

G18 Capacity Market Stress Event Guide

Public

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Amendment Record Table

This is a living document and as such will be regularly updated by EMR Settlement Limited to reflect the most up to date rules and regulations that govern the Capacity Market scheme and ensure it remains a useful resource for Capacity Providers.

This is a live document so if the user wants to comment to help simplify or explain further, please contact contact@emrsettlement.co.uk.

Version	Date	Description
1.0	May 2019	First published draft following consultation
2.0	April 2020	Updates Following EMRS and Delivery Body system changes, and housekeeping updates
3.0	December 2020	Updated following EMRS System Changes
4.0	December 2022	Updates following EMRS and Delivery Body system changes, and housekeeping updates
5.0	February 2023	Updates following EMRS and housekeeping updates
6.0	August 2024	Updates for changes to Stress Event timelines
7.0	December 2024	References to company updated to National Energy System Operator (NESO), System Stress Event timings, and housekeeping updates.
8.0	February 2025	Updates to the timings for Volume Reallocation, replaced references to Black Start with System Restoration, updated references to Delivery Body to NESO.
9.0	September 2025	Annual Review and updates to reflect EMRS new visual identity Updates to transfer document to EMRS ownership
10.0	November 2025	Housekeeping

1. Introduction

As defined in CM Rule 8.4.1¹, a System Stress Event means ‘a Settlement Period in which a System Operator Instigated Demand Control Event occurs where such event lasts at least 15 continuous minutes (whether the event falls within one Settlement Period or across more than one consecutive Settlement Periods, and where the event falls across multiple consecutive Settlement Periods, each of those Settlement Periods will be a “System Stress Event”’.

Meanwhile, a Capacity Market Stress Event is a System Stress Event that is relevant to Capacity Providers. This is defined as ‘a System Stress Event that has occurred at least four hours after a Capacity Market Notice has been issued and post-event analysis by National Energy System Operator (NESO) has confirmed that a System Stress Event has occurred’.

While this guidance focuses on Capacity Market Stress Events, it refers to both Capacity Market Stress Events and System Stress Events.

This guidance draws upon information set out in the Electricity Capacity Regulations 2014 (as amended) (“the Regulations”)², the Capacity Market Rules 2014 (as amended) (“the Rules”)¹, and the Working Practice and guidance documents published by EMRS and the EMR Delivery Body.

1.1 Scope and Purpose

This guidance has been created to provide information about, and to help Capacity Providers understand their roles and obligations with respect to, Capacity Market Stress Events. This includes:

- The processes involved in Capacity Market Stress Events
- Capacity Providers’ obligations during Capacity Market Stress Events
- The penalties for failing to deliver during a Capacity Market Stress Event

In the event where this document has any conflict or inconsistency with Rules, the Regulations or the Auction Guidelines, then the Rules, Regulations and Auction Guideline documents take precedence. Except in the case of Capacity Market Stress Event, capitalised terms used in this document have the same meanings given in the Capacity Market Rules.

1.2 Main Users and Responsibilities

Table 1 summarises the roles and responsibilities of those involved in Capacity Market Stress Event processes.

Table 1: Roles and Responsibilities in the event of a System Stress Event.

Organisation	Responsibilities
NESO (System Operator)	<ul style="list-style-type: none"> • Issue a Capacity Market Notice at least four hours in advance of when it believes that inaction will result in there being less generation available than is required to meet national electricity demand on the transmission system (accounting for additional reserve requirements of approximately 500MW). • Balance the electricity system • Confirm that a Capacity Market Stress Event has occurred
NESO (EMR Delivery Body)	<ul style="list-style-type: none"> • Collect, validate and send data to EMRS to allow settlement of a Capacity Market Stress Event
EMR Settlement Limited (on behalf of ESC)	<ul style="list-style-type: none"> • Maintain and validate Aggregation Rules • Validate metered data of Capacity Providers during a Capacity Market Stress Event • Publish the Capacity Volume Register • Facilitate volume reallocation • Operate the settlement system • Issue data default notice • Determine the payments and penalties required under the settlement process and issue invoices and reminders.

¹ <https://www.gov.uk/government/publications/capacity-market-rules>

² <https://www.legislation.gov.uk/ukdsi/2014/9780111116852/contents>

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Organisation	Responsibilities
Electricity Settlements Company (ESC)	<ul style="list-style-type: none">• Oversee settlement of payments
Capacity Provider	<ul style="list-style-type: none">• Ensure Authorised Persons are up-to-date• Ensure Aggregation Rules are up-to-date• Track communications from relevant parties• Ensure metering pathways have been setup and are functioning correctly• During the Stress Event, ensure CMU is generating at least its Adjusted Load Following Capacity Obligation• Engage in Physical Transfers of Capacity Obligations• Take part in volume reallocation• Submit data
Elexon	<ul style="list-style-type: none">• Provide data to support the settlement process
Half-hourly data aggregator	<ul style="list-style-type: none">• Provide metering data on behalf of CMUs registered with the Supplier volume

1.3 Associated Documents

This document should be read in conjunction with:

- Electricity Capacity Regulations³
- Capacity Market Rules⁴
- G1 – Capacity Market Metering⁵
- G17 – Capacity Provider Payments⁵
- WP1 – Overview of Settlement⁶
- WP26 – Capacity Provider Metering Configuration⁶
- WP41 – Late Payment Procedure⁶
- WP48 – Volume Reallocation⁶
- WP195 – CM CfD Metered Data⁶

Further information can be found in the System Stress Event training videos available on the EMRS Vimeo⁷, covering the following topics:

- Market Margin Signals
- Capacity Volume Register and Volume Reallocation
- Relevant Balancing Services

³ <https://www.legislation.gov.uk/ukdsi/2014/978011116852/contents>

⁴ <https://www.gov.uk/government/publications/capacity-market-rules>

⁵ <https://www.emrsettlement.co.uk/publications/guidance/>

⁶ <https://www.emrsettlement.co.uk/publications/working-practices/>

⁷ <https://vimeo.com/user225677431>

2. Stress Event Communications

2.1 Key sources of information related to Capacity Market Stress Events

Capacity Providers will receive information from several sources before, during and after a Capacity Market Stress Event. In some cases, only Authorised Contacts (someone recognised by the Delivery Partners to act on behalf of their EMR Party) will receive communications. Section 15.2 provides additional industry warnings and sources of information that may be of use to Capacity Providers but are not directly related to Capacity Market Stress Events.

Source	Information	Channel	Who can receive it
NESO (System Operator)	Capacity Market Notifications and cancellations ⁸	<ul style="list-style-type: none"> Text message Email Capacity Market Notice webpage⁹ 	<ul style="list-style-type: none"> Public Email subscribers
	Confirmation of System Stress Event	<ul style="list-style-type: none"> Text Message Email Capacity Market Notice webpage¹⁰ 	<ul style="list-style-type: none"> Public Email subscribers
NESO (EMR Delivery Body)	Capacity Market System Stress Event Template	<ul style="list-style-type: none"> Email from emr@neso.energy System Stress Event Template¹¹. 	<ul style="list-style-type: none"> Capacity Providers' assigned main admins
EMRS	Capacity Volume Register	<ul style="list-style-type: none"> Via My EMRS 	<ul style="list-style-type: none"> Primary Party Authority Finance Authority Operating Authority Finance Contact
	Data Default Notice	<ul style="list-style-type: none"> Emails from contact@emrsettlement.co.uk 	<ul style="list-style-type: none"> Primary Party Authority Finance Contact

⁸ Parties should sign up to email and text message alerts on the [Capacity Market Notice Website](#).

⁹ <https://gbcmn.nationalenergyso.com/>

¹⁰ <https://gbcmn.nationalenergyso.com/>

¹¹ <https://emrdeliverybody.nationalenergyso.com/IG/s/article/System-Stress-Event-Guidance>

3. Overview of Capacity Market Stress Event

3.1 Requirements before a Capacity Market Stress Event

Capacity Providers must ensure that:

Activity	Completed?
<p>The Metering System Identifiers (MSIDs) match the correct Balancing Mechanism Unit (BMU) in their portfolio.</p> <ul style="list-style-type: none"> This is particularly relevant for any Capacity Market Unit (CMU) that is made up of multiple components/BMUs. Capacity Providers must provide this data to the EMR Delivery Body. EMRS then validates the data to ensure it is correct 	✓
<p>Aggregation Rules are up to date (if required)</p> <ul style="list-style-type: none"> Aggregation Rules enable Metered Volumes to be calculated per CMU, which is then used to assess how much of a CMU's Capacity Obligation has been delivered (see Section 5.5 for more detail) 	✓
Metering pathways are fully set up and functioning correctly (see Section 5.2)	✓
They are signed up to all relevant contact lists (see Section 15.2)	✓
They are aware of and monitoring Capacity Market Notices when they are in effect (see Section 3.3)	✓
They know what data to provide, the correct format and the correct recipient organisation (see Section 5)	✓
Their CMUs can meet their obligations	✓
Capacity Providers without a Capacity Obligation (acquired via auction or physical trade) but wish to participate in Volume Reallocation following a Stress Event should contact NESO to register.	✓

Please see G4: EMRS Settlement Authorisations¹² for further guidance on Authorised roles.

3.2 Definition of a Capacity Market Stress Event

For the purposes of this guide, a **Capacity Market Stress Event** is:

- A System Stress Event that occurs at least four hours after a Capacity Market Notice (CMN) has been issued; and
- Has been confirmed by the National Energy System Operator (NESO) through post-event analysis.

Capacity Providers face penalties if they do not deliver their Adjusted Load Following Capacity Obligation (ALFCO) during a Capacity Market Stress Event (see Section 4 for details on ALFCO).

These events typically happen when:

- NESO has issued a CMN at least four hours ahead of a Settlement Period in which Demand Control measures were used to address a national shortage of generation capacity; and
- NESO confirms the event ex-post.

¹² <https://www.emrsettlement.co.uk/document/guidance/g4-emr-and-nuclear-rab-settlement-authorisations/>

CM rules defined terms	
System Stress Event	The Capacity Market Rules (8.4.1) ¹³ defines a System Stress Event as “a Settlement Period in which a System Operator Instigated Demand Control Event occurs where such event lasts at least 15 continuous minutes (whether the event falls within one Settlement Period or across more than one consecutive Settlement Periods, and where the event falls across multiple consecutive Settlement Periods, each of those Settlement Periods will be a “System Stress Event”).”
Demand Control¹⁴	Occurs when: <ul style="list-style-type: none"> • NESO issues a Demand Reduction; and/or • NESO issues an Emergency Manual Disconnection Instruction to one or more Distribution Network Operator (DNOs); and/or • Automatic Low Frequency Demand Disconnection takes place.
Capacity Market Notice	A warnings issued when NESO expects available generation is within 500MW of expected demand.

3.3 Capacity Market Notices (CMNs)

A CMN is an early indication that a Capacity Market Stress Event may occur.

When CMNs are issued:

- NESO issues a CMN when it believes expected available generation will be within **500MW** of expected demand.
- If a System Stress Event is expected, the CMN is issued at least four hours in advance, stating the expected start time.
- CMNs are posted on the NESO website and sent out by email (see Section 2.1 for mailing list sign-up).

Key points for Capacity Providers

- If a CMN is not issued at least four hours before a System Stress Event occurs, no penalties will be applied for failing to meet obligations.
- CMNs can also be triggered by:
 - A Demand Reduction Instruction, or
 - A Low Frequency Disconnection event where no CMN is already in effect.
- CMNs are not a formal dispatch mechanism for the Capacity Market – they are a signal to that the risk of a System Stress Event is higher than normal.
- **CMNs do not signal the start of a System Stress Event.** Once a CMN is issued, it is up to each Capacity Provider to decide how to meet their obligations.

Other system warnings

NESO may issue other warnings when there is a tight margin between supply and demand. These are independent, though they can be related.

Example:

- An Electricity Margin Notice (EMN) may follow a CMN.
- An EMN is issued when NESO believes there is a significant risk that generation will not meet demand.
- A CMN could be issued and resolved before an EMN is needed, or an EMN could be issued without a CMN (e.g., due to a large unplanned outage).

See Section 2.1 for a full explanation of other system warnings and their interactions.

¹³ <https://assets.publishing.service.gov.uk/media/686e4bcf2cfe301b5fb67905/informal-consolidation-cm-rules-2025.pdf>

¹⁴ There are some exceptions to this rule, as set out in Appendix 1.

3.4 Comparison of Capacity Market Notice and Electricity Margin Notice

An Electricity Margin Notice (EMN) is issued by National Energy System Operator (NESO) to request extra generation from the market.

CMN	Vs	EMN
Automated	Trigger	Manual
500MW above margin requirement	Threshold	500-800MW below margin requirement
Not included	Constraints	Included
4 hours out (for initial alert)	Lead time	Flexible
CM agreement holders put on notice that risk of System Stress Event is elevated	Expected response	Provision of additional energy where possible
Capacity Market Notices webpage	Publication	Balancing Mechanism Reporting Service
Aimed at CM agreement holders	Focus	Operationally focused

Figure 1: Comparison of Capacity Market Notice and Electricity Margin Notice

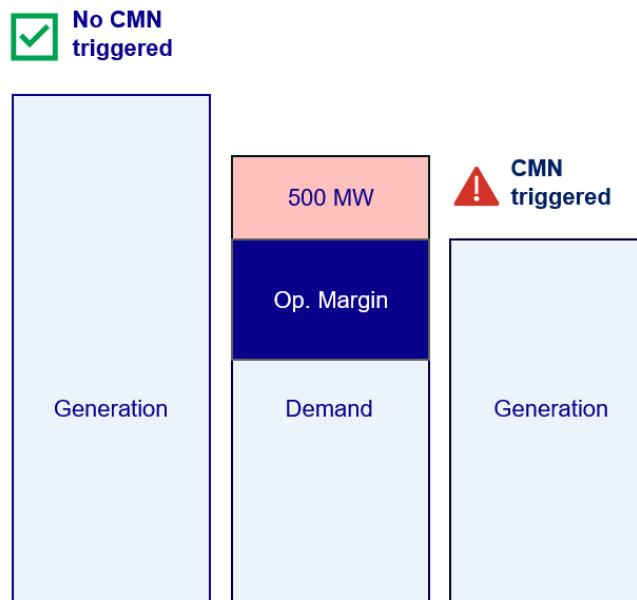


Figure 2: Trigger for a Capacity Market Notice in response to demand

CMNs are published on the NESO Capacity Market Notification¹⁵ webpage, where interested parties can sign up for notifications.

Further information can be found in the Market Signals Stress Event training video published on the EMRS Vimeo¹⁶.

¹⁵ <https://gbcmn.nationalenergyso.com/>

¹⁶ <https://vimeo.com/1027735455>

3.5 Relationship between CMNs and Capacity Market Stress Events

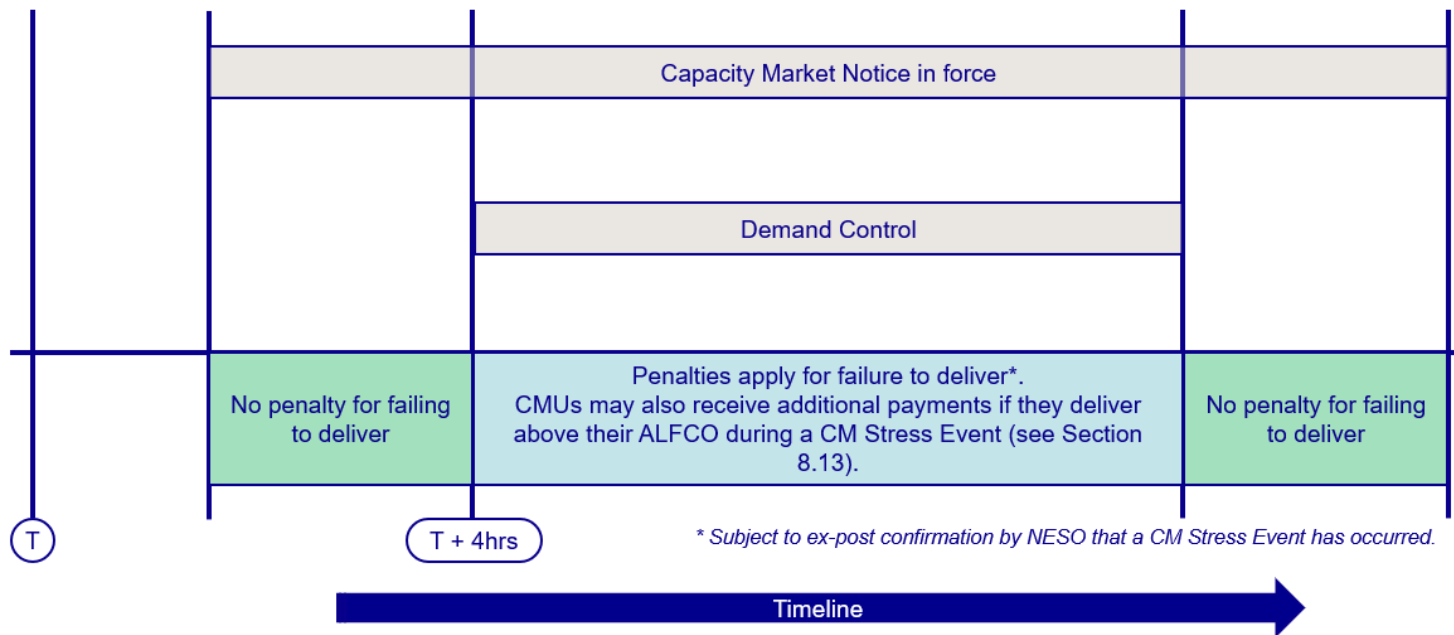


Figure 3: Relationship between Capacity Market Notices and Stress Event activities

3.6 The Capacity Volume Register

The Capacity Volume Register (CVR) provides information on each CMU's performance against its obligation following a Capacity Market Stress Event. It is also used to support Volume Reallocation.

Publication schedule:

- Published daily between the 24th and 33rd Working Day (inclusive) after the end of the month in which a Capacity Market Stress Event occurred.
- The CVR shows all Capacity Providers' final positions at the closure of the volume reallocation window on WD33.

As shown in the example below, the CVR will include:

- Auction Acquired Capacity Obligation (AACO) in MW
- Physically Traded Capacity Obligation (PTCO) in MW
- Reserve for Response (RfR)
- Involuntary Load Reduction (ILR)
- Load Following Capacity Obligation (LFCO) multiplier
- Load Following Capacity Obligation (LFCO) in MW
- Capacity delivered by a CMU in each Settlement Period during a Capacity Market Stress Event in MWh (E)
- Adjusted Load Following Capacity Obligation (ALFCO) in MWh – reflects a CMU's obligation (see Section 4.3)
- Initial Over-Delivery Volumes in MWh (IOD)
- Initial Under-Delivered Volume in MWh (IUD)
- Aggregated Traded Capacity Market Volume (ACMV); and
- Adjusted Metered Output (AE) in MWh – calculated as E + ACMV

Settlement Date	Settlement Period	CMU Id	AACO	PTCO	SCO	RfR	ILR	LFCO Multiplier	LFCO	E	ALFCO	IOD	IUD	ACMV	AE
dd/mm/yyyy	xx	Abc_12	xx.xxx	xx.xxx	x	xxx	x	x.xxx		xx.xxx	x.xxx	xx.xxx	xx.xxx	x	xx.xxx

Figure 4: Example CVR table

Please see WP48 - Volume Reallocation¹⁷ for further guidance on Volume Reallocation.

Further information can be found in the Capacity Volume Register and Volume Reallocation Stress Event training video published on the EMRS Vimeo¹⁸.

3.7 Deadlines following a Capacity Market Stress Event

WDX means X Working Days after the last working day of the month in which the relevant Capacity Market Stress Event occurred.

- **WD3:** Capacity Providers submit Balancing Services data
 - Ensure timely ALFCO calculations (see Section 5)
- **WD9:** Deadline for Capacity Providers to submit Meter Data
 - Missing this deadline will put the Capacity Provider into Data Default (see Section 5.6)
- **WD24:** EMRS publishes the Capacity Volume Register (CVR)
- **WD25 to WD33:** Volume Reallocation window
 - EMRS publishes an updated CVR at the end of each Working Day during this period
- **WD35:** EMRS issues penalty invoices
- **WD40:** Deadline for penalty payments
 - If penalties are unpaid, the amount will be deducted from future Capacity Payments (see Section 8.5)

Please see G17 - Capacity Provider Payments¹⁹ for further guidance on Capacity Provider Payments.

¹⁷ <https://www.emrsettlement.co.uk/document/working-practice/wp48-volume-reallocation/>

¹⁸ <https://vimeo.com/1067041329>

¹⁹ <https://www.emrsettlement.co.uk/document/guidance/g17-capacity-provider-payments/>

3.8 Key milestones following a Capacity Market Stress Event

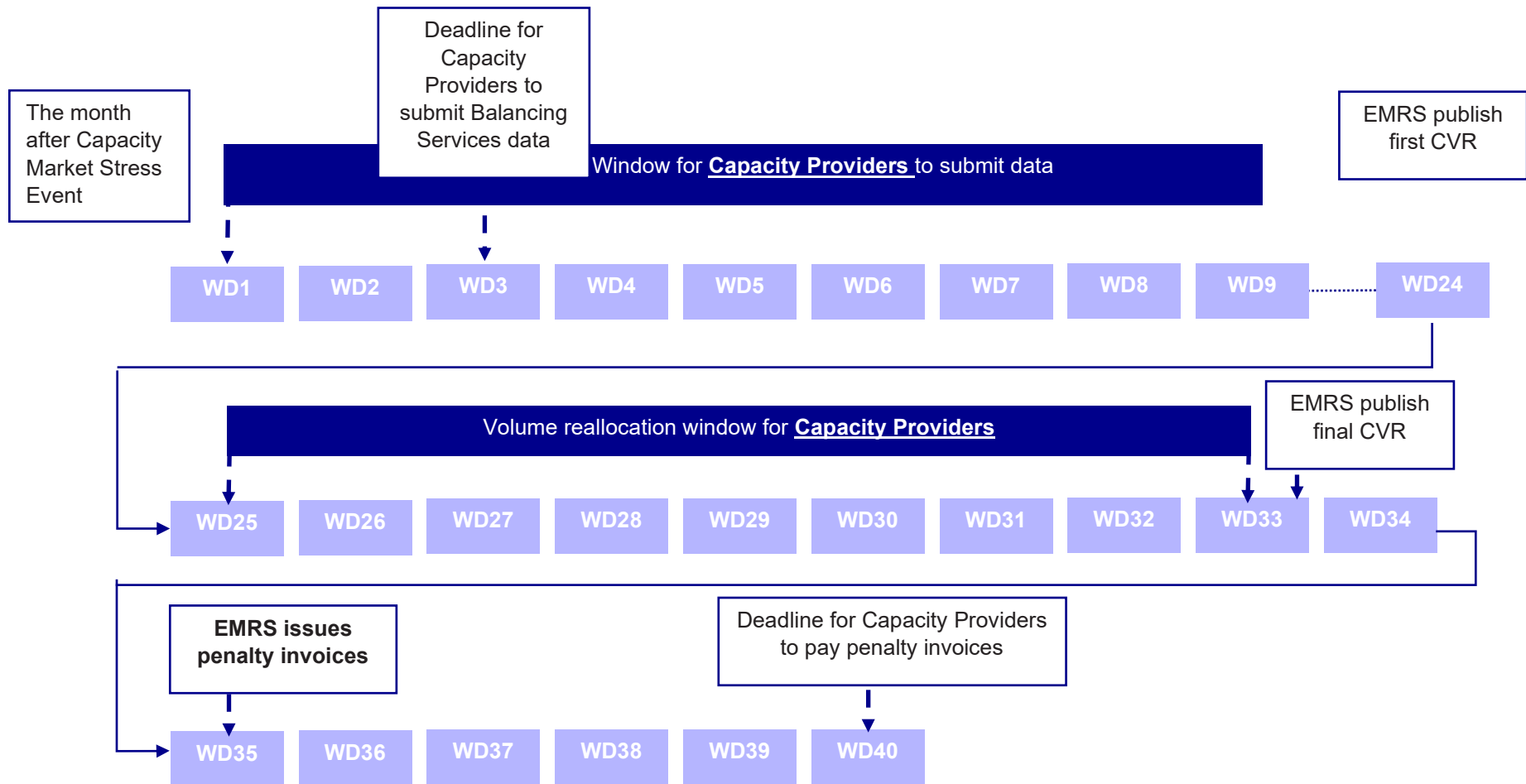


Figure 5: Key milestones following a Capacity Market Stress Event

3.9 Summary timeline of a Capacity Market Stress Event

High level timeline of a Capacity Market Stress Event

Nb: As stated above, the first indication that a Capacity Market Stress Event may occur is a Capacity Market Notice. This will be published on National Energy System Operator (NESO)'s website.

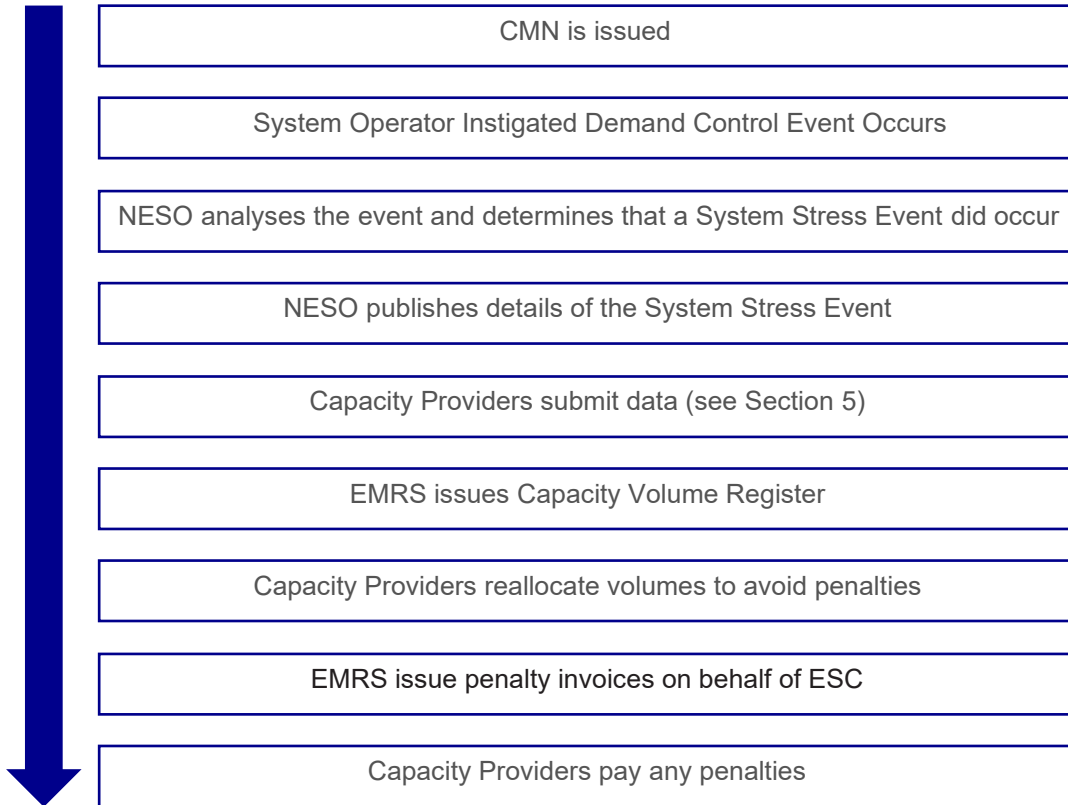


Figure 6: Summary timeline of a Capacity Market Stress Event

4. ALFCO Calculation

4.1 Capacity Provider Capacity Obligations

Capacity Providers must deliver their Adjusted Load Following Capacity Obligation (ALFCO) during a Capacity Market Stress Event.

ALFCO is a Capacity Provider's committed obligation for a Settlement Period during a Capacity Market Stress Event, with balancing services taken into account, e.g., acceptance of a negative Bid-Offer to reduce output. It is also related to the percentage of demand that needs to be met.

EMRS calculates the ALFCO for each CMU *after* a Capacity Market Stress Event has occurred because it is a function of the overall system demand and the amount of volume a CMU provides for balancing services. EMRS then publishes the ALFCO in the Capacity Volume Register.

At a high level, a CMU's ALFCO is calculated as follows:

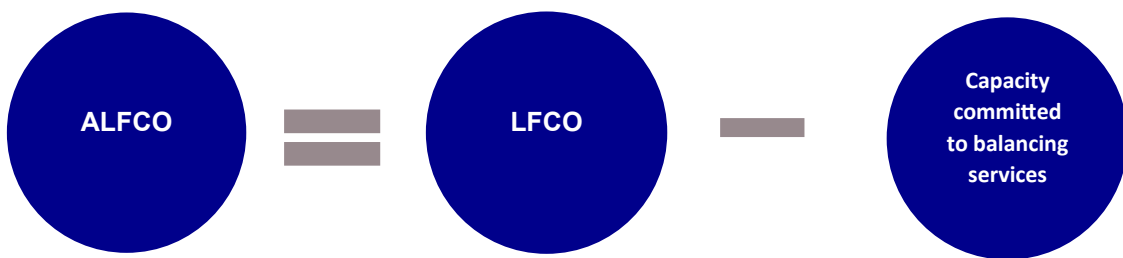


Figure 7: High level ALFCO calculation

- ALFCO = Load Following Capacity Obligation (LFCO) - Capacity committed to balancing services
- LFCO means the capacity that a Capacity Provider is obligated to provide during a Stress Event, as per their Capacity Agreement
- Capacity committed to balancing services means the volume the CMU provides for the relevant balancing services outlined in Section 6

The following high-level example is for an individual CMU in a single Settlement Period:

- LFCO = 120MW
- Capacity committed to balancing services = 5MW

ALFCO = LFCO – Capacity committed to balancing services
 ALFCO = 120MW – 5MW
 ALFCO = 115MW

The full ALFCO calculation uses the terms listed in the table below.

Term	Definition
AACO	The Auction Acquired Capacity Obligation of the CMU
β	This value is 1 where a Relevant Balancing Service is provided and is zero otherwise
$\sum E$	The total output of all Capacity Committed CMUs or CMVR Registered CMUs
ILR	The Involuntary Load Reduction is the load shed by Distribution Network Owners to meet any Demand reduction Instruction, and also the load shed as a result of any Automatic Low Frequency Demand Disconnection
LFCO	The capacity that a Capacity Committed CMU is obligated to provide in a given Settlement Period during a Stress Event, as per its Capacity Agreement. The LFCO is in MWh.
MEL	The aggregate of the Maximum Export Limit for each BM Unit comprised in the CMU which is providing a Relevant Balancing Service in a given Settlement Period

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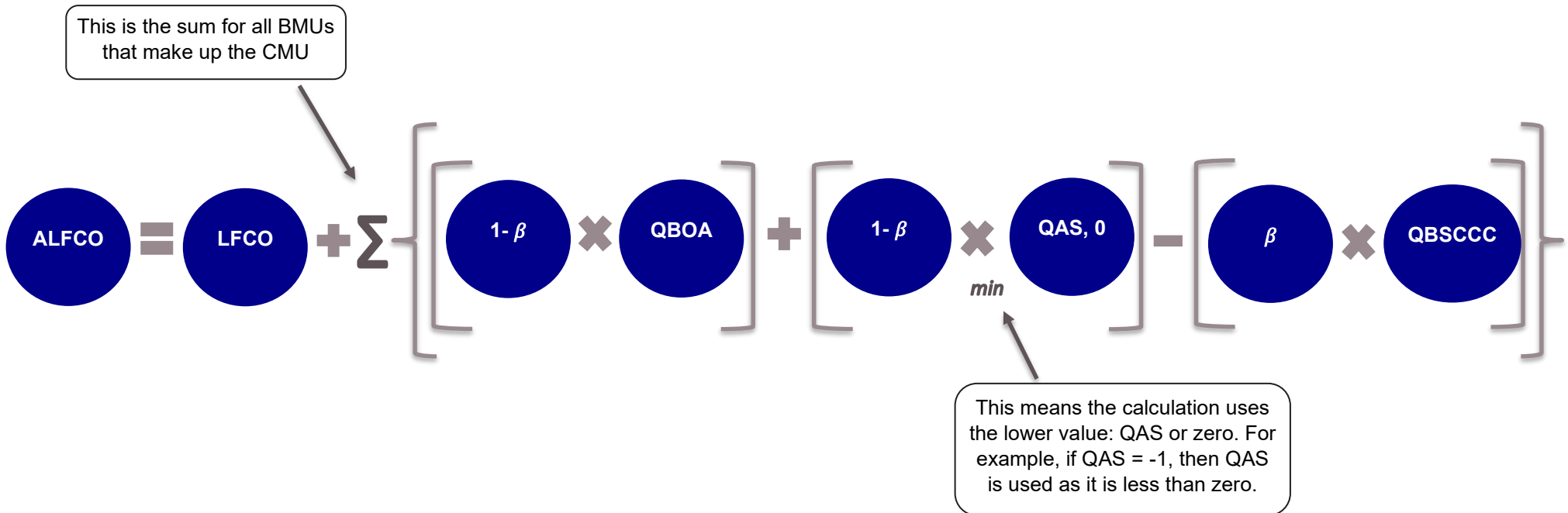
Term	Definition
PTCO	The Physically Traded Capacity Obligation of the CMU
QAB	The Period BM Unit Total Accepted Bid Volume
QAO	The Period BM Unit Total Accepted Offer Volume
QAS	BM Unit Applicable Balancing Services Volume provided by a BMU
QBOA	An adjustment factor used to account for a BMU reducing its output as a result of Negative Bid-Offer Acceptances
QBSCCC	The aggregate of Declared Availability minus Contracted Output
QME	The aggregate of the Period Expected Metered Volume for each BM Unit comprised in the CMU which is providing a Relevant Balancing Service in a given Settlement Period
RfR	The Reserve for Response amount, which is published by the EMR Delivery Body in the most recent Electricity Capacity Report ²⁰ prior to the relevant Auction Window for the relevant Delivery Year
SCO	The Suspended Capacity Obligation of the CMU
Σ	The sum of all Capacity Committed CMUs together with any CMU in respect of which an Acceptable Transferee is a CMVR Registered Participant

The full ALFCO calculation depends on the set up of the CMU. For a Generating CMU or an Interconnector CMU that is comprised of BM Units, see section 4.2 For a Generating CMU or an Interconnector CMU that is not comprised of BM Units, see section 4.3.

²⁰ <https://emrdeliverybody.nationalenergyso.com/IG/s/article/Electricity-Capacity-Report-ECR>

4.2 Generating CMU or Interconnector CMU that is comprised of BM Units

For a Generating CMU or an Interconnector CMU that is comprised of BM Units, the full calculation for ALFCO is:



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To work out the LFCO, QBOA, QBSCCC and LFCO values, you will need to use the following calculations.

LFCO Calculation

$$LFCO = \frac{AACO + PTCO - SCO}{2} \times \min \left[\frac{2 \times \Sigma E + 2 \times ILR + RfR}{\Sigma [AACO - SCO]}, 1 \right]$$

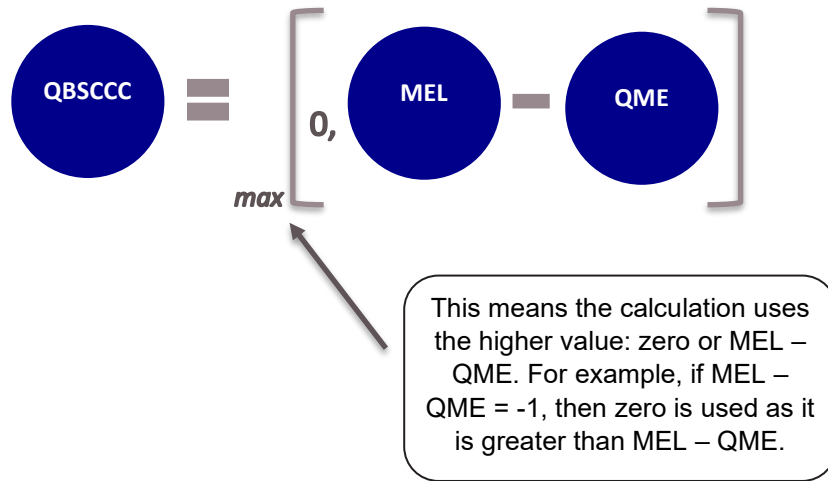
ΣE is the total output of all Capacity Committed CMUs together with any CMU in respect of which an Acceptable Transferee is a CMVR Registered Participant

$\Sigma AACO$ is the sum of Auction Acquired Capacity Obligations over all Capacity Committed CMUs together with any CMU in respect of which an Acceptable Transferee is a CMVR Registered Participant

QBOA Calculation

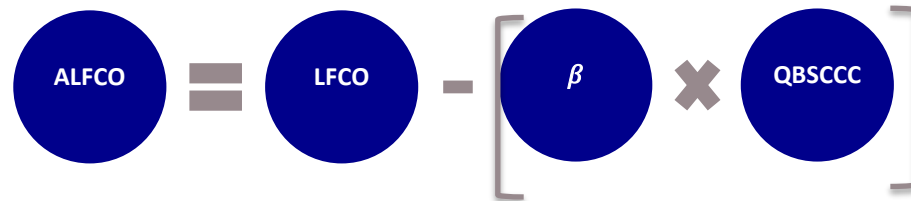
$$QBOA = \Sigma [QAO + QAB]$$

QBSCCC Calculation



4.3 Generating CMU or Interconnector CMU that is not comprised of BM Units

For a Generating CMU or an Interconnector CMU that is **not comprised of BM Units**, the calculation for ALFCO is:



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To work out the LFCO and QBSCCC values, you will need to use the following calculations.

LFCO Calculation

ΣE is the total output of all Capacity Committed CMUs together with any CMU in respect of which an Acceptable Transferee is a CMVR Registered Participant

$$LFCO = \frac{AACO + PTCO - SCO}{2} \times \min \left[\frac{2 \times \Sigma E + 2 \times ILR + RfR}{\Sigma [AACO - SCO]}, 1 \right]$$

$\Sigma AACO$ is the sum of Auction Acquired Capacity Obligations over all Capacity Committed CMUs together with any CMU in respect of which an Acceptable Transferee is a CMVR Registered Participant

QBSCCC Calculation

$$QBSCCC = \text{Declared Availability} - \text{Contracted output}$$

4.4 ALFCO calculation example

For the following example, it has been assumed that no balancing services have been offered by the CMU and therefore the following values have been used:

- $AACO = 20MW$
- $\Sigma AACO = 20MW$
- $\beta = 0$
- $\Sigma E = 70,000MWh$
- $ILR = 800MWh$
- $MEL = 30MWh$
- $PTCO = 0MW$
- $QAB = 0MW$
- $QAO = 0MW$
- $QAS = 0MW$
- $QBOA = 0MW + 0MW = 0MW$
- $QBSCCC = 5MW$
- $QME = 30MW - 25MW$
- $RfR = 1000MW$
- $SCO = 0MW$

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First, the LFCO is calculated for a Capacity Committed CMU in a given Settlement Period in MWh. The resulting LFCO can then be used in the ALFCO calculation.

$$\begin{aligned}
 \text{LFCO} &= \frac{\text{AACO} + \text{PTCO} - \text{SCO}}{2} \times \min \left[\frac{2 \times \sum E \text{ MWh} + 2 \times \text{ILR MWh} + \text{RfR}}{\sum [\text{AACO} - \text{SCO}]}, 1 \right] \\
 &= \frac{20\text{MW} + 0\text{MW} - 0\text{MW}}{2} \times \min \left[\frac{2 \times 70,000 \text{ MWh} + 2 \times 800 \text{ MWh} + 1,000}{\sum [60,000 \text{ MW} - 0\text{MW}]}, 1 \right] \\
 &= 10\text{MWh}
 \end{aligned}$$

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For a Generating CMU or an Interconnector CMU that **is** comprised of BM Units, the full calculation for ALFCO is:

$$\begin{aligned}
 \text{ALFCO} &= \text{LFCO} + \left[(1 - \beta) \times \text{QBOA} \right] + \left[(1 - \beta) \times \min(\text{QAS}, 0) \right] - \left[\beta \times \text{QBSCCC} \right] \\
 \text{ALFCO} &= 10 \text{ MWh} + \left[1 \times 0 \right] + \left[1 \times \min(0, 0) \right] - \left[0 \times 5 \text{ MWh} \right] \\
 \text{ALFCO} &= 10 \text{ MWh}
 \end{aligned}$$

5. Metered Data Submission

5.1 Obligations after a Capacity Market Stress Event

Following a Capacity Market Stress Event, Capacity Providers must submit:

- Metered data for their CM Units to EMRS (section 5)
- Balancing services data to EMR DB only if they were providing Relevant Balancing Services and/or Relevant Interruptions to NESO during the Stress Event (see Section 6).
- Capacity Market Volume Reallocation Notifications (CMVRNs) only if they wish to trade or reallocate Capacity Obligations (see Section 7).

This section details the metered data submission requirements following a Stress Event.

Capacity Providers' obligations on submitting data will depend on the type of their CMUs (see Section 5.7). It is the Capacity Provider's responsibility to ensure that the submitted data is accurate and complete. Capacity Providers who do not submit required data within the required timeframes could face Data Default (see Section 5.6).

It is important to note that Capacity Providers are also required to submit other required data prior to a Stress Event (see Section 3.1).

5.2 Meter Pathways

Metering pathways describe the different ways that Capacity Providers' data is submitted to EMRS to be used to calculate Capacity Obligations. Metering pathways differ depending on how the CMU's metering is set up (whether the CMU has settlement or non-settlement meters) and how it is registered in the market (whether the CMU is registered in Central Meter Registration Service (CMRS) or Supplier Metering Registration System (SMRS)).

Capacity Providers should check in advance of the Delivery Year with EMRS that their data flows are working by emailing the EMRS Help Desk. This is especially important for Capacity Providers providing data through Half Hourly Data Aggregators (HHDA) as these data flows can stop when components change electricity Suppliers. Capacity Providers are responsible for checking their data flows throughout the Delivery Year. Please note these will help to demonstrate Satisfactory Performance in a timely manner. It is also important to note that EMRS does not monitor data flows.

CM Metering Pathway	CMU Type	Data collection and submission	For party type	Notes
BSC Processes	CMUs with assets registered in the CMRS	BSC systems – Central Data Collection Agent (CDCA) and Settlement Administration Agent (SAA)	Parties with BMUs	No additional steps required to submit metering and balancing service data – these are carried out by BSC Central Systems (however, a Capacity Provider that wishes to issue CMVRNs will need to submit data – see Section 7.2)
HHDA	CMUs with assets registered in the SMRS	HHDA via the D0357 data flow	Parties with Demand Side CMUs and other assets that are registered as part of a Supplier portfolio (i.e., SVA registered)	Particularly important to check data flows following a change of Supplier

CM Metering Pathway	CMU Type	Data collection and submission	For party type	Notes
Self-submission or DC via Secure File Transfer Protocol (SFTP)	Assets with non-settlement meters	Self-submission by the Capacity Provider or their appointed Data Collector (DC)	Parties with existing balancing services or bespoke metering	Capacity Providers should ensure that accounts on the SFTP are set up with EMRS prior to the start of the relevant Delivery Year

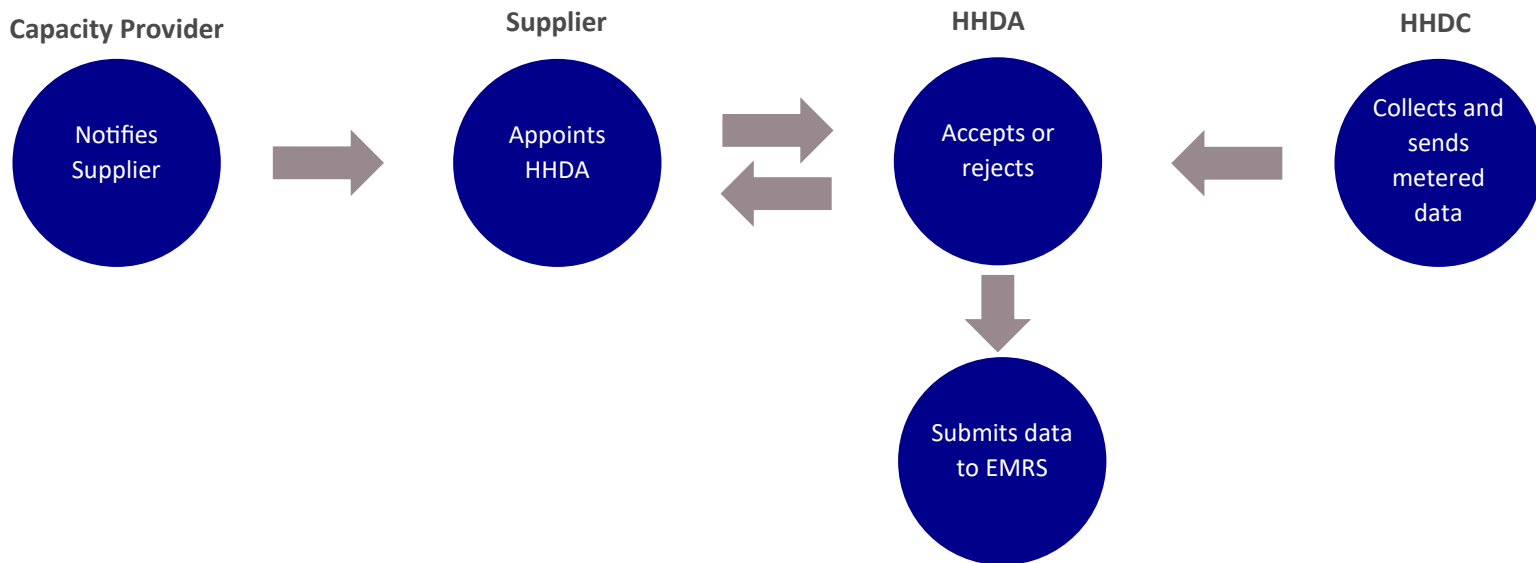
5.3 HHDA Metering Pathway

The HHDA Metering Pathway is used for sites that are registered as part of the SMRS.

In an SMRS registered site, the CMU can use the existing Half Hourly Meter used for settlement, as long as this only comprises assets related to the CMU, to determine the Metered Volumes for the CMU.

The Metered Volumes will be downloaded by the appointed HHDC who will pass them on to the appointed HHDA. The HHDA will submit the Metered Volumes to EMRS. This process uses four data flows and the D0357 flow for each component in the CMU and the EMR Settlement System will perform the aggregation. Please note that Capacity Providers will need to request the data flows are set up by their Supplier.

It is important that Capacity Providers ensure their MSIDs are correct before a Capacity Market Stress Event.



5.4 Self-Submission Metering Pathways

An existing Balancing Services Capacity Provider and a Capacity Provider using a Bespoke Metering Configuration Solution can submit Metered Volumes by self-submission (this can include a manual process).

Self-submission can be carried out by the Capacity Provider itself, or by its associated DC.

The main metered data should be provided to EMRS using a CSV defined file format uploaded via the SFTP.

- Data must be submitted for a Settlement Day, and not just the relevant Settlement Periods
- If the main meter data is incorrect due to a metering fault, the check meter data will be submitted to EMRS. It is the responsibility of the Capacity Provider to inform ESC of the metering fault
- The half-hourly data sent by the Capacity Provider will be in kWh (one decimal place) and in clock time.
- The defined format for the Self-Submission Metering Pathway CSV file can be found in Appendix 2 of WP195²¹

²¹ <https://www.emrsettlement.co.uk/publications/working-practices/>

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It is the Capacity Provider's responsibility to ensure that the data provided is consistent with that provided by the meter, is sent in the required format and has loaded successfully.

5.5 Aggregation Rules

Aggregation Rules are submitted via [My EMRS](#) and are set up to allow Metered Volumes to be calculated per CMU.

Aggregation Rules are created for Capacity Providers and Capacity Market Volume Reallocation (CMVR) Registered Participants.

- A CMU can be made up of a number of components
- A CMU component can be made up of one or more Metered Entities
- A Metered Entity is an individual component of a CMU that has a settlement or a non-settlement meter

The aggregated volumes of these Metered Entities are then used in the EMR Settlement System to calculate a CMU's ALFCO.

The overall aggregation process is driven by the EMR Aggregation Rules, a master copy of which is maintained by EMRS.

- EMRS creates an Aggregation Rule for a CMU based on metering information provided by the Capacity Provider via [My EMRS](#), which is validated and transmitted to EMRS.
- This information is submitted by the Capacity Provider or CMVR Registered Participant. It is important that Capacity Providers ensure they have their Aggregation Rules in place before the start of the Delivery Year

Aggregation Rules must include all components making up the CMU as well as all relevant identifiers for the Metering System. Relevant Identifiers are BM Unit Identification numbers or MSID.

5.6 Data Default

Deadlines for submitting data

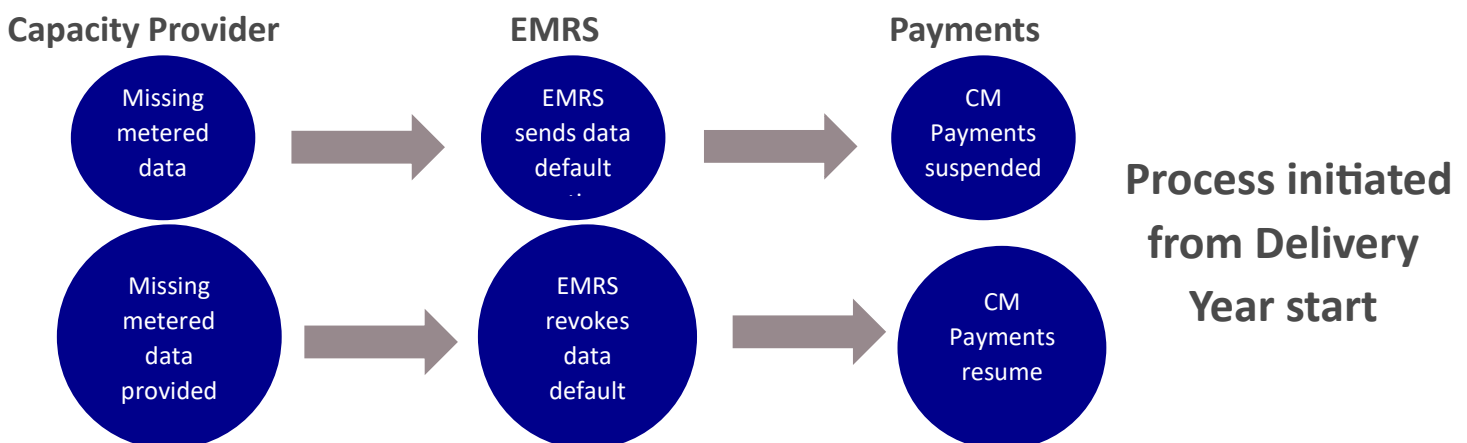
Capacity Providers are only required to submit data following a Capacity Market Stress Event. However, submitting data regularly throughout the Delivery Year will help in proving a CMU's Satisfactory Performance in a timely manner. Section 5.2 of this document explains the different pathways for submitting metered data.

Where a Stress Event has occurred and a Capacity Provider has failed to supply metered data within 9WD following the month in which the Stress Event occurred, EMRS issue a Data Default Notice to the Capacity Provider.

A Data Default notice means a Capacity Provider's Capacity Payments will be withheld until it complies with their data requirements and the Data Default notice is revoked.

Providing the missing data will bring a Capacity Provider out of Data Default and resume the Capacity Provider's Capacity Payments. However, it will not rectify settlement calculations that had already been carried out.

For any CMUs missing data required for determining Capacity Market Stress Event performance, EMRS will apply 'minimum' values to determine under-delivery and associated penalties.



5.7 Data Provision Obligations by CMU type

CMU Type	Assets Registered via	Metered Data Submission	Balancing Services Submission
BMU CMUs	CMRS	No action needed – BSC systems submit data	Via the Capacity Market System Stress Event Template.
Non-BMU CMUs	SMRS	Via the Half-Hourly Data Aggregator (HHDA)	Via the Capacity Market System Stress Event Template.
Non-BMU CMUs with settlement meters	CMRS or SMRS	Self-submission within 9WDs	Via the Capacity Market System Stress Event Template.
DSR CMUs	SMRS	Submit data from at least six weeks prior to the start of the relevant Settlement Period to inform the baselining methodology and the Settlement Period immediately before and immediately after each such Settlement Period which is used for de-rating	Via the Capacity Market System Stress Event Template. Submit data from at least six weeks prior to the start of the relevant Settlement Period to inform the baselining methodology.
Storage	CMRS or SMRS	Data required for each Settlement Period which is used for baselining or capability testing, and the Settlement Period immediately before and immediately after each such Settlement Period or which is used for de-rating Submit data from at least six weeks prior to the start of the relevant Settlement Period to inform the baselining methodology	Via the Capacity Market System Stress Event Template. Submit data from at least six weeks prior to the start of the relevant Settlement Period to inform the baselining methodology
Interconnector BMUs	CMRS	No action needed – BSC systems submit data	N/A

6. Obligations following a Capacity Market Stress Event: Balancing services data submission

6.1 Relevant Balancing Services and Relevant Interruptions

A Capacity Provider's Capacity Obligation is adjusted for any Relevant Balancing Services that they were providing during the Capacity Market Stress Event.

Relevant Balancing Services Guidelines list the different services which are eligible for an adjustment. Schedule 4 of CM Rules describes the process and requirements for the publication of the Relevant Balancing Services Guidelines. It also sets out the process in respect of which NESO shall consult and amend the Relevant Balancing Services Guidelines.

If a Capacity Committed CMU is affected by a Relevant Interruption during a System Stress Event, then the Capacity Committed CMU has no Obligations to deliver the ALFCO as per CM Rule 8.5.1 (c). A Relevant Interruption is defined in the Connection and Use of System Code (CUSC) Section 5.10.

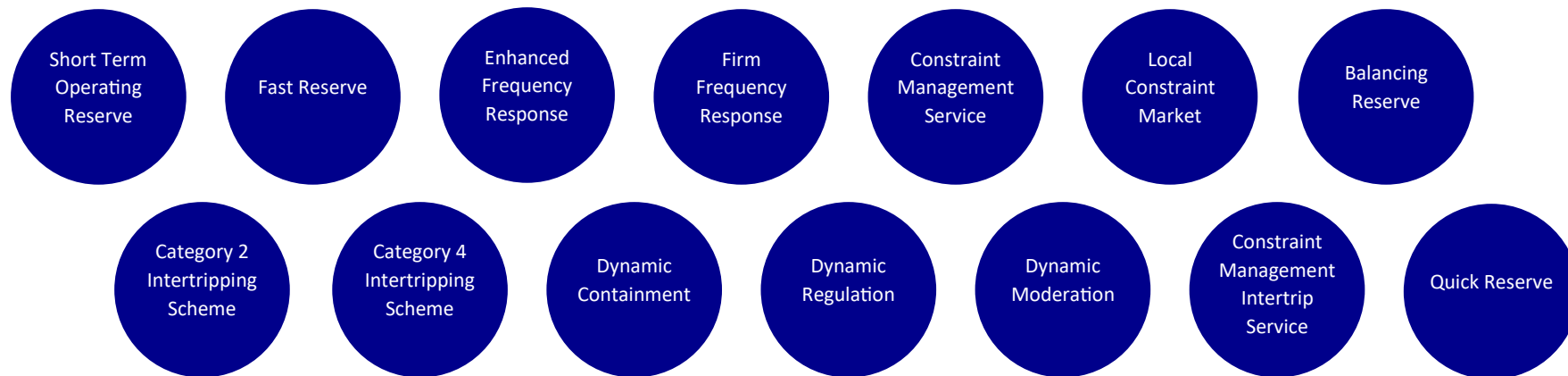


Figure 7: Relevant Balancing Services

Further information can be found in the Relevant Balancing Services Stress Event training video published on the EMRS Vimeo²².

²² <https://vimeo.com/1086336876>

6.2 Balancing Services Data Submission

3WD – deadline for submitting balancing services data

A CMU must complete and submit the correct System Stress Event Data Template to NESO within 3 WDs of the last day of the month in which the Capacity Market Stress Event occurred, but only if it was providing Relevant Balancing Services or Relevant Interruptions during that event. This ensures the timely calculation of their ALFCO.DSR CMUs and Generating CMUs with Storage Components are required to provide extra data (6 weeks of data) to determine the baseline demand (as per schedule 2 and 2a of the CM rules).

Capacity Providers submit this data using the **System Stress Event Data Template**, which will be circulated by NESO EMR DB after a Capacity Market Stress Event. The template can also be accessed from the EMR DB Portal²³.

System Stress Event Data Template



Table "System Stress Event information" will be pre-populated by EMR DB with the relevant date and settlement periods for the stress event.

System Stress Event Information	
Event Date	
Event Settlement Period - First	
Event Settlement Period - Last	
Number of Settlement Period(s)	



Please complete all the applicable fields from 'CMU ID' to 'Relevant Interruption'. Please note same template can be used to provide details for more than one CMU.

CMU ID	Component ID	Settlement Date	Settlement Period	Import MPAN (If applicable)	Export MPAN (If applicable)	BMU ID/BSU ID (as applicable)	Declared Availability in the Relevant Balancing Service	Contracted Output in the Relevant Balancing Service	Relevant Balancing Service	Relevant Interruption
Please Enter the CMU ID as in Capacity Market Register for Delivery Year for which data is being provided.										

Figure 8: SSE Data Template

²³ <https://emrdeliverybody.nationalenergyso.com/IG/s/article/Relevant-Balancing-Services-Guidelines>

7. Volume Reallocation

7.1 Volume Reallocation Process

Capacity Providers can reallocate volumes for any Settlement Period that forms part of a Capacity Market Stress Event from an over-delivering CMU to an under-delivering CMU. By reallocating volumes Capacity Providers can reduce the amount of Penalty Charges they owe.

Volume Reallocation can be done ex-post between a Capacity Provider and another Capacity Market Volume Reallocation (CMVR) Registered Participant.

- All Capacity Providers are automatically included in the Volume Reallocation process and do not need to register.
- Any CMU that participated in the auction for the relevant delivery year but **does not** hold a capacity agreement for the relevant Delivery Year, is able to register to participate in Volume Reallocation providing registration has been completed prior to the stress event.

Further information can be found in the Capacity Volume Register and Volume Reallocation Stress Event training video published on the EMRS Vimeo²⁴.

7.2 Capacity Market Volume Reallocation Notifications (CMVRNs)

Volume Reallocation requires two matching submissions. The CMVR Registered Participant for the CMU trading away excess volume (the “transferor”) must submit a file, while the owner of the CMU receiving the volume (the “transferee”) must submit a corresponding file with equal but opposite values (negative for the transferor, positive for the transferee). These files are known as Capacity Market Volume Reallocation Notifications (CMVRNs) (see Section 7.2).

EMRS validates CMVRNs, matches them to their counterparts, and notifies the CMVR Registered Participants involved whether the submission has been accepted. Valid and matched CMVRNs are then used to update the Capacity Volume Register (CVR).

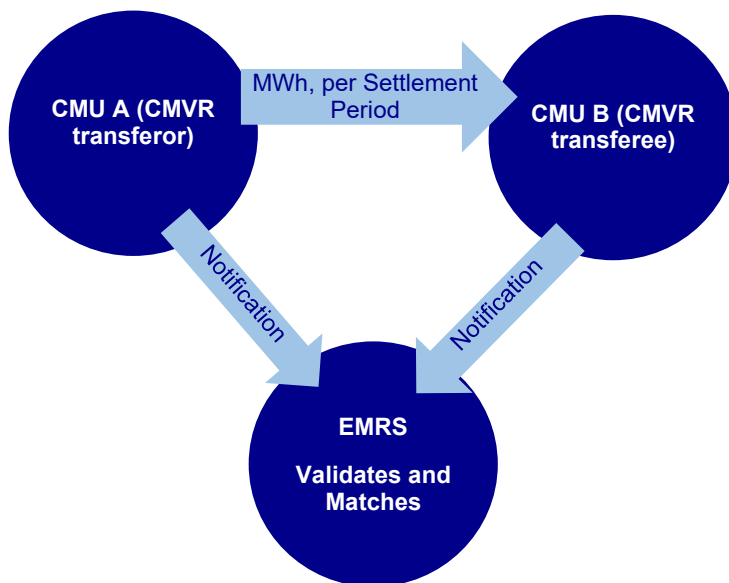


Figure 9: Volume Reallocation

The Volume Reallocation process runs from the 24th to the 33rd working day (inclusive) of the month following the one in which the Capacity Market Stress Event occurred.

Volume Reallocation and Secondary Trading

Both Volume Reallocation and Secondary Trading are methods of reducing penalties for under delivery should a Capacity Market Stress Event occur. However, they are different in that Secondary Trading must be done before a Capacity Market Stress Event occurs (ex-ante), whereas Volume Reallocation can only be done between the 24th and 33rd working day after the final working day of the month after a Capacity Market Stress Event occurs (ex-post).

Registration for Volume Reallocation must be complete prior to a Stress Event on the EMR DB portal against the CMU, see guidance on [EMR BD Portal](#).

Please note that for certain Relevant Balancing Services such as Firm Frequency Response (FFR) and Fast Reserve (FR), there are extended validation timescales. This may result in an updated CVR being required due to changes in data during WD24 - WD33.

²⁴ <https://vimeo.com/1067041329>

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- On WD24, EMRS publishes the Capacity Volume Register (CVR).
- On each Settlement Day between WD24 and WD33 (inclusive), an updated CVR is published at the end of the working day.

The CVR records the total obligation of each CMU for each Settlement Period during the Capacity Market Stress Event, including any reallocated volumes (see Section 3.6).

At the end of the Volume Reallocation period, any CMU that has under-delivered against its obligation will incur penalties (calculated monthly – see Section 8). CMUs that have delivered above their obligation may receive over-delivery payments, which are calculated annually based on the total penalties collected.

CMVRNs must be submitted to EMRS via MyEMRS²⁵. More information is available in EMRS Working Practice 48²⁶ and Guidance Document 25²⁷. Each participating CMU's owner is responsible for submitting the required CMVRN.

The screenshot shows the EMR Settlement MyEMRS interface. On the left is a navigation menu with items: Dashboard, Registration (circled in blue), Party Details, Party Data, CP Metered Data, and CMVRN (circled in blue). A blue arrow labeled 'New' points from the CMVRN menu item to a main content area. The main content area is titled 'Volume Reallocation Window' and contains three panels: 'A Guide to Volume Reallocation Windows', 'Volume Reallocation Window Details', and 'Stress Event Details'.

Volume Reallocation Window Details	
Delivery Year	2021/22
Start of Volume Reallocation Window	11 March 2022
End of Volume Reallocation Window	19 March 2022

Stress Event Details	
Start Date	11 Feb 2022
Start Settlement Period	5
End Date	11 Feb 2022
End Settlement Period	7

7.3 Initiating Volume Reallocation

When participating in Volume Reallocation, the following rules apply:

- The **Capacity Volume Register (CVR)** should be used to identify potential CMUs to trade with. It shows each CMU's performance against its ALFCO (i.e. over- or under-delivery).
- The **Settlement Periods** specified in both CMVRN files must fall within a Capacity Market Stress Event.
- A CMVRN file can only show trades in **one direction** (buying or selling). To trade in the opposite direction, a separate CMVRN must be submitted.
- Where a Capacity Obligation has been transferred between Capacity Providers via **Secondary Trading** before the Stress Event, only the Capacity Provider holding the Capacity Obligation on the Stress Event settlement date may submit a CMVRN.
- Once EMRS successfully matches a CMVRN with its equal and opposite counterpart, the new Capacity Obligations for both CMUs will be reflected in the next version of the CVR.
- **Over-delivering CMUs** may only trade volumes if they remain above their ALFCO after the trade.
- **Under-delivering CMUs** may only trade volumes if they remain below their ALFCO after the trade. Any trades breaching these limits will not be accepted.

7.4 Creating a CMVRN

²⁵ <https://my.emrsettlement.co.uk/>

²⁶ <https://www.emrsettlement.co.uk/document/working-practice/wp48-volume-reallocation/>

²⁷ <https://www.emrsettlement.co.uk/document/guidance/g25-my-emrs-user-guide/>

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CMVRNs can only be submitted by either a Capacity Provider or a CMVR Registered Participant. The CMVRN must specify:

- The Capacity Provider, or CMVR Registered Participant, and its **CMVR Transferor** to which the CMVRN relates;
- The Capacity Provider, or CMVR Registered Participant, and its **CMVR Transferee** to which the CMVRN relates;
- One or more Settlement Period to which the CMVRN relates;
- The Traded Capacity Market Volume; and
- A CMVRN identifier provided by the Contract Trading Party in accordance with [Working Practice 48](#).

A CMVRN is only valid if:

- It is submitted between WD24 and WD33 inclusive after the end of the calendar month in which the Settlement Period to which the CMVRN relates occurred;
- The Settlement Period or periods specified was or were a System Stress Event; and
- It is submitted by either the relevant parties and is in the correct form, as set out in [Working Practice 48](#).

The CM Settlement Body must:

- Validate each CMVRN submitted to it; and
- Inform the relevant parties who submitted a CMVRN if it does not validate a CMVRN submitted to it.

7.5 CMVRN Matching

In relation to CMVRNs, a Settlement Period will only be “matched” if:

- The CMVRN is valid (see Section 7.4)
- The corresponding CMVRN is valid; and
- The Traded Capacity Market Volume for the Settlement Period specified in the CMVRN are the same.

A corresponding CMVRN is the CMVRN submitted by the other Contract Trading Party relating to the same CMUs.

The CM Settlement Body must issue a notification report for a matched CMVRN to the person who submitted the CMVRN “as soon as practicable” after it is matched.

8. Penalty Invoice Calculation

8.1 How Penalties are Incurred

Capacity Providers who fail to deliver sufficient Metered Volumes to meet their Capacity Obligation during a Capacity Market Stress Event, and are unable to reallocate volumes to another CMU during the volume reallocation window (see Section 7), will be required to pay a penalty.

The purpose of the penalties is to appropriately incentivise Capacity Providers to ensure they are able to meet their obligations when called upon. The deadline for paying penalties are shown in Section 8.5.

It is important to note that Penalties and Termination Fees arise for different reasons and have different consequences for Capacity Providers. If a Capacity Provider is required to pay a penalty for under-delivering, they will still hold their Capacity Agreement and will continue to receive their payments. These penalties are capped and will never exceed the payments received by the Capacity Provider in the relevant Delivery Year (see Section 8.2). Meanwhile, Termination Fees are much larger (up to £35,000/MW) and if a Capacity Provider is required to pay a Termination Fee, they will no longer hold their Capacity Agreement. Some Termination Events also require Capacity Providers to return their payments.

8.2 How Penalties are Calculated

Penalty Amounts are first calculated for each individual CMU and are then apportioned to the appropriate Capacity Provider based on how long they were responsible for the CMU in the month the Capacity Market Stress Event occurred. This means that Capacity Providers can incur penalties for CMUs that they did not own at the time of the Capacity Market Stress Event.

The ALFCO is the Capacity Obligation that Capacity Providers are required to deliver during a Capacity Market Stress Event.

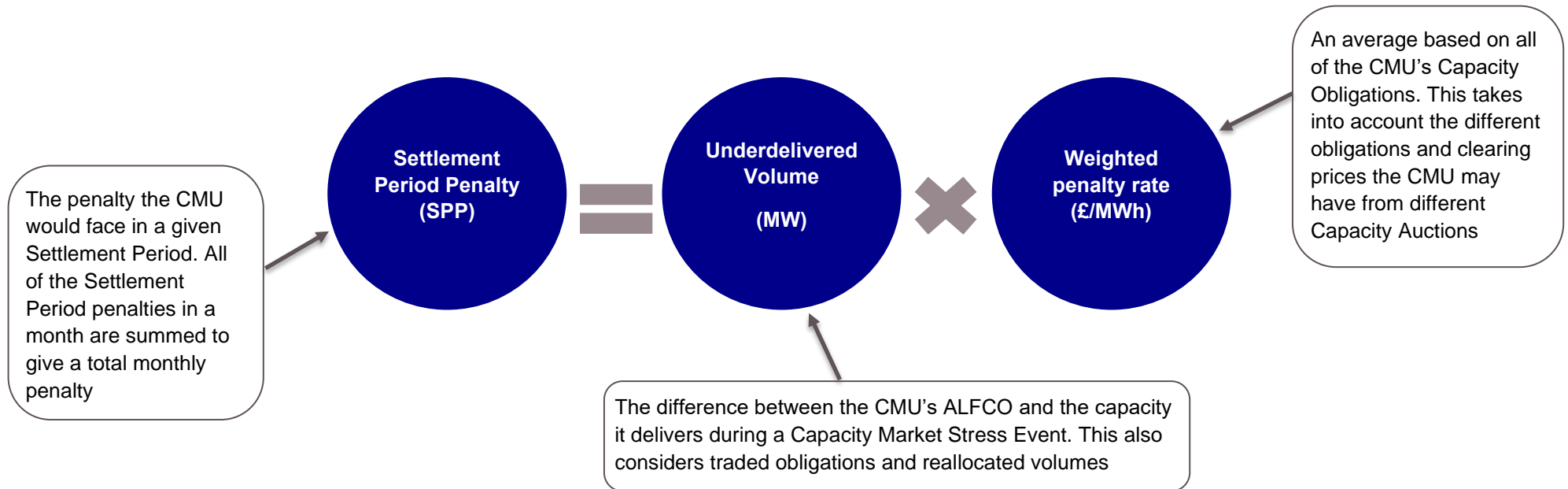
It is based on the Capacity Obligation of the CMU (as set out in the Capacity Market Register²⁸) and is adjusted to account for the ratio of total energy needed during the Capacity Market Stress Event against total contracted energy and the capacity of the CMU which has already been committed to balancing services to manage the Capacity Market Stress Event (the interactions between balancing services and Capacity Obligations is explained in Section 6).

If Capacity Providers fail to deliver their ALFCO, they are subject to penalties.

²⁸ <https://emrdeliverybody.nationalenergyso.com/CM/s/regulatoryreports>

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The penalty calculation for an individual CMU is as follows:



All of the SPPs for a month are summed to give a total monthly penalty. EMRS also calculates a variant of this where no capacity is delivered to give a maximum monthly penalty.

Monthly penalties are capped at 200% of the Capacity Payments received by the CMU in that month. Annual penalties cannot exceed the total payments received by a CMU in the relevant Delivery Year (i.e., a CMU can never be penalised by an amount that is more than the total Capacity Payments it receives in the relevant Delivery Year).

For illustration, a CMU would have to fail to deliver all of its obligation, and any single Capacity Market Stress Event would need to last a total of approximately four hours for the monthly cap to be met. There would need to be six such events for the annual cap to be met. Please note that these numbers are purely indicative – the exact number and duration of Capacity Market Stress Events needed to meet the penalty caps would depend on the ALFCO and Capacity Obligation of the CMU.

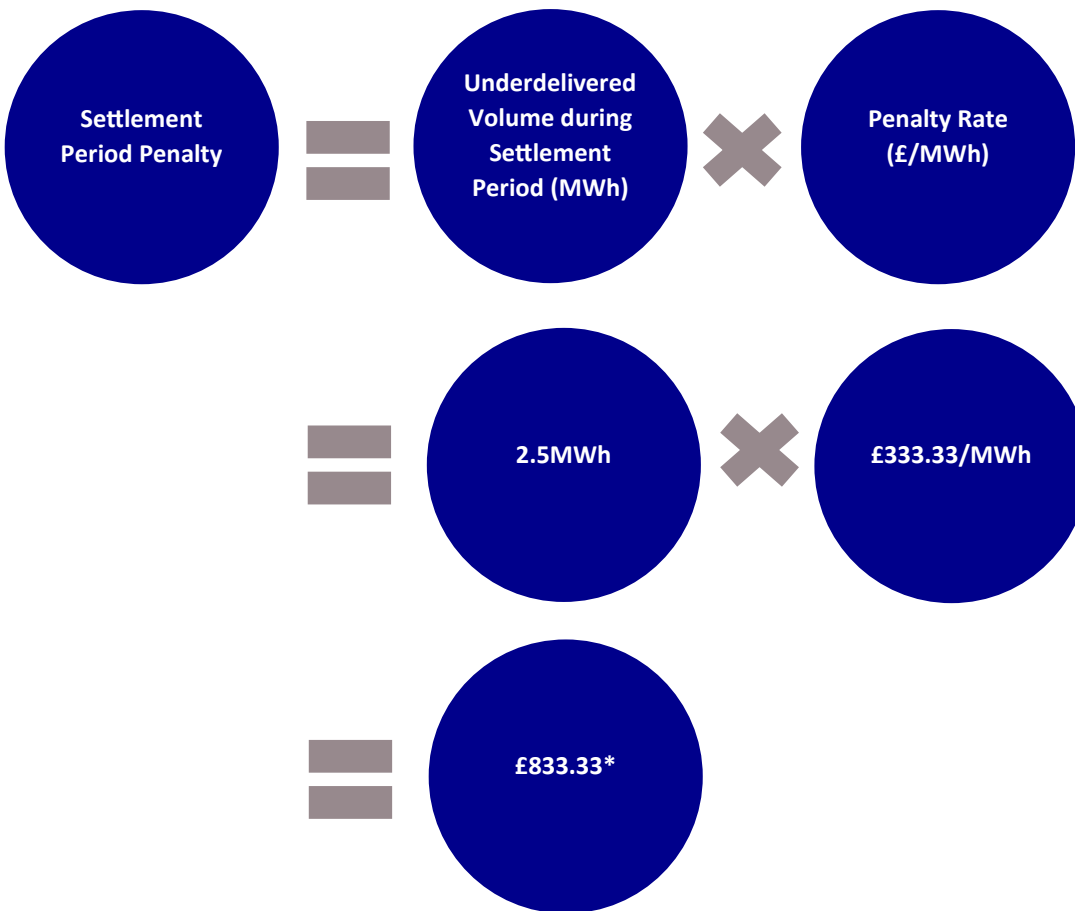
8.3 Example 1 – CMU with a Single Capacity Obligation

The following example and its calculations relate to a single CMU which holds a single Capacity Obligation for the relevant Delivery Year.

Settlement Period Penalty

The calculation below shows how the Settlement Period Penalty is calculated.

- ALFCO = 10MW
- Capacity Cleared Price = £8,000/MW
- Penalty rate = £8,000/MW ÷ 24 = £333.33/MWh
- Delivered volume in Settlement Period = 2.5MWh
- Underdelivered volume in Settlement Period = (10MW x 0.5h) - 2.5MWh = 2.5MWh



*It is important to note that penalties are calculated relative to a CMU's ALFCO, which is calculated for each Settlement Period and therefore may vary. Therefore, it is unlikely that there will be a uniform penalty across all Settlement Periods during a Capacity Market Stress Event.

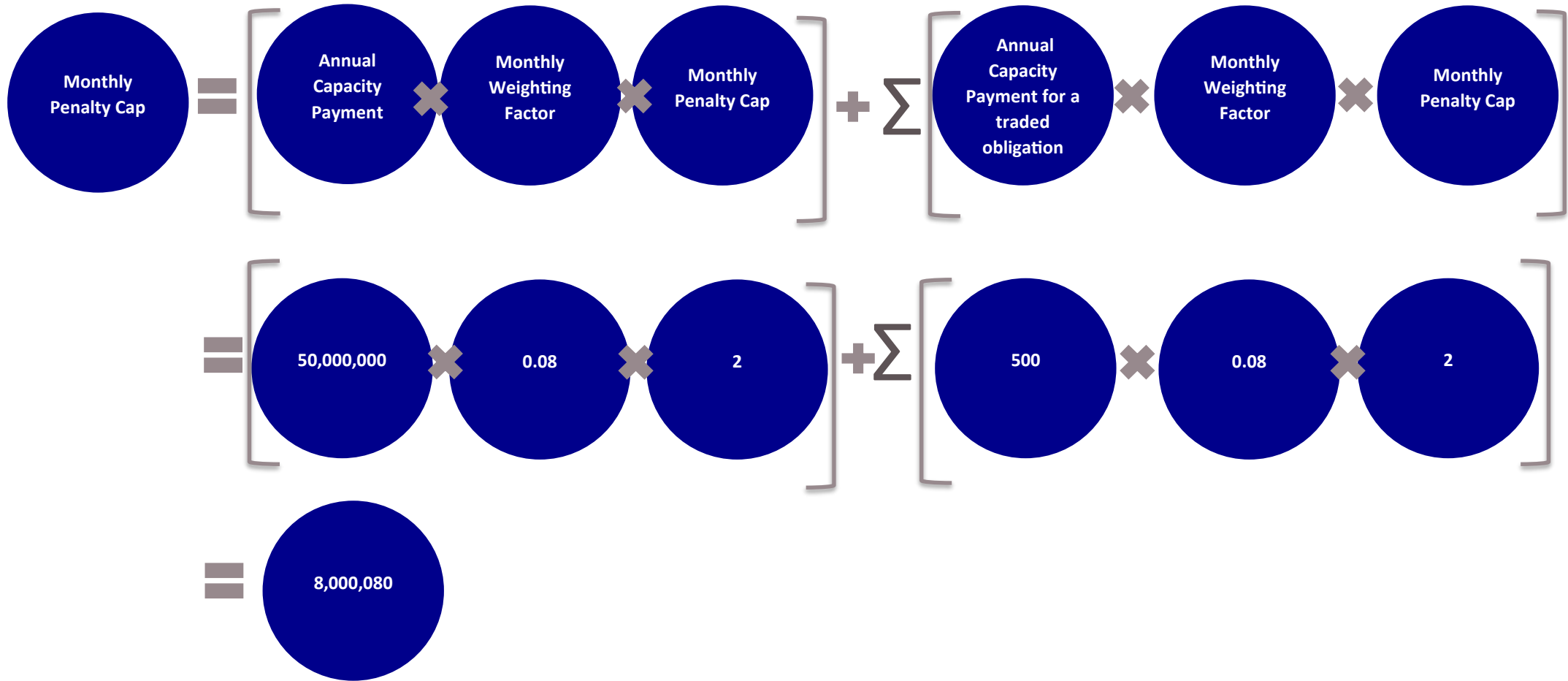
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Monthly Penalty Cap

The calculation below shows how the Monthly Penalty Cap is calculated.

Penalties are capped at 200% of the CMU's Capacity Payments for the relevant month. If there are multiple months during a Delivery Year in which Capacity Market Stress Events occur, then penalties are capped at 100% of the annual Capacity Payments.

This example assumes that the monthly weighting for Capacity Payments is 8%.



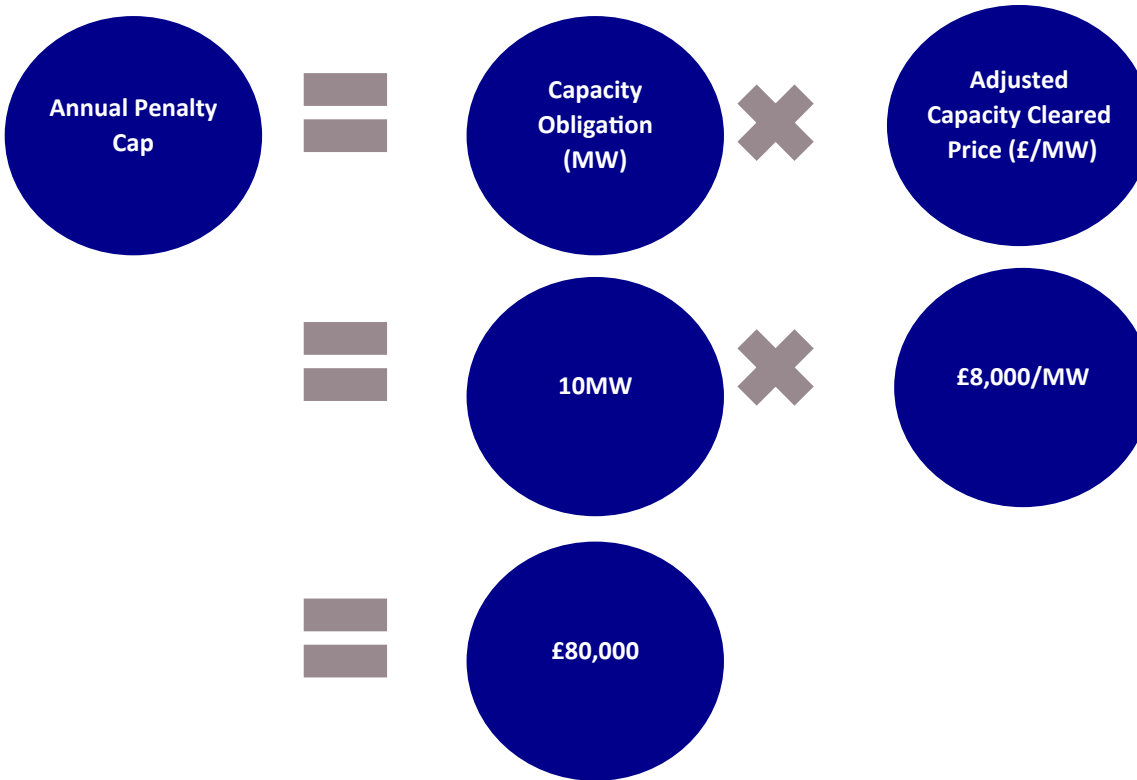
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Annual Penalty Cap

The calculation below shows how the Annual Penalty Cap is calculated.

Penalties are capped at 200% of the CMUs Capacity Payments for the relevant month. If there are multiple months during a Delivery Year in which Stress Events occur, then penalties are capped at **100% of annual payments**.

On this basis the annual cap would be met if the Capacity Market Stress Events cumulatively last more than 96 Settlement Periods and the CMU delivered 50% of its Capacity Obligation in each Settlement Period, as per the previous calculation.



8.4 Example 2 – CMU with multiple Capacity Obligations

The following example and its calculations relate to a single CMU which holds multiple Capacity Obligations for the relevant Delivery Year.

Settlement Period Penalty

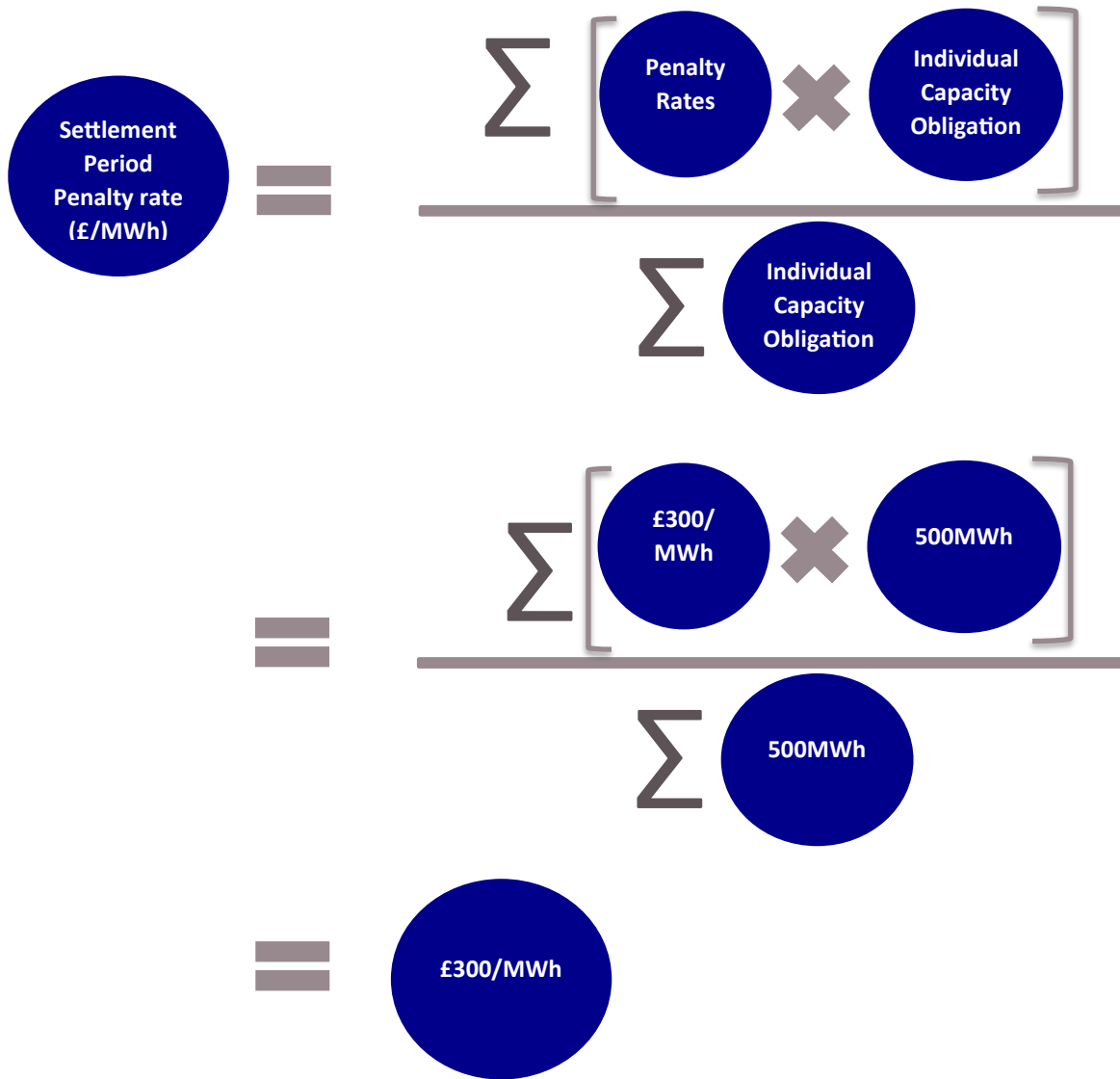
To calculate the Settlement Period Penalty for a CMU with multiple obligations, we first need to work out the individual Capacity Obligation Penalty Rate. This is the Capacity Cleared Price for each obligation, which will need to be adjusted for inflation for T-4 auctions, divided by 24.

It is important to note that all Capacity Payments, and by extension penalty rates, are adjusted by CPI for the relevant Delivery Year. Therefore the Capacity Payments and penalties may differ in Nominal terms from the auction clearing price.

After we have the Individual Capacity Obligation Penalty Rates, they will need to be summed as per the below to calculate the Settlement Period Penalty Rate for a CMU.

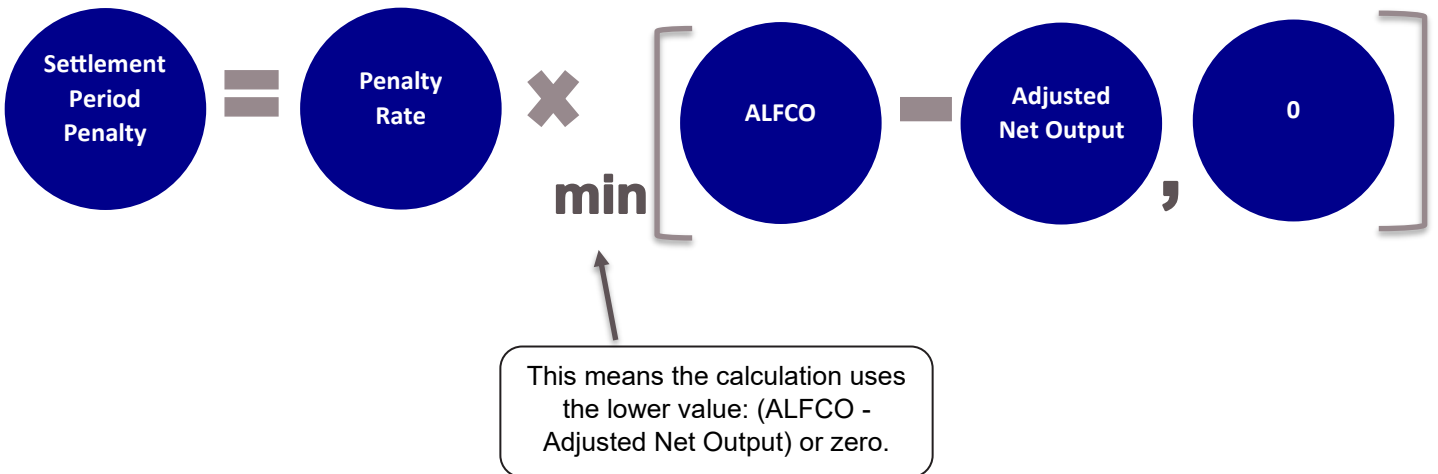
The following values are used in the example calculation:

- Sum of Penalty Rates for each Obligation = £300/MWh
- Sum of all individual Capacity Obligations = 500MWh



Settlement Period Penalty

To calculate the total Settlement Period Penalty, we first need to work out if the ALFCO is greater than the Adjusted Net Output. If the ALFCO is greater, then use the ALFCO. If the ALFCO is lower, then use the calculation below:



8.5 Timings for penalty invoices and payments

35 working days following a month in which a Capacity Market Stress Event occurs, EMRS will issue Penalty Invoices to Capacity Providers for the total amount that they are required to pay. Following this, Capacity Providers have 5 working days to pay their Penalty Fees.

Any non-payment of penalties will be deducted from a Capacity Provider's Capacity Payments. If the penalty is greater than a Capacity Provider's payments for that month then the remainder of the penalty will be taken out of future months' Capacity Payments.

8.6 Over-Delivery Payments

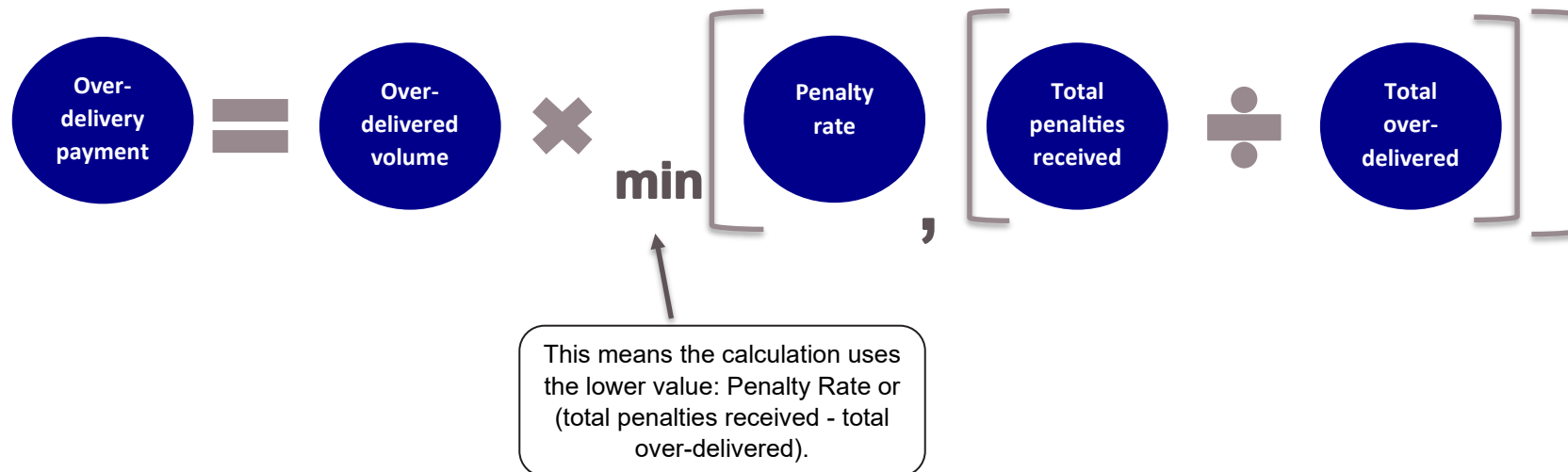
While Capacity Providers are penalised for under-delivering, they can also be rewarded for over-delivering.

After all under-delivery penalties in the relevant Delivery Year have been recovered, the under-delivery “pot” is then redistributed across the CMUs that over-delivered against their ALFCO. Over-delivery payments are calculated and paid at the end of the Delivery Year (rather than monthly like Penalty Fees).

These over-delivery payments are determined using the minimum of the penalty rate and the total penalty payments received during the Delivery Year as a proportion of the total over-delivered volume.

The amount of these penalties cannot be estimated in advance due to the large number of variables and could in practice be zero.

Capacity Providers will receive Credit Notes for any monies owed for Over-Delivery by the 42nd Working day following the end of the Delivery Year.



9. Data Quality

9.1 Mock Stress Event Reporting

The purpose of the Mock Stress Event (MSE) Reporting is to enable Capacity Providers to understand their initial position had a Stress Event occurred. Capacity Providers do **not** need to provide any additional information to EMRS as EMRS will use already submitted metered data.

When an MSE Reporting takes place during the Delivery Year, Capacity Providers will receive an email containing an Output spreadsheet based on the format of the Capacity Volume Register (CVR). Section 3.6 of this document and WP48 – Volume Reallocation²⁹ contain the definitions of the column headers that will be used.

The MSE Reporting is focused on data quality to support the Output and Penalty Calculations. Capacity Providers will be able to validate the data to ensure accuracy with the aim of enhancing knowledge and awareness. Please note it does not include Volume Reallocation.

As an MSE is not an actual System Stress Event, we have applied some exceptions which are listed on the EMRS Website Mock Stress Event Reporting Page³⁰.

Further information on the Mock Stress Event Reporting can be found:

- EMRS Website Mock Stress Event Reporting Page³¹
- FAQ Document³²
- WP48 – Volume Reallocation³³

9.2 Data quality for settlement

Data alerts are issued to Capacity Providers to provide notification of data quality issues:

Data Quality Initiative	Description
Metering Aggregation Rule alerts	<p>Automated Email alert issued if a CMU is missing Aggregation Rules for the current Delivery Year.</p> <p>Capacity Payments are withheld if payments are not setup.</p> <p>Aggregation Rules are required to enable Metered Volume to be received and to demonstrate you have delivered your Capacity Obligation during a Stress Event. If data is not available, this will lead to Penalty Charges.</p>
Missing Metered Volume alerts: HHDA Metering Pathway (Non-BMU CMUs with settlement meters)	<p>Automated email alerts issued where a CMU is missing metered volumes for the current Delivery Year.</p> <p>The accurate submission of metered volumes data is critical to:</p> <ul style="list-style-type: none"> • Demonstrate you have delivered your Capacity Obligation during a Stress Event. If data is not available, this will lead to Penalty Charges. • Support you in completing your Satisfactory Performance Days and/or Extended Performance obligations.
Missing Metered Volume alerts: Self-submission metering pathway (Non-BMU CMUs with non-settlement meters)	<p>Automated email alert issued where a CMU is missing metered volumes for the current Delivery Year.</p> <p>The accurate submission of metered volumes data is critical to:</p>

²⁹ <https://www.emrsettlement.co.uk/publications/working-practices/>

³⁰ <https://www.emrsettlement.co.uk/change/latest-changes/mock-system-stress-event-reporting/>

³¹ <https://www.emrsettlement.co.uk/change/latest-changes/mock-system-stress-event-reporting/>

³² <https://www.emrsettlement.co.uk/document/latest-changes/faq-mock-system-stress-event-reporting/>

³³ <https://www.emrsettlement.co.uk/publications/working-practices/>

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Data Quality Initiative	Description
	<ul style="list-style-type: none">• Demonstrate you have delivered your Capacity Obligation during a Stress Event. If data is not available, this will lead to Penalty Charges.• Support you in completing your Satisfactory Performance Days and/or Extended Performance obligations.
Data Default Notice – missing metered volume HHDA Metering Pathway (Non-BMU CMUs with settlement meters)	Data Default Notice issued for non-BMU CMUs with settlement meters for a CMU that has not provided sufficient metered data. The Settlement Body will withhold any further payments until such point as you have provided this missing data. We will continue to issue credit notes, with any credits accruing on your account, but no further payments will be made.

10. Disputes

10.1 Disputes in the Capacity Market

The ESC is the Settlement Body for the Capacity Market scheme. Its functions, as set out in the Rules and Regulations include:

- Calculating, collecting, and paying monies to and from Electricity Suppliers and Capacity Providers.
- Reconciling payments.
- Calculating and collecting Credit Cover from Electricity Suppliers and Capacity Market auction participants.
- Managing the disputes process relating to metering tests or the calculation of payments by ESC.

Two types of disputes, as outlined the table below, can be raised by Capacity Providers or energy Suppliers following the metering tests and the calculation of payments by the ESC.

Dispute type	Raised by	Raised due to	Timescales	Notes
Payment calculation disputes	Capacity Provider or energy Supplier	Disagreement over EMRS Capacity Payment calculation	Must be raised to ESC within 28 days of notice of payment calculation	ESC may seek independent advice
Metering test disputes	Capacity Provider	Disagreement over ESC's determination that the provider has failed a metering test	Must be raised to ESC within 5 working days of receiving a notice of a failed metering test	If unresolved, it will be referred by ESC to an expert for determination

Detailed guidance on the dispute resolution process is available on the Low Carbon Contracts Company website,³⁴ where the Electricity Settlements Company publishes the full procedures for both Payment Disputes and Metering Test Disputes.³⁵ The Electricity Capacity Regulations³⁶ establish the governance framework for disputes, while the Capacity Market Rules (Schedule 5: Expert Determination Procedure)³⁷ set out the detailed rules that must be followed when managing disputes.

10.2 Payment calculation disputes

Capacity Providers may raise disputes to ESC relating to the calculation or determination of:

- The Adjusted Load Following Capacity Obligation (ALFCO)
- The net output or adjusted net output of the generator during the delivery period
- Capacity payments, settlement charges or over-delivery payments
- Termination fees or the amount of credit cover to be drawn down by the ESC

This guide focuses on provision of information for Capacity Providers; therefore, supplier disputes are not covered.

³⁴ <https://www.lowcarboncontracts.uk/resources/guidance-and-publications/capacity-market-dispute-resolution/>

³⁵ https://lcc-web-production-eu-west-2-files20230703161747904200000001.s3.amazonaws.com/documents/Capacity_Market_Dispute_Resolution_20230206.pdf

³⁶ <https://www.legislation.gov.uk/ukdsi/2014/9780111116852/regulation/74>

³⁷ <https://assets.publishing.service.gov.uk/media/686e4bcf2cfe301b5fb67905/informal-consolidation-cm-rules-2025.pdf>

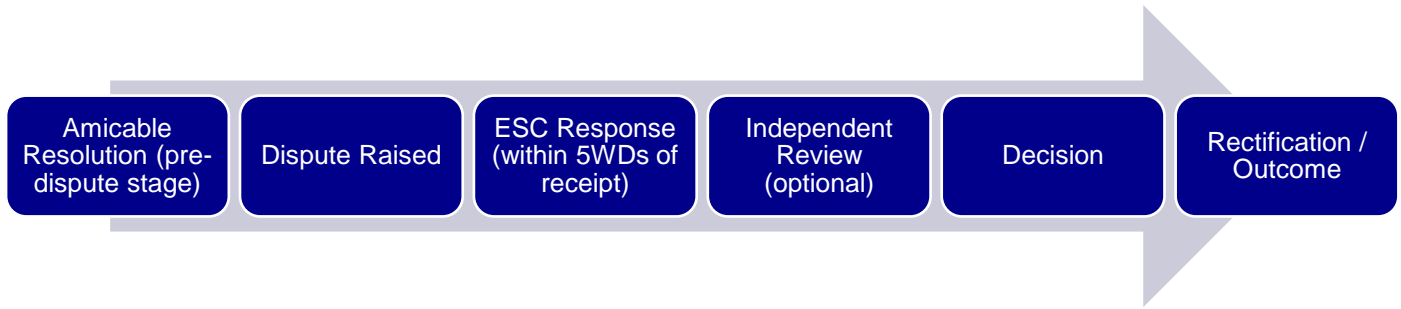


Figure 10: High-level payment calculation disputes process

Amicable Resolution (pre-dispute stage)

- If you have a query on a calculation or determination, first contact EMRS (contact@emrsettlement.co.uk) to try to resolve it before payments are processed.

Raising a Dispute

- If unresolved and within the scope of the Regulations:
- Submit a Disputes Notice to ESC (accounts@electricitysettlementscompany.uk).
- Notice must:
 - Set out the issue and the outcome sought.
 - Be signed by an authorised signatory.
 - Be submitted within 28 days of receiving the original calculation/determination.
 - Late submissions will not be accepted.

ESC Response (within 5 WDs of receipt)

- ESC confirms whether:
 - The Disputes Notice is rejected (procedural non-compliance), OR
 - ESC is considering the dispute.
- If accepted, ESC issues a Procedure & Timetable for review, which may include requests for information, documents, or representations.

Independent Review (optional)

- ESC may appoint an independent person to assist in assessing the dispute.
- Parties may be invited to provide further representations.

Decision

- ESC must determine the dispute:
 - Within 28 days of receiving the Disputes Notice, OR
 - Within 28 days of receiving the independent person's report (if appointed).
- ESC notifies the disputing party of its determination and reasons in writing.

Rectification / Outcome

- If ESC finds an error:
 - EMRS issues a corrected calculation and revised invoice/credit note.
- If ESC finds no error:
 - Original payment obligation stands, and any late payments must include interest.

10.3 Metering Disputes

The ESC is responsible for conducting metering tests and the resolution of metering test disputes, with support of EMRS

- A Metering Test is conducted by ESC to determine whether CMUs have an 'Approved Metering Solution'.
 - If the metering arrangements pass the test, the ESC issues a Metering Test Certificate to the CMU.
 - If the CMU fails the test, the ESC issues a Metering Test Failure Notification.
 - Following receipt of the notification, the Capacity Provider must notify ESC within 5 working days whether it accepts the decision. If it does not accept this decision there is a dispute

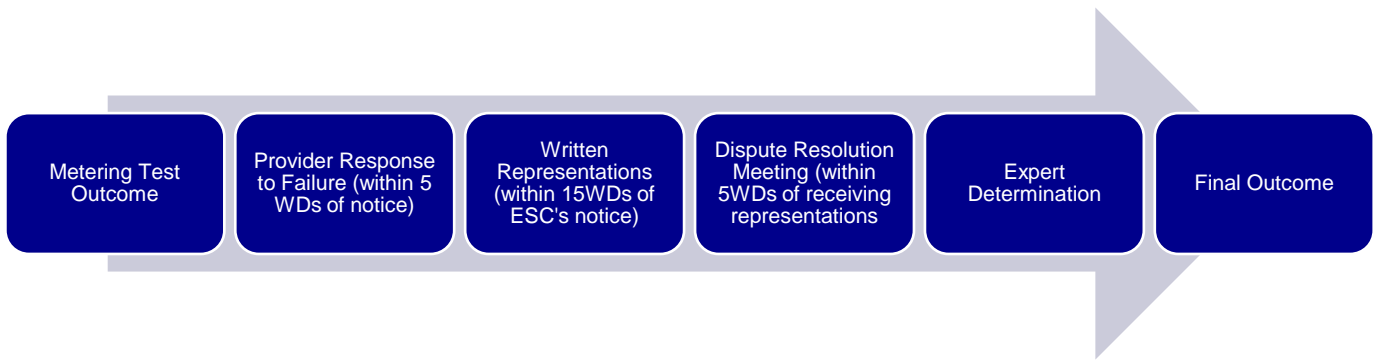


Figure 11: High level metering disputes process

Please note that, as with payment calculation disputes, Capacity Providers are encouraged to contact EMRS on contact@emrsettlement.co.uk as soon as possible in order to discuss and resolve queries in relation to metering before raising a dispute.

- Within **15 WDs** of receiving a Metering Test failure notice, the Capacity Provider must inform ESC why it believes a certificate should have been issued, supported by evidence from an independent metering specialist.
- Within **5 WDs** of receiving the representations, ESC will convene a meeting with the Capacity Provider and the independent metering specialist to attempt resolution.
- If **no resolution** is reached, the dispute is referred to an independent expert, whose determination is **final and binding**.
- Following the expert's decision:
 - ESC issues a Metering Test Certificate, or
 - The Capacity Provider must **submit and implement a rectification plan**.

11. System Restoration

The System Restoration **does not** constitute a System Stress Event.

System Restoration is the procedure to recover from a total or partial shutdown of the GB Transmission System that has caused an extensive loss of supplies.

The process involves isolated power stations being started individually and gradually reconnected to form an interconnected system.

If NESO decides to suspend the market under Grid Code Section G,³⁸ Capacity Providers:

- Cannot release their obligation.
- Are therefore not required to meet their ALFCO (rule 8.5.1 (b)).

Capacity Providers will **not** be penalised for failing to release their obligation while the emergency situation continues

12. Acronyms and Definitions

A list of acronyms and definitions can be found in the Glossary³⁹ on the EMRS website.

13. Frequently Asked Questions (FAQs)

FAQs on Capacity Market Stress Event can be found in the Stakeholder Support for Capacity Providers webpage⁴⁰ on the EMRS website.

14. Need more information?

If you would like any additional information or support, please contact EMR Settlement Limited by email at contact@emrsettlement.co.uk or call us on 020 7380 4333.

³⁸ <https://www.neso.energy/industry-information/codes/grid-code-gc>

³⁹ <https://www.emrsettlement.co.uk/glossary/>

⁴⁰ <https://www.emrsettlement.co.uk/stakeholder-support/stakeholder-support-capacity-providers/>

15. Appendices

15.1 Appendix 1 - Definition of a System Operator Instigated Demand Control Event

Exceptions to definition of a System Operator Instigated Demand Control event (as per Capacity Market Rule 8.4.2).

Definition of a System Operator Instigated Demand Control Event

“System Operator Instigated Demand Control Event” means where:

- a) the System Operator gives a Demand Reduction Instruction and/or an Emergency Manual Disconnection Instruction to one or more DNOs; and/or
- b) an Automatic Low Frequency Demand Disconnection takes place, except where one or more of the following applies:
 - i such action results from one or more faults in the GB Transmission System or a Distribution Network; or
 - ii the System Operator issues a Bid-Offer Acceptance(s) to reduce output or an Emergency Instruction(s) to reduce output to the extent that the Volume of that Bid-Offer Acceptance(s) or that Emergency Instruction(s) exceeds the Volume of the Demand Reduction Instruction and/or an Emergency Manual Disconnection Instruction issued or the Automatic Low Frequency Demand Disconnection that took place.
 - iii the action has an associated System Management Action Flag attached in accordance with Section Q6 (Submission of Data by the Transmission Company) of the BSC.

15.2 Appendix 2 – Information before a Stress Event

Before a System Stress Event occurs, a range of notifications and warnings may be issued. Some will explicitly relate to Capacity Market Stress Events, while others may act as early indicators that such an event could occur.

2-14 days ahead: rising wholesale prices and Day-Ahead (DA) margin data may an increased likelihood of a System Stress Event. This data is available on the Elexon Insights Solution website.⁴¹

During the **day ahead** and within day: NESO may issue several notifications that provide further signals of a potential System Stress Event. These include:

- Day and Day Ahead (DA) margins,
- The DA de-rated margins,
- Published Loss of Load Probabilities (LoLP), and
- Warming instructions for generators (instructions to be generating within a certain timeframe).

There may also be several operational warnings:

- Capacity Market Notices (CMNs)
- Electricity Margin Notices (EMNs)
- High Risk of Demand Reduction (HRDR) warnings, and
- Demand Control Imminent (DCI) warnings.

In **real time**, the National Energy System Operator will announce a Demand Control Event. This is defined in Section 3.2.

⁴¹ <https://bmrs.elexon.co.uk/>

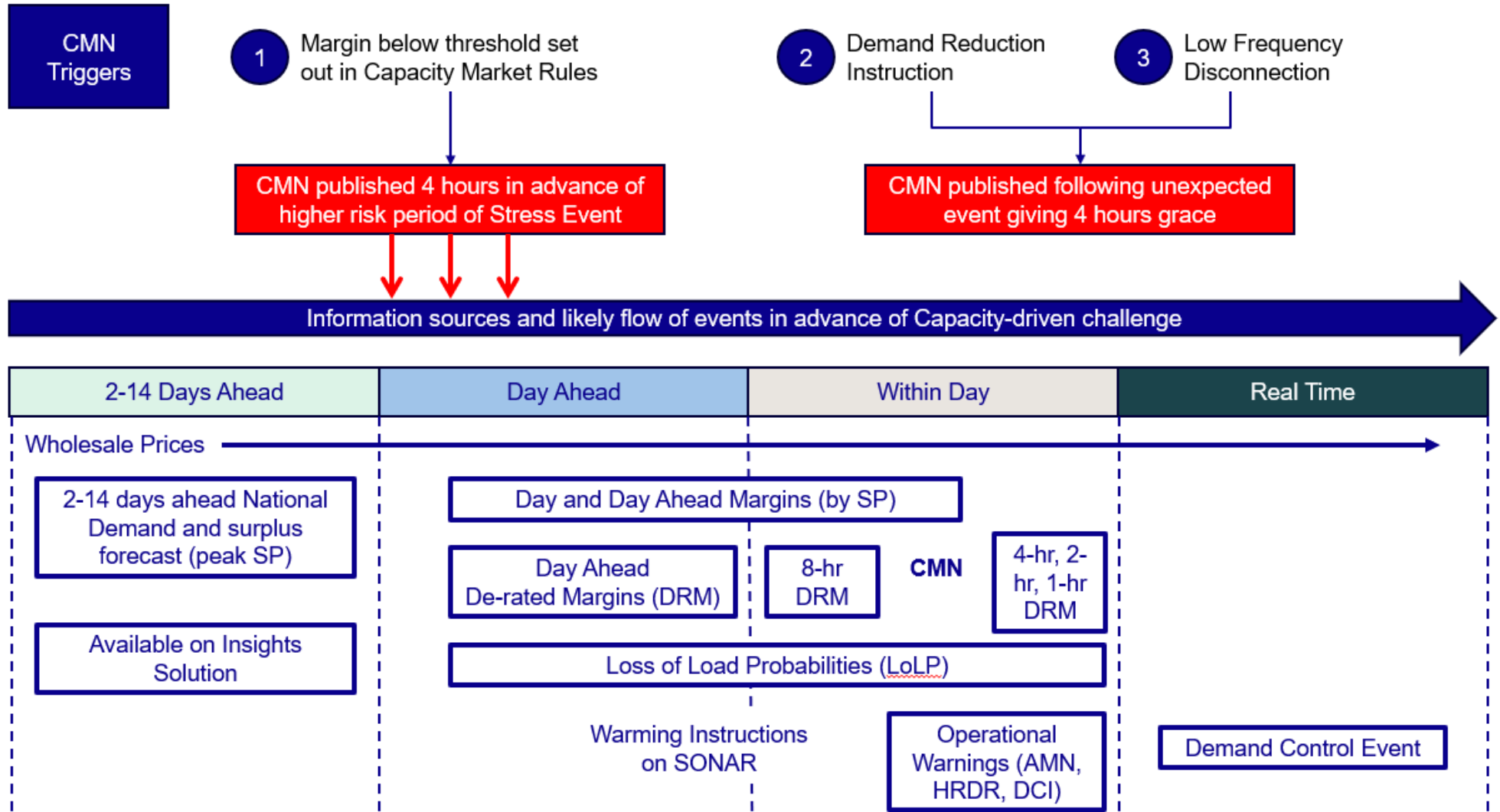


Figure 12: Events and communications leading up to a potential System Stress event