

ATTACHMENT A – DOCUMENTATION CHANGES

Changes are shown against v27.0 of the RMP (NSW/ACT). Blue underline means addition and ~~red-strikeout~~ means delete.

Only clauses to which changes have been proposed are reproduced below. Where large sections of a clause are unaffected by the proposed changes, they have been omitted in the below and replaced with a vertical ellipsis (:).

Extract from Retail Market Procedures (NSW/ACT)

1.2 Definitions and Interpretation

1.2.1 Definitions

The words and phrases set out below have the meanings set out opposite them when used in these Procedures. Defined terms are intended to be identified in these Procedures by italicising them, but failure to italicise a defined term does not affect its meaning unless otherwise indicated.

:

alternative summer period The period starting seven days earlier and ending seven days later than the *summer period*.

:

alternative winter period The period starting seven days earlier and ending seven days later than the *winter period*.

:

occupancy factor In relation to a *delivery point* supplied by a *volume boundary meter* or a *volume boundary hybrid meter*, the deemed average *occupancy of medium-density or high-rise premises eligible for volume-boundary-meter and volume-boundary-hybrid-meter Type 2 estimations and substitutions in accordance with Attachment 2 and Attachment 3 respectively.*

:

summer period The period between 1 October and 31 March within the current 12-month period.

temperature sensitivity factor In relation to a *delivery point*, the incremental gas consumption at that *delivery point*; that is, the MJ per EDD calculated in accordance with Attachment 2 and Attachment 3.

:

volume boundary hybrid meter A *gas meter* which measures the appliance-specific consumption (excluding centralised hot water systems) of a medium-density or high-rise premises containing multiple dwellings.

volume boundary meter

A gas meter which measures the total or appliance-specific consumption of a medium-density or high-rise premises containing multiple dwellings for which centralised hot water system(s) are the dominant appliance type.

⋮

winter period

The period between 1 April and 30 September within the current 12-month period.

⋮

A2.1 Gas Meters

(a) Criteria and EDD

A *Network Operator* must undertake an *estimated meter reading* in the circumstances required under clause 3.5 of these Procedures.

On each gas day *AEMO* must use its reasonable endeavours to calculate a New South Wales “effective degree day” or “EDD” value and a Australian Capital Territory EDD value for use in the calculation of Type 1 estimations prescribed in paragraph (b), and *publish* those EDDs by midnight on the next *business day* after the day to which the EDD applies.

The EDD calculations will be the EDD (NSW or ACT), calculated in accordance with clause A1.3, applicable to the *network section* to which the *meter* is connected.

(b) Type 1 Estimation Methodology (Gas non-daily metered)

A *Network Operator* must use this estimation methodology where the *delivery point* in respect of which the *estimated meter reading* is to be undertaken has at least 12 months’ consumption history.

A *Network Operator* must utilise the calculated daily *base load* and the calculated usage per effective degree day for the relevant *delivery point* as follows:

- (i) The *Network Operator* must estimate the *consumed energy* for a *basic meter* based on the weather measured in effective degree days and the *base load* and temperature sensitivity factor as follows:

$$\text{Consumed energy} = (\text{BL} \times \text{P}) + (\text{TSF} \times \Sigma \text{EDD})$$

Where:

- *consumed energy* is the estimated *consumed energy* over the *reading period*;
- BL is the *base load*;
- P is the number of days in the *reading period*;
- TSF is the temperature sensitivity factor; and
- ΣEDD is the sum of the effective degree days over the *reading period*.

- (ii) The *base load* is derived from the smallest *consumed energy* measured in a *reading period* during the ~~summer period~~ summer period (defined as between

~~1 October and 31 March within the current 12 month period~~) according to the following formula:

$$BL = SE / PSE$$

Where:

- BL is the *base load*;
- SE is the smallest *consumed energy* (in terms of average daily consumption) between two consecutive *scheduled read dates* during the ~~summer period~~*summer period*; and
- PSE is the number of days in the *reading period* during the ~~summer period~~*summer period*.

- (iii) The *temperature sensitivity factor* applies a weather impact to the *base load* by reference to the *effective degree day* for each day in the *reading period*. The *temperature sensitivity factor* is derived from the difference between:
- (A) the largest *consumed energy* measured in a *reading period* during the ~~winter period~~*winter period (between 1 April and 30 September within the current 12 month period)*; and
- (B) the smallest *consumed energy* (in terms of average daily consumption) between two consecutive *meter readings* measured in a *reading period* during the ~~summer period~~*summer period*,

divided by the sum of the effective degree days for the *reading period* over which the largest *consumed energy* value was derived. This is represented by the following formula:

$$TSF = \max \{0, (LE - (BL \times PLE)) / \Sigma EDD (LE)\}$$

Where:

- TSF is the temperature sensitivity factor;
- LE is largest *consumed energy* between two consecutive scheduled *reads* during the ~~winter period~~*winter period*;
- BL is the *base load*;
- PLE is the number of days in the *reading period* during the ~~winter period~~*winter period*; and
- $\Sigma EDD (LE)$ is the sum of the effective degree days over the *reading period* during the ~~winter period~~*winter period*.

- (iv) The *Network Operator* must use the latest available effective degree days *published* by AEMO. Where the effective degree day for a *reading period* for a day is not available, the *Network Operator* must use the effective degree day for the previous day.

- (iv)(v) For non-daily read meters which have at least 12 months' consumption history and are ineligible for Type 1 calculation of base load and temperature sensitivity factor due to reading periods not being wholly within defined

summer period and winter period, a Network Operator may use readings in the alternative summer period for the purposes of calculating a base load and readings in the alternative winter period for the purposes of calculating the temperature sensitivity factor.

(c) Type 2 Estimation Methodology (Gas non-daily metered)

A Network Operator must use this estimation methodology where a *delivery point* in respect of which the *estimated meter reading* is to be undertaken has less than 12 months' consumption history except when:

- the delivery point is metered by a volume boundary meter or a volume boundary hybrid meter; or
- the delivery point has a residential customer characterisation and is metered by both a gas meter and a hot water meter.

A Network Operator must use the categories of customers in accordance with the customer characterisation as follows:

	NSW Metropolitan	NSW Non-metropolitan
Residential	R1	R2
Business	B1	B2
ACT Metropolitan		
Residential	R1	
Business	B1	

(i) A Network Operator must calculate the average *base load* and average temperature sensitivity factor for each *customer characterisation* as follows:

(A) The average *base load* is:

- the sum of the *base load* consumption for all customers within that Network Operator's network which have that *customer characterisation* and 12 months or more consumption history; divided by
- the number of *delivery points* within that Network Operator's network which have that *customer characterisation* and 12 months or more consumption history.

(B) The average temperature sensitivity factor is:

- the sum of temperature sensitivity factors for all customers within that Network Operator's network which have that *customer characterisation* and 12 months or more consumption history; divided by

- the number of *delivery points* within that *Network Operator's network* which have that *customer characterisation* and 12 months or more consumption history.
- (ii) A *Network Operator* must determine the estimated usage for a *delivery point* by applying the relevant average *base load* and average temperature sensitivity factor for that *delivery point* to each day occurring during the period to which the *estimated meter reading* relates. A *Network Operator* must use the latest available effective degree days *published* by AEMO. Where the effective degree day for a *reading period* for a day is not available, the *Network Operator* must use the effective degree day for the previous day.
- (iii) A *Network Operator* must apply the applicable *average heating value* and pressure correction factors to the estimated *consumed energy* to determine the estimated *flow* for the period and the relevant *estimated meter reading*.

(c1) Type 2 Estimation Methodology (Gas non-daily metered – volume boundary, ≠ volume boundary hybrid meters and gas meters with a hot water meter attached to same delivery point)

- (i) A *Network Operator* must use this estimation methodology where a *delivery point* in respect of which the *estimated meter reading* is to be undertaken has less than 12 months' consumption history and:
- the *delivery point* is metered by a *volume boundary meter* or a *volume boundary hybrid meter*, or
 - the *delivery point* has a residential *customer characterisation* and is metered by both a *gas meter* and a *hot water meter*.

Note: A *Network Operator* will calculate average per dwelling *base load* and *temperature sensitivity factors* for each of the following *gas meter* types in the following ways:

<u>Delivery point gas meter types</u>	<u>Average per dwelling BL and TSF factors calculated according to average for</u>	<u>Calculated under clause</u>
<u><i>volume boundary meter</i></u>	<u>centralised hot water meters</u>	<u>A2.1(c1)(v)-(vi)</u>
<u><i>volume boundary hybrid meter</i></u>	<u>gas meters associated with a hot water meter</u>	<u>A2.1(c1)(vii)-(viii)</u>
<u><i>gas meters at a delivery point with a residential customer characterisation that is metered by both a gas meter and a hot water meter</i></u>		

- (ii) A *Network Operator* must determine the estimated usage for a *delivery point* metered by a *volume boundary meter* or a *volume boundary hybrid meter* by applying the relevant *base load*, *temperature sensitivity factor* and *occupancy factor* for that *delivery point* to each day occurring within the period to which the *estimated meter reading* relates. A *Network Operator* must use the latest available effective degree days *published* by AEMO. Where the effective degree day for a *reading period* for a day is not available, the *Network Operator* must use the effective degree day for the previous day.

- (iii) A Network Operator must apply the applicable average heating value and pressure correction factors to the estimated consumed energy to determine the estimated flow for the period and the relevant estimated meter reading.
- (iv) The base load and temperature sensitivity factor for each delivery point metered by a volume boundary meter or a volume boundary hybrid meter will be determined by multiplying the number of dwellings supplied by the volume boundary meter or the volume boundary hybrid meter and the average per dwelling base load and temperature sensitivity factor applicable to the connected appliances.
- (v) The average per dwelling base load for volume boundary meters will be determined by the Network Operator as the aggregate centralised hot water master gas meter base load consumption divided by the number of individual hot water meters associated with the same dataset of master gas meters.
- (vi) The average per dwelling temperature sensitivity factor for volume boundary meters will be determined by the Network Operator as the aggregate centralised hot water master gas meter temperature sensitivity factor divided by the number of individual hot water meters associated with the same dataset of master gas meters.
- (vii) The average per dwelling base load for volume boundary hybrid meters will be determined by the Network Operator in as the aggregate base load of gas meters associated with hot water meters attached to a common delivery point divided by the number of gas meters in the same delivery point dataset.
- (viii) The average per dwelling temperature sensitivity factor for volume boundary hybrid meters will be determined by the Network Operator as the aggregate temperature sensitivity factor of gas meters associated with hot water meters attached to a common delivery point divided by the number of gas meters in the same delivery point dataset.
- (ix) The occupancy factor will have an initial value of 0.60 and be determined by the Network Operator as the aggregate consumption of volume boundary meters and volume boundary hybrid meters with less than 12 months' consumption history and actual meter readings divided by the sum of Type 2 Estimation Methodology consumption as if 100% occupied for the same delivery point dataset (subject to the calculation result being no greater than 1).
- (x) A Network Operator must review and update initial average per dwelling volume boundary meter and volume boundary hybrid meter base load and temperature sensitivity factors and occupancy factor by 30th September 2024 and then at least every 2 years thereafter.
- (xi) A Network Operator must determine the estimated usage for a gas meter at a delivery point with residential customer characterisation that is metered by both a gas meter and a hot water meter by applying the average per dwelling base load and temperature sensitivity factors calculated in sub-clauses (vii) and (viii) above for that gas meter to each day occurring in the period to which the estimated meter reading relates. A Network Operator must apply effective degree days, applicable average heating value and pressure correction factor

to derive estimated consumed energy, flow and meter readings in accordance with (ii) and (iii) above.

A3.2 Gas Meters

- (a) Type 1 Substitution Methodology (Gas non-daily metered)

A *Network Operator* must use this substitution methodology where the *delivery point* in respect of which the *substituted meter reading* is to be undertaken has at least 12 months' consumption history.

A *Network Operator* must utilise the calculated daily *base load* and the calculated usage per effective degree day for the relevant *delivery point* as follows:

- (i) The *Network Operator* must estimate the *consumed energy* for a basic *meter* based on the weather measured in effective degree days and the *base load* and temperature sensitivity factor as follows:

$$\text{Consumed energy} = (\text{BL} \times \text{P}) + (\text{TSF} \times \Sigma\text{EDD})$$

Where:

- *consumed energy* is the estimated *consumed energy* over the *reading period*;
- BL is the *base load*;
- P is the number of days in the *reading period*;
- TSF is the temperature sensitivity factor; and
- ΣEDD is the sum of the effective degree days over the *reading period*.

- (ii) The *base load* is derived from the smallest *consumed energy* measured in a *reading period* during the ~~summer period~~ summer period (defined as between 1 October and 31 March within the current 12 month period) according to the following formula:

$$\text{BL} = \text{SE} / \text{PSE}$$

Where:

- BL is the *base load*;
- SE is the smallest *consumed energy* between two consecutive scheduled *reads* during the ~~summer period~~ summer period; and
- PSE is the number of days in the *reading period* during the summer period.

- (iii) The *temperature sensitivity factor* applies a weather impact to the *base load* by reference to the effective degree day for each day in the *reading period*. The *temperature sensitivity factor* is derived from the difference between:

(A) the largest *consumed energy* measured in a *reading period* during the ~~winter period~~ (between 1 April and 30 September within the current 12 month period); and

(B) the smallest *consumed energy* between two consecutive scheduled *reads* measured in a *reading period* during the ~~summer period~~,

divided by the sum of the effective degree days for the *reading period* over which the largest *consumed energy* value was derived. This is represented by the following formula:

$$\text{TSF} = \max\{0, (\text{LE} - (\text{BL} \times \text{PLE})) / \Sigma \text{EDD (LE)}\}$$

Where:

- TSF is the temperature sensitivity factor;
- LE is largest *consumed energy* between two consecutive scheduled *reads* during the ~~winter period~~;
- BL is the *base load*;
- PLE is the number of days in the *reading period* during the ~~winter period~~; and
- Σ EDD (LE) is the sum of the effective degree days over the *reading period* during the ~~winter period~~.

(iv) The *Network Operator* must use the latest available effective degree days published by AEMO. Where the effective degree day for a *reading period* for a day is not available, the *Network Operator* must use the effective degree day for the previous day.

(iv)(v) For non-daily read meters which have at least 12 months' consumption history and are ineligible for Type 1 calculation of *base load* and *temperature sensitivity factor* due to *reading periods* not being wholly within defined *summer period* and *winter period*, the *Network Operator* may use readings in the *alternative summer period* for the purposes of calculating a *base load* and *reading periods* in the *alternative winter period* for the purposes of calculating the *temperature sensitivity factor*.

(b) Type 2 Substitution Methodology (Gas non-daily metered)

A *Network Operator* must use this substitution methodology where the *delivery point* in respect of which the *substituted meter reading* is to be undertaken has less than 12 months' consumption history except when:

- the *delivery point* is metered by a *volume boundary meter* or a *volume boundary hybrid meter*; or
- the *delivery point* has a residential *customer characterisation* and is metered by both a *gas meter* and a *hot water meter*.

A *Network Operator* must use the categories of *customers* in accordance with the *customer characterisation* ~~*Network Operator*~~ as follows:

	NSW Metropolitan	NSW Non-metropolitan
Residential	R1	R2
Business	B1	B2
	ACT Metropolitan	
Residential	R1	
Business	B1	

- (i) A Network Operator must calculate the average *base load* and average temperature sensitivity factor for each *customer characterisation* as follows:
- (A) The average *base load* is:
- the sum of the *base load* consumption for all customers within that Network Operator's network which have that *customer characterisation* and 12 months or more consumption history; divided by
 - the number of *delivery points* within that Network Operator's network which have that *customer characterisation* and 12 months or more consumption history.
- (B) The average temperature sensitivity factor is:
- the sum of temperature sensitivity factors for all customers within that Network Operator's network which have that *customer characterisation* and 12 months or more consumption history; divided by
 - the number of *delivery points* within that Network Operator's network which have that *customer characterisation* and 12 months or more consumption history.
- (ii) A Network Operator must determine the substituted usage for a *delivery point* by applying the relevant average *base load* and average temperature sensitivity factor for that *delivery point* to each day occurring during the period to which the *substituted meter reading* relates. A Network Operator must use the latest available effective degree days published by AEMO. Where the effective degree day for a *reading period* for a day is not available, the Network Operator must use the effective degree day for the previous day.
- (iii) A Network Operator must apply the applicable *average heating value* and *pressure correction factor* to the substituted *consumed energy* to derive the substituted *flow* for the period and the relevant *substituted meter reading*.

(b1) Type 2 Substitution Methodology (Gas non-daily metered – volume boundary meters, volume boundary hybrid meters, and gas meters with a hot water meter attached to the same delivery point)

(i) A Network Operator must use this substitution methodology where the *delivery point* in respect of which the *substituted meter reading* is to be undertaken has less than 12 months' consumption history and:

- the *delivery point* is metered by a *volume boundary meter* or a *volume boundary hybrid meter*,
- the *delivery point* has a residential customer characterisation and is metered by both a *gas meter* and a *hot water meter*.

Note: A Network Operator will calculate average per dwelling base load and temperature sensitivity factors for each of the following *gas meter* types in the following ways:

<u>Delivery point gas meter types</u>	<u>Average per dwelling BL and TSF factors calculated according to average for</u>	<u>Calculated under clause</u>
<u><i>volume boundary meter</i></u>	<u>centralised hot water meters</u>	<u>A3.2(b1)(v)-(vi)</u>
<u><i>volume boundary hybrid meter</i></u>	<u>gas meters associated with a hot water meter</u>	<u>A3.2(b1)(vii)-(viii)</u>
<u><i>gas meters at a delivery point with a residential customer characterisation that is metered by both a gas meter and a hot water meter</i></u>		

(ii) A Network Operator must determine the *substituted usage* for a *delivery point* metered by a *volume boundary meter* or a *volume boundary hybrid meter* by applying the relevant *base load*, *temperature sensitivity factor* and *occupancy factor* for that *delivery point* to each day occurring within the period to which the *substituted meter reading* relates. A Network Operator must use the latest available *apply effective degree days published by AEMO*. Where the effective degree day for a *reading period* is not available, the Network Operator must use the effective degree day for the previous day.

(iii) A Network Operator must apply the applicable *average heating value* and *pressure correction factors* to the *substituted consumed energy* to determine the *substituted flow* and the relevant *substituted meter reading*.

(iv) The *base load* and *temperature sensitivity factor* for each *delivery point* metered by a *volume boundary meter* or a *volume boundary hybrid meter* will be determined by multiplying the number of dwellings supplied by the *volume boundary meter* or the *volume boundary hybrid meter* and the average per dwelling *base load* and *temperature sensitivity factor* applicable to the connected appliances.

(v) The average per dwelling *base load* for *volume boundary meters* will be determined by the Network Operator as the aggregate centralised hot water master *gas meter base load* consumption divided by the number of individual *hot water meters* associated with the same dataset of master *gas meters*.

(vi) The average per dwelling *temperature sensitivity factor* for *volume boundary meters* will be determined by the Network Operator as the aggregate centralised hot water master *gas meter temperature sensitivity factor* divided by the number of individual *hot water meters* associated with the same dataset of master *gas meters*.

- (vii) The average per dwelling base load for volume boundary hybrid meters will be determined by the Network Operator as the aggregate base load of gas meters associated with hot water meters attached to a common delivery point divided by the number of gas meters in the same delivery point dataset.
- (viii) The average per dwelling temperature sensitivity factor for volume boundary hybrid meters will be determined by the Network Operator as the aggregate temperature sensitivity factor of gas meters associated with hot water meters attached to a common delivery point divided by the number of gas meters in the same delivery point dataset.
- (ix) The occupancy factor will have an initial value of 0.60 and be determined by the Network Operator as the aggregate consumption of volume boundary meters and volume boundary hybrid meters with actual meter readings and less than 12 months' consumption history divided by the sum of Type 2 Substitution Methodology consumption as if 100% occupied for the same delivery point- dataset (subject to the calculation result being no greater than 1).
- (x) A Network Operator must review and update initial average per dwelling volume boundary meter and volume boundary hybrid meter base load and temperature sensitivity factors and occupancy factor by 30th September 2024 and then at least every 2 years thereafter.
- (xi) A Network Operator must determine the substituted usage for a gas meter of a delivery point with residential customer characterisation that is metered by both a gas meter and a hot water meter by applying the average per dwelling base load and temperature sensitivity factors calculated in sub-clauses (vii) and (viii) above for that gas meter to each day occurring in the period to which the substituted meter reading relates. A Network Operator must apply effective degree days, applicable average heating value and pressure correction factor to derive substituted consumed energy, flow and meter readings in accordance with (ii) and (iii) above.