

## What is the Dispatch Compliance Monitor?

AEMO utilises the Dispatch Compliance Monitor (DCM) to compare the MW output of Registered Facilities with their Dispatch Instructions, as required by clause 2.13.7 of the WEM Rules.

## Why is it needed?

If the output of a Registered Facility deviates from Dispatch Instructions, it may impact on Power System Security.

## How does it work?

The DCM calculates the ‘Projected Quantity’ of the Registered Facility on a minute-by-minute basis. This calculation is based on:

- Previous Dispatch Instruction
- Current Dispatch Instruction
- How many seconds of the current Dispatch Interval have passed \*rounded down to the nearest 10 seconds.

$$\text{Projected Quantity} = \text{Previous Dispatch Instruction} + ((\text{Check Date/Time}^* - \text{Dispatch Interval}) / \text{Dispatch Interval Length}) \times (\text{Current Dispatch Instruction} - \text{Previous Dispatch Instruction})$$

The ‘Projected Quantity’ is then used to calculate an ‘Expected Operating Range’ considering the facility’s Tolerance Range and any cleared Regulation quantities:

$$\begin{aligned}
 \text{Expected Operating Range LOWER} &= \text{Projected Quantity} - \text{Regulation Lower quantity} - \text{Tolerance Range} \\
 \text{Expected Operating Range UPPER} &= \text{Projected Quantity} + \text{Regulation Raise quantity} + \text{Tolerance Range}
 \end{aligned}$$

If the NETT SCADA MW Output of a Registered Facility is outside the Expected Operating Range, the DCM records the deviation and issues a non-compliance notice to the Market Participant via email.

### DCM Inputs

- Previous Dispatch Instruction.
- Current Dispatch Instruction.
- NETT SCADA MW Output.
- Snapshot timestamp to the nearest 10 seconds.
- Tolerance Range.
- Regulation Lower/Raise quantities.
- Linear ramp between Previous and Current Dispatch Instruction.

### What is not included

- Contingency Reserve Raise/Lower.
- Droop movements.
- On a Facility tripping, the defined logic will only reset to zero after the facility re-bids within the Real Time Market.

**Example:** DCM calculation for 11:51

**Dispatch Instructions:**

Time	Dispatch Target
11:45	29.95
11:50	0

**Time of compliance check:** 11:51:36

**Tolerance Range:** 12

**Regulation Lower quantity:** 2

**Regulation Raise quantity:** 2

=	Previous Dispatch Instruction (Target)	+	*rounded down to the nearest 10 seconds ((Check Date/Time	-	Dispatch Interval)	/	Dispatch Interval Length)	X	(Current Dispatch Instruction (Target)	-	Previous Dispatch Instruction (Target))	
=	29.95	+	((11:51:36*	-	11:50:00)	/	300)	X	(0	-	29.95))	
Projected Quantity	=	29.95	+	((11:51:30	-	11:50:00)	/	300)	X	(0	-	29.95))
=	29.95	+	(90	-		/	300)	X	(0	-	29.95))	
=	20.965											

=	Projected Quantity	-	Regulation Lower quantity	-	Tolerance Range	
Expected Operating Range LOWER	=	20.965	-	2	-	12
=	6.965					

=	Projected Quantity	+	Regulation Raise quantity	+	Tolerance Range	
Expected Operating Range UPPER	=	20.965	+	2	+	12
=	34.965					

**The NETT SCADA MW Output of this Facility should be between 6.965 and 34.965 MW at the time of the compliance check.**

<p>WEM <a href="#">AEMO   System operations</a></p>	<p><b>Dispatch Monitoring</b></p> <p>AEMO’s automated monitoring process indicates that you may be in breach of your obligations under WEM Market Rule 7.10.1</p>
<p>Time:</p>	<p>30/07/2024 11:51:36 AM +08:00</p>
<p>Resource:</p>	<p>FACILITY_NAME_SF1 ID: (12345)</p>
<p>Compliant Generating Range:</p>	<p>6.965 to 34.965</p>
<p>Current Generation:</p>	<p>36.123</p>
<p>Target Generation:</p>	<p>0</p>
<p>Please return the resource to its compliant generating range as soon as possible.</p> <p>Please only contact the AEMO Control Room if <b>FACILITY_NAME_SF1</b> is experiencing operational issues which are impacting its output.</p> <p>If you are currently in direct manual communication with AEMO (i.e. have received a Dispatch Instruction for the current interval by phone), please ignore this message.</p> <p>Thank you.</p>	
<p><i>Automatically generated email from AEMO’s Dispatch Compliance Monitor</i> <i>Please do not respond to this address</i></p>	

## Notes

The Lower Tolerance Range does not apply to a Semi-Scheduled/Non-Scheduled Facility given the intermittent nature of its fuel source.

The calculated Linear Ramp Rate is capped at the Maximum Ramp Rate within Standing Data.

To further understand and recreate the DCM logic please review the Excel Worksheet DCM Example noting that results may vary from that of AEMO due to the timing in which NETT SCADA MW Output data is retrieved and the Projected Quantity is calculated.

Queries in relation to the DCM should be forwarded to [wa.operations@aemo.com.au](mailto:wa.operations@aemo.com.au) including updating the recipient of non-compliance notifications.