



Schedule of reliability settings

25 February 2021

Purpose of this schedule

The National Electricity Rules (NER) require the Australian Energy Market Commission (AEMC) to calculate the market price cap (MPC) and the cumulative price threshold (CPT) to apply on and from 1 July each year. The AEMC is to complete the calculation by 28 February each year and to publish its calculations on its website as part of a schedule of reliability settings. This schedule is published in accordance with these requirements.

MPC and CPT for the 2021-22 financial year

Applying the requirements under the NER, the AEMC has calculated the MPC and CPT values to apply for the 2021-22 financial year. The commencement of five minute settlement on 1 October 2021 will amend the definition of a trading interval from a 30 minute period to a five minute period and will alter the calculation for the cumulative price threshold. As such, the AEMC has published two calculations, one that is based on the current formula and applies from 1 July 2021-30 September 2021 and the other that applies on and from 1 October 2021-30 June 2022.

The current values for 2020-21 financial year, and the adjusted values for 1 July 2021-30 September 2021, are shown as follows:

	From 1 July 2020 to 30 June 2021	From 1 July 2021 to 30 September 2021
MPC	\$15,000 / MWh	\$15,100 / MWh
CPT	\$224,600	\$226,500

The adjusted values for 1 October 2021-30 June 2022, are shown as follows:

	From 1 October 2021 to 30 June 2022
MPC	\$15,100 / MWh
CPT	\$1,359,100

Details of the calculations are set out in this schedule.

Requirements under the National Electricity Rules

The requirements for the AEMC to undertake the calculation of the MPC are set out under clause 3.9.4(c) of the NER. Clauses 3.9.4(d) and (e) also set out the specific formulae that must be used by the AEMC.

The requirements for the AEMC to undertake the calculation of the CPT are set out under clause 3.14.1(d) of the NER. Clauses 3.14.1(e) and (f) also set out the specific formulae that must be used by the AEMC, noting the amendments to clause 3.14.1(e) in the *Five minute settlement Rule 2017 No. 15* and *Delayed implementation of five minute and global settlement Rule 2020 No. 10* to take effect from 1 October 2021.

Calculation of the MPC

The method and formula with which the MPC is to be indexed is set out under clauses 3.9.4(d) and (e) of the NER. The AEMC's calculation, in accordance with these provisions, is outlined below.

In accordance with information published by the ABS, the Reliability Settings Index values are:¹

	Year c (2020)	Year b (2010)
Q ₁	116.6	95.2
Q ₂	114.4	95.8
Q ₃	116.2	96.5
Q ₄	117.2	96.9
Sum	464.4	384.4

The following formula is used to calculate the MPC:

$$MPC^x = BV^{MPC} \times \frac{(Q_1^c + Q_2^c + Q_3^c + Q_4^c)}{(Q_1^b + Q_2^b + Q_3^b + Q_4^b)}$$

Where:

MPC is the market price cap in dollars per MWh

x is the financial year for which the MPC is being calculated, which in this case is the 2021-22 financial year

BV^{MPC} is \$12,500/MWh (being the value of the market price cap prior to 1 July 2012)

Q₁ to *Q₄* are the values of the Reliability Settings Index² for each of the four quarters of years *c* and *b* (as the case may be) as at five months before the start of year *x*

c is the calendar year commencing 18 months before the start of year *x*, which in this case is calendar year 2020

b is the calendar year 2010

Clause 3.9.4(e)(1) of the NER also requires the calculated MPC value to be rounded to the nearest \$100/MWh.

¹ Full details of the ABS data are set out in Attachment 1.

² In accordance with clause 3.9.4(d) of the NER, the Reliability Settings Index is the All groups, Australia Consumer Price Index (CPI) found at Index Numbers, All groups, Australia, in Tables 1 and 2 of the CPI, Australia, published by the Australian Bureau of Statistics (ABS) for the relevant quarter, except where that index ceases to be published or is substantially changed, in which case the Reliability Settings Index will be such other index as is determined by the AEMC as suitable.

Applying these values and requirements, the MPC for 2021-22 is:³

$$\begin{aligned} \text{MPC}^{2021-22} &= \$12,500/\text{MWh} \times \frac{464.4}{384.4} \\ &= \$15,101.46/\text{MWh} \text{ (rounded to two decimal points)} \\ &= \$15,100/\text{MWh} \text{ (rounded to the nearest \$100/MWh)} \end{aligned}$$

Calculation of the CPT

The method and formula with which the CPT is to be indexed is set out under clauses 3.14.1(e) and (f) of the NER. AEMC's calculation in accordance with these provisions is outlined below.

In accordance with information published by the ABS, the Reliability Settings Index values are:⁴

	Year c (2020)	Year b (2010)
Q ₁	116.6	95.2
Q ₂	114.4	95.8
Q ₃	116.2	96.5
Q ₄	117.2	96.9
Sum	464.4	384.4

The following formula is used to calculate the CPT:

$$CPT^x = BV^{CPT} \times \frac{(Q_1^c + Q_2^c + Q_3^c + Q_4^c)}{(Q_1^b + Q_2^b + Q_3^b + Q_4^b)}$$

Where:

CPT is the cumulative price threshold in dollars

x is the financial year for which the CPT is being calculated, which in this case is the 2021-22 financial year

BV^{CPT} is:

- \$187,500 under the current Rules to apply until 30 September 2021 (being the value of the cumulative price threshold prior to 1 July 2012), and
- \$1,125,000 under the Rules to apply from the commencement of five minute settlement on 1 October 2021 (being 6 times the value of the cumulative price threshold prior to 1 July 2012 calculated on a 30-minute basis).⁵

³ Clause 3.9.4(e)(2) of the NER requires that, if the MPC calculated under this clause for year *x* is less than the MPC for the preceding year (year *x* - 1), then the MPC for year *x* will be the value of the MPC for year *x* - 1. In this case, as the calculated value of \$15,100/MWh is greater than MPC²⁰²⁰⁻²¹ (ie, \$15,000/MWh), MPC²⁰²¹⁻²² is \$15,100/MWh.

⁴ Full details of the ABS data are set out in Attachment 1.

⁵ In accordance with the amendments to clause 3.14.1(e) of the NER for the *Five minute settlement Rule 2017 No. 15* and *Delayed implementation of five minute and global settlement Rule 2020 No. 10*.

Q_1 to Q_4 are the values of the Reliability Settings Index⁶ for each of the four quarters of years c and b (as the case may be) as at five months before the start of year x , which are the same as those for the MPC calculation above

c is the calendar year commencing 18 months before the start of year x , which in this case is calendar year 2020

b is the calendar year 2010

Clause 3.14.1(f)(1) of the NER also requires the calculated CPT value to be rounded to the nearest \$100.

Applying these values and requirements, the CPT to apply from 1 July 2021-30 September 2021 is:⁷

$$\begin{aligned} CPT^{2021-22} &= \$187,500 \times \frac{464.4}{384.4} \\ &= \$226,521.85 \text{ (rounded to two decimal points)} \\ &= \$226,500 \text{ (rounded to the nearest \$100)} \end{aligned}$$

Applying these values and requirements, the CPT to apply from 1 October 2021-30 June 2022 is:⁸

$$\begin{aligned} CPT^{2021-22} &= \$1,125,000 \times \frac{464.4}{384.4} \\ &= \$1,359,131.11 \text{ (rounded to two decimal points)} \\ &= \$1,359,100 \text{ (rounded to the nearest \$100)} \end{aligned}$$

⁶ In accordance with clause 3.14.1(e) of the NER, the Reliability Settings Index is the All groups, Australia CPI found at Index Numbers, All groups, Australia, in Tables 1 and 2 of the CPI, Australia, published by the ABS for the relevant quarter, except where that index ceases to be published or is substantially changed, in which case the Reliability Settings Index will be such other index as is determined by the AEMC as suitable.

⁷ Clause 3.14.1(f)(2) of the NER requires that, if the CPT calculated under NER clause 3.14.1(e) for year x is less than the CPT calculated under this clause for year $x - 1$, then the CPT for year x will be the value of the CPT for year $x - 1$. In this case, as the calculated value of \$226,500 is greater than $CPT^{2020-21}$ with BV^{CPT} of \$187,500 (i.e. \$224,600), $CPT^{2021-22}$ is \$226,500 for 1 July 2021-30 September 2021.

⁸ Clause 3.14.1(f)(2) of the NER requires that, if the CPT calculated under NER clause 3.14.1(e) for year x is less than the CPT calculated under this clause for year $x - 1$, then the CPT for year x will be the value of the CPT for year $x - 1$. In this case, as the calculated value of \$1,359,100 is greater than $CPT^{2020-21}$ with BV^{CPT} of \$1,125,000 (i.e. \$1,347,700), $CPT^{2021-22}$ is \$1,359,100 for 1 October 2021-30 June 2022.

Attachment 1 – CPI values published by the Australian Bureau of Statistics

ALL GROUPS CPI, Index numbers(a)

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Weighted average of eight capital cities
2010									
March	95.2	95.2	95.2	94.6	95.6	95.4	95.4	95.3	95.2
June	95.6	95.8	95.9	95.3	96.5	95.8	96.2	95.6	95.8
September	96.3	96.3	96.9	96.2	96.9	96.8	97.2	96.3	96.5
December	96.7	96.9	97.4	96.5	97.0	96.9	97.1	96.7	96.9
2020									
March	117.4	117.8	116.2	115.8	113.5	117.2	111.8	115.5	116.6
June	114.7	115.7	113.6	114.6	112.1	115.6	109.0	112.8	114.4
September	116.8	116.7	116.2	115.7	114.1	116.7	110.8	115.4	116.2
December	118.0	118.4	117.5	116.5	113.0	117.6	111.5	116.3	117.2

a) Unless otherwise specified, reference period of each index: 2011-12 = 100.0.

Source: TABLES 1 and 2 CPI: All Groups, Index Numbers and Percentage Changes.xls
Released 27/01/2021

<https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/dec-2020/640101.xls>