# Proposal for a Capacity Market Rules Change

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**Reference number** *(to be completed by Ofgem)*: **CP299**

| **Name of Organisation(s) / individual(s):** **Electricity Settlements Company (ESC)** | **Date Submitted:** **17/10/2017** |
|---|---|
| **Type of Change:**<br><br>☒ **Amendment**<br><br>☐ **Addition**<br><br>☐ **Revoke**<br><br>☐ **Substitution** | **If applicable, whether you are aware of an alternative proposal already submitted which this proposal relates to:**<br><br>Click here to enter text. |

**Proposal summary** *(short summary, suitable for published description on our website)*

When a Stress Event occurs and CMUs are subject to Capacity Provider Penalties for under-delivery those Penalties are subject to an Agreement Monthly Penalty Cap. However, Rules and Regulations currently allow for that cap to a) become a negative value and b) do not provide for month-to-date penalties to follow Physically Traded Capacity Obligations to other CMUs. This proposal seeks to address both these issues.

**What the proposal relates to and if applicable, what current provision of Rules the proposal relates to** *(please state provision number)***:**

The Electricity Capacity Regulations 2014, as amended by the The Electricity Capacity (Amendment) Regulations 2016, Schedule 1 section 6A(3).

**Description of the issue that the change proposal seeks to address:**

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Firstly, the current Regulations allow the Agreement Monthly Penalty Cap ($MPC_{ijN}$) to become a negative value as a result of deducting month-to-date Apportioned Settlement Period Penalty Amounts ($ASPPA_{ikN}$). Secondly, that issue only arises because those $ASPPA_{ikN}$ do not follow any Physically Traded Capacity Obligation (PTCO) to another CMU, so additional Settlement Period Penalty Settlement Amounts ($SPPSA_{ij}$) can be apportioned (under Schedule 1 section 6A(4)) to the CMU receiving the PTCO that would otherwise be capped if $ASPPA_{ikN}$ did follow the PTCO.
The result is that for an Agreement (N) the total $ASPPA_{ijN}$ for a month across all CMUs (i) that held any part of the obligation during the month can exceed the total initial $MPC_{ijN}$ for the month across all CMUs. See the example scenario in the table in the attached Appendix.

**If applicable, please state the proposed revised drafting** *(please highlight the change)***:**

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**[DN The above Field does not allow application of subscript to selected text, as required below]**

We propose that amendments be made to the above Regulations, Schedule 1 section 6A(3), in two ways to address the above issues.

First, if it were determined that $ASPPA_{ikN}$ should not follow any related PTCO (see below), then the formula in the above Regulation should be amended as follows in order to avoid negative $MPC_{ijN}$ :

$$MPCijN = \max ( ICOijN \times PEzx \times WFmx \times Fz - \sum k=1 \text{ to } j-1 \; ASPPAikN , 0 )$$

Secondly, if it were determined that ASPPAikN should follow any related PTCO then the formula needs to be extended to take account of both:

a) Pro-rata apportionment of ASPPAikN to follow any PTCO-out to transfer some, or all, of an Agreement's obligation from CMUi for a range of dates to another CMUa and similarly when the PTCO ends to apportion ASPPAakN back to CMUi; and
b) PTCO-in to include any of the above ASPPAikN received from CMUi.

Complexity arises because there may be multiple PTCOs in/out of CMUi for Agreement N on any one day and hence for Relevant Settlement Period 1 of the day the formula needs to cope with one or more previous PTCO-out ending on the previous day and one or more new PTCO-out starting on this day.

The proposed formula then becomes:

$$MPCijN = ICOijN \times PEzx \times WFmx \times Fz - \sum k=1 \text{ to } j-1 \; ASPPAikN – ASPPAikN\text{-}in + ASPPAikNout$$

Where:

$$ASSPAikN\text{-}in = \sum Tr ( \sum k=1 \text{ to } (j-1) \; ASPPATrkN \times \sum t \max ( tICOijN , 0) / ICOTr(j-1)N )$$

$$ASSPAikN\text{-}out = ( \sum k=1 \text{ to } (j-1) \; ASPPAikN + ASSPAikN\text{-}in ) \times (\sum t \min ( tICOijN , 0 ) / ( ICOi(j-1)N + \sum t \max (tICOijN , 0) )$$

Tr is the PTCO Transferor CMU's Obligations and related ASPPA relating to Agreement N, be that for a PTCO-in to CMUi or for a PTCO-out that has now expired and the Obligation effectively returns to CMUi.

**Analysis and evidence on the impact on industry and/or consumers including any risks to note when making the revision - including, any potential implications for industry codes:**

Without at least preventing a negative Agreement Monthly Penalty Cap, it is possible for multiple CMUs holding parts of an Agreement's Obligation during a month to, in total, incur Apportioned Settlement Period Penalty Amounts that exceed the Agreement Monthly Penalty Cap if it had only been held by a single CMU during the month. Only by providing for the Apportioned Settlement Period Penalty Amounts to follow Physically Traded Capacity Obligations can the apportionment of Settlement Period Penalty Settlement Amounts between CMUs be equitable to the Obligations they have held during the month.

**Details of Proposer** *(please include name, telephone number, email and organisation)*:

**Omer Ahmad, Jules Davenport**
Electricity Settlements Company
T: 0207 211 8881
info@electricitysettlementscompany.uk

## Appendix – example scenario demonstrating negative $MPC_{ijN}$

Assuming $PE_{zx} \times WF_{mx} \times F_z = 1$ so the initial $MPC_{ijN} = ICO_{ijN}$

| | **CMUi** | **A** | | | **B** | | | **TOTAL N** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **SD** | Obligation | ASPPA | $MPC_{ijN}$ | Obligation | ASPPA | $MPC_{ijN}$ | Obligation | ASPPA | $MPC_{ijN}$ |
| AACO N | **1** | 2000 | | 2000 | | | | 2000 | | 2000 |
| Stress Event | | | 1000 | | | | | | 1000 | |
| Cumulative c/f | | 2000 | 1000 | | | | | 2000 | 1000 | |
| PTCO1 starts | **2** | (1000) | | | 1000 | | | | | |
| Cumulative b/f | | 1000 | 1000 | 0 | 1000 | | 1000 | 2000 | 1000 | 1000 |
| Stress Event | | | 0 | | | 1000 | | | 1000 | |
| Cumulative c/f | | 1000 | 1000 | 0 | 1000 | 1000 | | 2000 | 2000 | |
| PTCO1 ends | **3** | 1000 | | | (1000) | | | | | |
| Cumulative b/f | | 2000 | 1000 | 1000 | 0 | 1000 | (1000) | 2000 | 2000 | 0 |
| Stress Event | | | 1000 | | | 0 | | | | |
| Cumulative c/f | | 2000 | 2000 | | 0 | 1000 | | 2000 | 3000 | |
| Cumulative b/f | | | | 0 | | | (1000) | | | (1000) |

We can see above that more Settlement Period Penalty Amounts are apportioned to Agreement N in total than is appropriate (3000 instead of a maximum of 2000) because $MPC_{ijN}$ is based on $ICO_{ijN}$ per CMU and $ASSPA_{ikN}$ stays with the CMU's $ICO_{ijN}$