as applicable. Removal of this from the Rules drafting means that CP372 represents a fundamental change to the operation of the Capacity Market, as it means that changes to CMUs will not be subject to the governance or assurance that is required as part of Prequalification. This could result in unintended consequences such as gaming, where Capacity Providers may prequalify as one asset with more favourable Auction outcomes, and later

change the configuration of their CMU following prequalification which would not have had the same outcome in an Auction.

Following this feedback, the CMAG Secretariat presented an alternative legal text at CMAG Meeting 10, which removed the list of assurance measures from Option 1 of the legal text, and replaced it with a requirement to provide updated Qualification Exhibits where necessary, as CMAG identified this to be the only assurance measure that was not otherwise picked up within the Rules. EMR DB noted that there needs to be further consideration given to the specific scenarios that CMAG are seeking to address through a change to Rule 4.4.4, to ensure that any legal text sufficiently captures these and can address them. The CMAG Secretariat, with input from EMR DB, drafted a set of specific change proposal questions as shown in Appendix 2, for CMAG Members to respond to, in order to draw out these scenarios.

At Meeting 12, the CMAG Secretariat presented a summary of the Member responses to the specific change proposal questions for CP372. The views received from Members were limited to two Generating Technology Classes (Battery and Reciprocating Engine), and therefore it is difficult to determine the scope and different scenarios a change to Rule 4.4.4 should address.

A survey was circulated to the CMAG Newsletter distribution list on Thursday 2 November 2023, with 8 responses received in total, of which 2 were partial responses, which are summarised in Appendix 3. CMAG reviewed these responses at CMAG Meeting 14, and the CMAG Secretariat highlighted that while there is a clear consensus on some questions as shown in Appendix 2, others require CMAG input to determine how to proceed with any further drafting to the legal text.

Ofgem noted, at CMAG Meeting 14, they are looking at a broader piece of work on Secondary Trading, which would include review of Rule 4.4.4 and to consider these issues and Secondary Trading proposals as a whole. DESNZ noted they are working closely with Ofgem on this and welcome CMAG input into this work. A Member noted that Secondary Trading and Rule 4.4.4 were highlighted as key priority areas by CMAG, so change in this area should move at pace, with a clear vision from Ofgem and DESNZ on what the expected outcomes are. DESNZ noted this is a significant piece of work and Members should note that it will therefore take time to work through the issues raised and provide a clear vision on changes. DESNZ further noted that changes to the Regulations as a result of this work will add complexity to the process and may take additional time to take through the parliamentary process.

CMAG Members agreed with the approach to consider a change to Rule 4.4.4 as part of the broader work on Secondary Trading, and therefore not continuing development of CP372 further. The CMAG Secretariat noted that all current development and discussion on CP372 so far would be included within this report, for Ofgem to consider.

# **Impacts & Costs**

#### Rules

- i. Rule 4.4.4 Configuration of Generating Units
- ii. 6.10.1 Termination Events

#### Costs

CP372 did not progress to a stage where expected implementation and enduring costs could be considered by CMAG and Delivery Partners.

#### **Regulation and Other Code Impacts**

The CMAG determined there are no impacts on the Regulations or other industry codes.

# **Conclusion**

CMAG Members agreed to consider CP372 as part of a wider review of Secondary Trading arrangements and Rule 4.4.4, with Ofgem and DESNZ, as there are key policy intent considerations required and a holistic approach in order to make a change in this area most effective. The CMAG has agreed to not continue development of CP372, due to possible inconsistencies with the Regulations and interdependencies with Secondary Trading arrangements, which are subject to policy review in future DESNZ consultations.

#### **CMAG** Recommendation

The CMAG is submitting this report to Ofgem with the recommendation that Ofgem note the contents of this report as part of a wider review of Secondary Trading arrangements and Rule 4.4.4.

#### Appendix 1 - Legal Text for CP372

#### Option 1 - Presented at CMAG Meeting 8

- 4.4.4 The configuration of Generating Units that comprise a CMU must not be changed once that CMU has prequalified. A Prequalified CMU may not change the configuration of Generation Units that comprise a CMU with the exception of the following aspects:
  - a) Fuel Type;
  - b) Generating Technology Class;
  - c) Metering Arrangement; and
  - d) Connection Capacity.
- 4.4.4A Any changes to the configuration of a Prequalified CMU under Rule 4.4.4 may only be made before the start of the relevant Delivery Year, and such that the configuration change does not lower its De-rated Capacity.
- 4.4.4B Any changes to the configuration of a Prequalified CMU under Rule 4.4.4 may only be made subject to:
  - a) The new CMU configuration meeting any outstanding milestones;
  - b) A declaration being made, and any relevant evidence being submitted, to [the Delivery Body] confirming that the change of CMU Components has not impacted any completed milestone:
  - c) The new CMU configuration obtaining Relevant Planning Consents pursuant to Rule 3.7.1;
  - d) The new CMU configuration obtaining Connection Agreements pursuant to Rule 3.7.3;
  - e) Where there is a change to the Metering Arrangement for the CMU, the CM Settlement Body confirming the change to the Metering Configuration as set out in Rule 8.3.3;
  - f) The configuration change does not alter the Low Carbon Exclusion or Low Carbon Grant status under Rule 3.4.7;
  - g) Updated Qualification Exhibits being provided for the CMU as required;
  - h) For a CMU that has passed the Evidence of Total Project Spend:
    - i. A declaration that the CMU Components being removed will not be used to ensure that a different CMU meets CAPEX thresholds for longer agreements
  - i) For a CMU that has not passed the Evidence of Total Project Spend:
    - i. A declaration that the CMU Components being added have not been used to ensure that a different CMU meets CAPEX thresholds for longer agreements
- 6.10.1 Each of the following events is a Termination Event with respect to a Capacity Agreement (other than a Capacity Agreement that has been transferred under Rule 9.2.4(a)), and the Capacity Provider must notify the Delivery Body if any of the following events has occurred and is continuing:
- (i) where the Capacity Agreement relates to a Generating CMU with a multi-year Capacity Obligation and the CM Settlement Body determines that the Capacity Provider has on three separate occasions, other than occasions relating to changes of the CMU configuration under Rule 4.4.4, invalidated the Metering Test Certificate relating to that Generating CMU;

#### Option 2 - Presented at CMAG Meeting 10

4.4.4 The configuration of Generating Units that comprise a CMU must not be changed once that CMU has Prequalified.

A CMU comprised of Generating Units may only change its configuration such that it does not lower its de-rated capacity and AACO. Where there is a change in technology class, the CMU must use the most recent de-rating factors for that technology class and subject to:

- a) Providing updated Qualification Exhibit ZA Fossil Fuel Emissions Declaration and Exhibit ZB Fossil Fuel Emissions Commitment, where necessary.
- 6.10.1 Each of the following events is a Termination Event with respect to a Capacity Agreement (other than a Capacity Agreement that has been transferred under Rule 9.2.4(a)), and the Capacity Provider must notify the Delivery Body if any of the following events has occurred and is continuing:
- (i) where the Capacity Agreement relates to a Generating CMU with a multi-year Capacity Obligation and the CM Settlement Body determines that the Capacity Provider has on three separate occasions, other than occasions relating to changes of the CMU configuration under Rule 4.4.4, invalidated the Metering Test Certificate relating to that Generating CMU;

Appendix 2 – Summary of CMAG responses to Questions on the Issue and Government Policy

Issue and Government Policy Questions		
Question	Comment	
Is this a valid problem?  Are the issues related to just storage, or other technologies too?	This is a valid problem that is often experienced by Battery CMUs, as they require augmentation to continue to meet their obligations through a long-term Capacity Agreement.  Various technologies, including CCGT, may wish to	
	decarbonise throughout a long-term Capacity Agreement and could do so effectively through a change to Rule 4.4.4.	
Is the CM the right place to address this issue?	The CM is the right place to resolve this, as the CM Agreement and Rule 4.4.4 can be a key barrier to decarbonisation in the CM.	
Is the solution for CP372 going to be counter to the policy objective of the CM?	A change that is confined to changes to 'configuration' and therefore within the same technology class should have no impact.	
What is the impact on:	A solution for CP372 should enhance security of	
<ul><li>Security of supply;</li><li>Cost (including cost to consumers); and</li></ul>	supply by ensuring CMUs can meet their obligations under multi-year Capacity Agreements.	
Unintended consequences?	There is no known cost to consumers, but a possible cost to Capacity Providers to increase Capital Expenditure when changing configuration.	
	Allowing switching of components may temporarily reduce security of supply whilst CMUs are offline. However, if these CMUs are decarbonising, this should theoretically increase security of supply long term and reduce costs for consumers.	
Are there any consequential impacts on the Regulations?	No consequential impacts to the Regulations were identified.	
Does this change explicitly affect any functions granted to the Secretary of State?	The setting of De-rating Factors should not be impacted, however, there is an open question as to the applicability of particular De-Rating Factors and whether they should be tagged to the Auction in which a Capacity Agreement was awarded or whether De-Rating Factors should use the latest calculations.	
For example, the Energy Act 2013 set specific function to the Secretary of State, including Derating Factors.		
Is there an impact on subsidy control?  For example, any change that would favour one Generating Technology Class over another would require a review through the Subsidy Control Framework.	No, a solution can be drafted in a manner that is technology neutral and does not favour one particular Generating Technology Class.	

Appendix 3 – Summary CMAG responses to Specific Change Proposal Questions for CP372

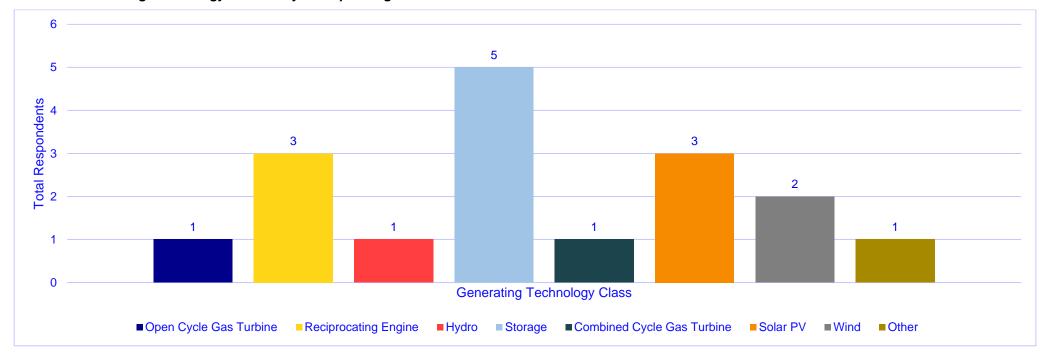
Specific Change Proposal Questions			
Question	Comment		
For a Generating Unit (Component), what constitutes:  • Maintenance;  • Reconfiguration; and  • Refurbishment?	"Changes to fuel type or metering arrangements are not changes to 'configuration' and are already permitted in the CM Rules. It is not clear that changes to Generating Technology Class or Connection Capacity are considered changes to configuration and that they would be allowed by removing Rule 4.4.4."		
	"Adding engines or batteries would appear to be considered a change in configuration and ought to be permitted through a change to Rule 4.4.4 as there is no downside to doing so, subject to assurances on Total Project Spend where the change relates to a multi-year Capacity Agreement."		
	"There needs to be clarification from Ofgem and DESNZ on what is meant by configuration, to understand what is currently allowed/prohibited under Rule 4.4.4."		
What De-rating Factor should be used for a Component added to a CMU? What De-rating Factor should be used for a change in Generating Technology Class reconfiguration of a Component?	Member responses to these questions showed a consensus that when relating to an original Generating Technology Class, the Capacity Agreement's De-rating Factor should be used. Where there is a change in Generating Technology Class, the latest De-rating Factor for the Delivery Year would be most appropriate.		
	"From a Battery CMU perspective, the De-rating factor is applicable for the original CM Agreement should stay in place, this is consistent with Rule 2.3.3. I agree that for a change in Generating Technology Class it seems reasonable to use the latest De-rating factor."		
	"Should use the latest De-rating factor which has been published for that technology in that Delivery Year. This is because that factor best represents the security of supply contribution of that technology at that time."		
	"If there is no change to the Technology Class, then adding a Component (presumably in order to be able to meet existing obligations) makes little or no difference. The capacity obligation is unchanged and therefore adding a Component may not even need a De-rating factor applied."		
	"Not sure that a change in technology class is a change in 'configuration' but if permitted, I think the latest DF seems sensible, but there are, as discussed, difficulties with Rule 2.3.3."		

Specific Change Proposal Questions			
Question	Comment		
Should the De-rated Capacity of a CMU be allowed to change as a result of changing configuration of a Generating Unit or reallocation of Components in a CMU?	Member responses indicated that in some cases, additional capacity could be separately metered and become a separate CMU.		
	"Agree that text should only allow changes that do not lower derated capacity / AACO."		
	"The AACO is the Obligation acquired in an Auction and cannot change as a result of changes to configuration either to increase or decrease. A reconfigured CMU would need to be able to demonstrate at least sufficient De-rated capacity to meet its AACO, but an increased De-rated capacity would not result in an increased AACO."		
	"My understanding is that additional capacity could only be covered by additional CM payments/obligations if it was separately metered from the other capacity - otherwise in a system stress event. It could not be known which capacity was delivering under which Obligation."		
What happens regarding a CMU's FCM if a Component is Reallocated away from it after passing FCM?  What impact does an added Component have on a CMU's FCM, if the Component was part of a previous CMU before that CMU passed FCM?	"For a CMU that is reliant on an FCM to demonstrate that it qualifies for a multi-year Capacity Agreement, a confirmation from Directors may be a sensible check."		
	"The policy intent (based on current CM Rules for Refurbishing CMUs) seems to be that TPS/FCM should be certified only once. I.e. if a Component has been used to certify FCM once, it cannot be used to certify FCM again."		
Where the CMU has passed the evidence of Total Project Spend, how could it confirm that the Component(s) being removed will not be used to ensure that a different CMU meets the Capital Expenditure thresholds for longer Capacity Agreements?	Member responses indicated a consensus that any spend on a Component that then moves to a different CMU should not also count towards the TPS for that CMU.  "On the evidence of Total Project Spend point, I don't think a Component should be able to be double counted - i.e. towards TPS on more than one site. I can see a counterargument that we shouldn't care as long as the original site can meet its obligations under its CM agreement but alignment with the Rules on Refurbishing CMUs seems reasonable."		
	"A replacement of a brand-new (expensive) Component with a 2nd hand (cheaper) Component would be a concern if the total spend had been signed off on the basis of the spend on the expensive Component. Selling that Component on (for example abroad rather than to become part of another CMU) and replacing with a cheaper one could result in the total spend not being reached."		
Should changes be allowed within a Delivery Year?	Yes, for this change to be most effective, changes to configuration of Components should be allowed at any time during a Delivery Year.		

Specific Change Proposal Questions			
Question	Comment		
What additional assurances are required for Component changes made within a Delivery Year?	"Any changes to configuration should not adversely impact the CMUs original Prequalification result."  "Any change should not adversely impact the original CMU meeting its Extended Years Criteria, a declaration may be required to ensure that any Component(s) added have not been used to ensure a different CMU has met its Extended Years Criteria."		

#### Appendix 4 – Summary of Industry Survey Responses to Specific Change Proposal Questions

#### Q1: What Generating Technology Class are you responding as?



\*Other - Consultant

# Q2: For a Generating Unit (Component), what constitutes maintenance, reconfiguration and refurbishment?

Generating Technology Class	Maintenance	Reconfiguration	Refurbishment
Reciprocating     Gas/Diesel	Repair of components as necessary without replacing a generating unit in full	<ul> <li>Changing the number of units and capacity of those units</li> <li>Replacing the generator or turbine</li> </ul>	<ul> <li>Major repair or replacement of unit/equipment once it is already operational</li> </ul>
<ul><li>Wind</li><li>Hydro</li><li>Solar PV</li></ul>	<ul> <li>Repair of components as necessary without replacing a generating unit in full</li> <li>Anything covered by the performance warranty including cell refresh</li> </ul>	Changing the number of containers/inverters	<ul> <li>Major repair or replacement of unit/equipment once it is already operational</li> </ul>
<ul> <li>Combined Cycle Gas Turbine /</li> <li>Open Cycle Gas Turbine</li> </ul>	<ul> <li>Replace parts as a result of normal wear and tear, can be planned as part of a maintenance cycle or unplanned as a result of a parts failure.</li> <li>Maintenance does not fundamentally change plant and the replacement of parts will be on a like-for-like basis</li> </ul>	<ul> <li>When a planned configuration of components is changed ahead of commissioning, e.g. a plan to build a 20MW generator made up of 10 x 2MW components is changed to 4 x 5MW components.</li> <li>Reconfiguration would generally not include change to GTC, location or final output of a generator, but rather how the planned output is delivered</li> </ul>	Replacement of parts with the aim of improving performance or efficiency or materially extending the life of a generator
Battery Storage	<ul> <li>Anything covered by the performance warranty including cell refresh</li> </ul>	<ul> <li>Increasing connection capacity, duration of a battery storage project, or changing technology class</li> </ul>	<ul> <li>Could include full cell refresh or replacement of key components within original configuration</li> </ul>