

IMPACT & IMPLEMENTATION REPORT (IIR)

Issue number	IN011/21		
Impacted jurisdiction(s)	New South Wales–Australian Capital Territory		
Proponent	Marc Flynn	Company	JGN
Affected gas market(s)	Retail	Consultation process (ordinary or expedited)	Ordinary
Industry consultative forum(s) used	GRCF	Date industry consultative forum(s) consultation concluded	Tuesday, 16 November 2021
Short description of change(s)	Baseload (BL) and temperature sensitivity factor (TSF) changes. Revised proposal.		
Procedure(s) or documentation impacted	Retail Market Procedures (NSW and ACT).		
Summary of the change(s)	Introduce a new substitution and estimation methodology for Volume Boundary Meters and Volume Boundary Hybrid Meters in the NSW/ACT retail gas market. Initiative IN011/21 was introduced following withdrawal of the original initiative IN004/20.		
IIR prepared by	Arjun Pathy	Approved by	Meghan Bibby
Date IIR published	1 December 2021	Date consultation concludes	14 January 2022
Email address for responses	grcf@aemo.com.au		
Other key contact information	arjun.pathy@aemo.com.au		



IMPACT & IMPLEMENTATION REPORT

CRITICAL EXAMINATION OF PROPOSAL

1. DESCRIPTION OF ISSUE

Jemena Gas Networks (JGN) is proposing a change to the Retail Market Procedures (RMPs) (NSW/ACT) to support improvement of the Type 2 gas meter estimation and substitution methodologies (i.e., the methodologies that apply when meters have been connected for fewer than 12 months). The proposed changes cater to two meter types—Volume Boundary (VB) meters and Volume Boundary Hybrid (VBH) meters. The changes will improve first-time billing accuracy and customer outcomes.

Currently, the Base Load and Temperature Sensitivity (BL TSF) calculations define an estimation and substitution methodology for gas meters. There are three types of calculations:

- Type 1 – 12 months reading history present: reading data is used to determine meter identification registration number (MIRN)-specific BL TSF standing data values that have billing period and Effective Degree Days applied when consumption and meter readings are estimated or substituted.
- Type 2 – fewer than 12 months reading history present: characterisation averages are used, calculated from whole-of-Type 1 population characterisation averages.
- Type 3 – agreed method between network operator and retailer (in practice, for publishing of readings within RMP time-frames, the network operator will apply an alternate method using, e.g., reading history and the retailer will perform its own validation, accept and use for billing, or raise a query or dispute).

Under Type 2, there are six characterisations or market segments:

MR	Metro Residential	Residential class within Short Term Trading Market
MB	Metro Business	Business class within Short Term Trading Market
NR	Non-Metro Residential	Residential class in regional NSW
NB	Non-Metro Business	Business class in regional NSW
AR	ACT Residential	Residential class in Canberra/ACT
AB	ACT Business	Business class in Canberra/ACT

Analysis of meter reading and estimation data by JGN shows that the current methodologies do not cater for VB and VBH meters, because these meters exhibit energy intensities and MIRN-to-MIRN variability not consistent with the six current characterisations.

1.1. Proposed changes

1.1.1. Volume Boundary (VB) and Volume Boundary Hybrid (VBH) meters

This installation type, introduced by JGN in 2015 for the medium-density / high-rise market, offers an alternative for premises with centralised hot water systems and individual-unit sub-metering / individual metering for cooktops. Embedded network operators or strata operators are typically the customers for VB meters who on-sell hot water or energy to individual customers outside of the retail gas market. Attachments B and C show a diagram of VB installation types – Pure (substantially Hot Water) and Hybrid (cooktops supplied through the VB meter with a combination of traditional centralised hot water set-up).



The current size of this market segment is 750 installations, with projected growth of 150 per year. These installations represent roughly 70,000 dwellings.

VB meters have wide variation in energy flow through the meter due to the variation in number of dwellings and appliance type behind the meter. For dwellings, the range is from 10 gigajoules (GJ) per annum to almost 1000 GJ per annum with the average around 100 GJ per annum. For appliances, per-dwelling cooking load is around 1-2 GJ per annum and for hot water is around 12-15 GJ per annum – approximately a seven-fold variation in energy-intensity. The energy recorded by VB meters is therefore neither representative of a single residential dwelling nor of a business, and it is therefore not well captured by any existing Type 2 characterisations. Attachment D illustrates the high level of variance between individual VB-metered MIRNs.

The consequence of the current RMP arrangements is that applying the NSW/ACT RMP methodology leads to inaccurate estimates and systemic underestimation of energy consumption for VB meters. Actual readings can also be unnecessarily invalidated as JGN's internal systems are expecting a lower reading. This leads to less accurate customer bills, potential revenue loss, bill shocks (when actual readings are obtained), and retailer and customer dissatisfaction with the VB product.

A further impact is that the presence of VB meter energy within the residential (or business) characterisations skews higher the characterisation average calculation. JGN notes that retailers are sometimes incorrectly classifying VB meter installations as business even though they are substantively residential in order to try and avoid inaccurate substituted / estimated reads under the existing Type 2 characterisations.

Consideration has been given to using Type 3 methodology or creating a VB characterisation average, but these options do not address the large variances in energy across the VB meter portfolio, nor improve the accuracy of characterisation averages.

Therefore, JGN proposes an alternative Type 2 estimation methodology for VB meters linked to number of dwellings, appliance type, and occupancy factor (allowing for an average of less than 100% occupancy of medium density / high-rise premises during the first year after meter activation).

JGN further proposes that VB MIRNs and meter energy be excluded from the calculations of the relevant residential- or business-characterisation average.

1.1.2. Gas meters attached to the same MIRN as hot water meter – medium density / high rise

A gas meter behind a MIRN that has a separate hot water meter will typically record cooktop / oven appliances and possibly bayonet fittings gas usage. JGN data analysis of this 250,000-meter cohort shows energy consumption in the range of 1–3 GJ per annum, which is a fraction of average consumption for residential customers without separate gas and hot-water meters for the same MIRN (around 1/10 the average consumption for residential customers without separate gas and hot-water meters for the same MIRN in NSW and 1/25 in ACT). Residential characterisation average is only representative of customers with multiple appliances, including cooking, hot water, or space heating.

Typically, 10,000 to 20,000 new meters of this type are connected each year. This will continue into the foreseeable future as the Australian Energy Regulator (AER) has decided that Centralised Hot Water with individual market-contestable sub-meters must remain an available option alongside VB meters.

Systemic overestimation of the gas meter consumption occurs where the meter reading is skipped during the first year after meter activation. Actual readings can also be unnecessarily invalidated as JGN's systems are expecting a higher consumption and reading. JGN has put in place business processes to validate and accept lower than expected actual readings.



The presence of gas meters behind MIRNs that have a separate hot water meter skews the residential characterisation average lower. JGN therefore proposes to create an alternative Type 2 methodology for MIRNs with attached gas and hot water meters to calculate Type 2 estimated consumptions and readings.

JGN also proposes to exclude the MIRNs and energy of gas meters associated with hot water meters from the residential characterisations and include in additional residential characterisations.

1.1.3. Type 1 estimations

The primary focus of this initiative is improvement of Type 2 gas meter estimations. JGN also seeks to make a minor change to the Type 1 BL (1 October to 31 March) and TSF (1 April to 30 September) reading periods defined in the RMP to improve the quality of BL and TSF standing data calculations.

This is for MIRNs with at least 12 months' consumption history where the quarterly reading dates fall on dates outside the specified periods (due to scheduled dates or route changes) that a MIRN-specific BL and TSF value cannot be calculated. A seven-day tolerance around the RMP-defined period dates would result in approximately 1,000 to 5,000 MIRNs each BL TSF twice-yearly calculation cycle being allocated MIRN-specific instead of characterisation-average BL and TSF values.

JGN proposes to seek discretion for BL calculations to use readings with a seven-day tolerance (i.e., 23 September to 7 April for TSF and 24 March to 7 October for affected quarterly-read MIRNs), which would otherwise revert to characterisation average values.

1.2. Outcome of previous consultation IN004/20

JGN initially proposed changes to the BL and TSF calculations under initiative IN004/20. In IIR feedback to IN004/20 (see Attachment H), Red / Lumo raised concerns around specific components of the drafting. In response to these concerns, the Gas Retail Consultative Forum (GRCF) agreed that a sub-group of the GRCF should redraft the RMP changes to ensure that JGN's original requirements were met without creating the concerns that Red / Lumo had identified¹. The proposed RMP changes adopted a different drafting approach, and as such, JGN withdrew the original initiative IN004/20 and AEMO raised a new initiative IN011/21 to reflect the new drafting approach. The GRCF provided comment on the new RMP changes under IN011/21 (see Attachment I). As such, AEMO believes that the RMP changes proposed in this IIR both meet JGN's initial requirements as well as address Red / Lumo's concerns raised in their feedback to the IN004/20 IIR.

1.3. Invitation to provide feedback.

Anyone wishing to make a submission for this IIR consultation is requested to use the response template provided in Attachment A. Submissions close 14 January 2022 and should be e-mailed to grcf@aemo.com.au.

2. REFERENCE DOCUMENTATION

- Retail Market Procedures (NSW and ACT) v27.0

3. OVERVIEW OF CHANGES

The key changes are:

- (1) Calculation methodology for estimation of VB meter consumption using number of dwellings, appliance type and occupancy factor.

¹ See Section 8 of the 16 September 2021 GRCF minutes: https://aemo.com.au/-/media/files/stakeholder_consultation/working_groups/retail_meetings/grcf/2021/meeting-145-minutes.pdf?la=en



- (2) Exclusion of VB and VBH meter consumption and MIRNs from existing relevant Residential characterisations.
- (3) New, separate Type 2 methodologies for VB and VBH meters, as well as for gas meters with associated hot water meters.
- (4) Introduction of seven-day allowable periods outside of current defined BL and TSF reading periods.

The proposed changes are set out in Attachment B.

JGN has provided advice to AEMO that they will most likely be able to implement these changes in Q4 2022. Therefore, if these changes are approved, AEMO will issue a Notice of Effective Date issued by June 2022. If the effective date of these changes moves outside of the Q4 2022 window, AEMO will run an IIR-only consultation exclusively on the change to the effective date.

4. OVERALL COST AND BENEFITS

From an overall benefits perspective, the proposed changes will result in fewer billing adjustments to both Network Operator and Retailer, a lower risk of revenue loss, more satisfied customers, and cost reductions from reduced complaints and subsequent investigations.

The specific benefits are:

- More accurate network and end-user billing for: VB and VBH meters, gas meters associated with a hot water meter for the same MIRN, and quarterly read customers whose reading periods fall outside the defined summer and winter periods.
- More actual readings and better-quality estimates will improve overall customer satisfaction for retailers, embedders and end-use customers in the medium density / high rise segment and enhance trust and confidence in the VB meter product.

These factors will improve overall customer satisfaction principally by reducing the number of dissatisfied customers. In turn this will reduce the costs incurred by Retailers and Network Operators in cancel-rebilling effort and in resolving customer metering and billing issues.

In terms of costs, the proposed change is not anticipated to require retailer or AEMO process or IT system change impacts. IT changes are anticipated to be limited to JGN. Neither AEMO nor any retailer disputed this assessment during pre-consultation or during the PPC consultation. JGN has provided advice that their overall system changes (IT and business process) are expected to be reasonably substantive. However, JGN believes that the benefits (tangible and intangible) will be realised over a longer-term horizon (factoring in anticipated growth of the VB meter and VBH meter market segments) and will surpass the original establishment costs.

5. MAGNITUDE OF THE CHANGES

Given that the change requires no system changes for any retailer or AEMO, and given that the changes represent a net benefit for JGN, AEMO believes the magnitude of this change to be “non-material”.

6. CONSISTENCY WITH NATION GAS RULES (NGR) AND NATIONAL GAS OBJECTIVE (NGO)

As part of the PPC consultation for IN004/20, AEMO put forward the following assessment regarding compliance with section 135EB of the National Gas Rules:



Consistency with National Gas Law (NGL) and NGR	AEMO’s view is that the proposed change is consistent with the NGL and NGR. AEMO also believes that this change is consistent with the National Energy Retail Rules (NERR). No participant raised any objections during the pre-consultation and participants will be given an opportunity during this PPC consultation to inform AEMO if they believe there is such an inconsistency.
National Gas Objective	As outlined in Section 6, AEMO’s view is that the propose change will help achieve the National Gas Objective through two mechanisms: <ol style="list-style-type: none"> 1. Improving the efficiency of the operation of the gas market via more accurate bills. 2. Improving price and quality outcomes for consumers by minimising the frustration from estimated or inaccurately estimated bills.
Any applicable access arrangements	AEMO’s view is that the proposed change is not in conflict with existing Access Arrangements. Participants will be given an opportunity during this PPC consultation to inform AEMO if they believe the proposed change is in conflict with existing Access Arrangements.

No participant submitted any opposing views in relation to AEMO’s assessment during the first-round consultation for IN004/20. One participant submitted feedback to the IN004/20 IIR highlighting a possible inconsistency between the proposed RMP changes and the NGR, but that possible inconsistency was addressed as part of the redrafted RMP changes. No participant submitted any feedback on the redrafted RMP changes that indicated they believed there was any inconsistency between the proposal and the NGR, NGO, or any applicable access arrangements. AEMO therefore believes that the above assessment is accurate with respect to the RMP changes proposed in this IIR.

7. CONSULTATION FORUM OUTCOMES

The outcomes of the previous IIR consultation (i.e., for IN004/20) are detailed in Section 1.2. All submissions to the IIR for IN004/20 supported the intent of the proposal, with Red / Lumo’s response raising some concerns only around specific drafting provisions. AEMO’s response to all IN004/20 IIR feedback is given in Attachment H.

8. SUPPORTING DOCUMENTATION

- Attachment A IIR response template
- Attachment B Documentation Changes
- Attachment C Volume Boundary Meter – “Hybrid” Installation Schematic
- Attachment D Volume Boundary Meter – “Pure” Installation Schematic
- Attachment E Volume Boundary Meter – Energy by Dwellings and Appliance Type



- Attachment F Indicative per dwelling BL, TSF and occupancy factors
- Attachment G Customer Characterisations – Current and Proposed State
- Attachment H Responses given to IN004/20 IIR
- Attachment I Responses given to redrafted RMP following IN004/20 IIR

9. SHOULD THE PROPOSED PROCEDURES BE MADE)?

Given AEMO's assessment under Section 6 of this IIR, AEMO recommends the changes proposed in Attachment B.

10. PROPOSED TIMELINES

Subject to all necessary approvals, AEMO proposes the following timeframe:

- Issue IIR on 1 December 2021.
- IIR consultation closes on Friday 14 January 2022.
- Notice of AEMO Decision issued in mid-February 2022.
- Notice of Effective Date issued by June 2022.
- Effective date in Q4 2022.



ATTACHMENT A – IIR RESPONSE TEMPLATE

The IIR response template has been attached separately to this document. There are two sections in the template:

- Section 1 seeks feedback on AEMO’s examination of the proposal in Sections 1–9 (i.e. whether AEMO has correctly captured the requirements and surrounding context of the proposal).
- Section 2 seeks feedback on the proposed RMP changes themselves (i.e., whether the drafted RMP changes accurately reflect the proposal in the IIR).

Anyone wishing to make a submission to this IIR consultation are to use this response template.

Submissions close 14 January 2022 and should be emailed to grcf@aemo.com.au.

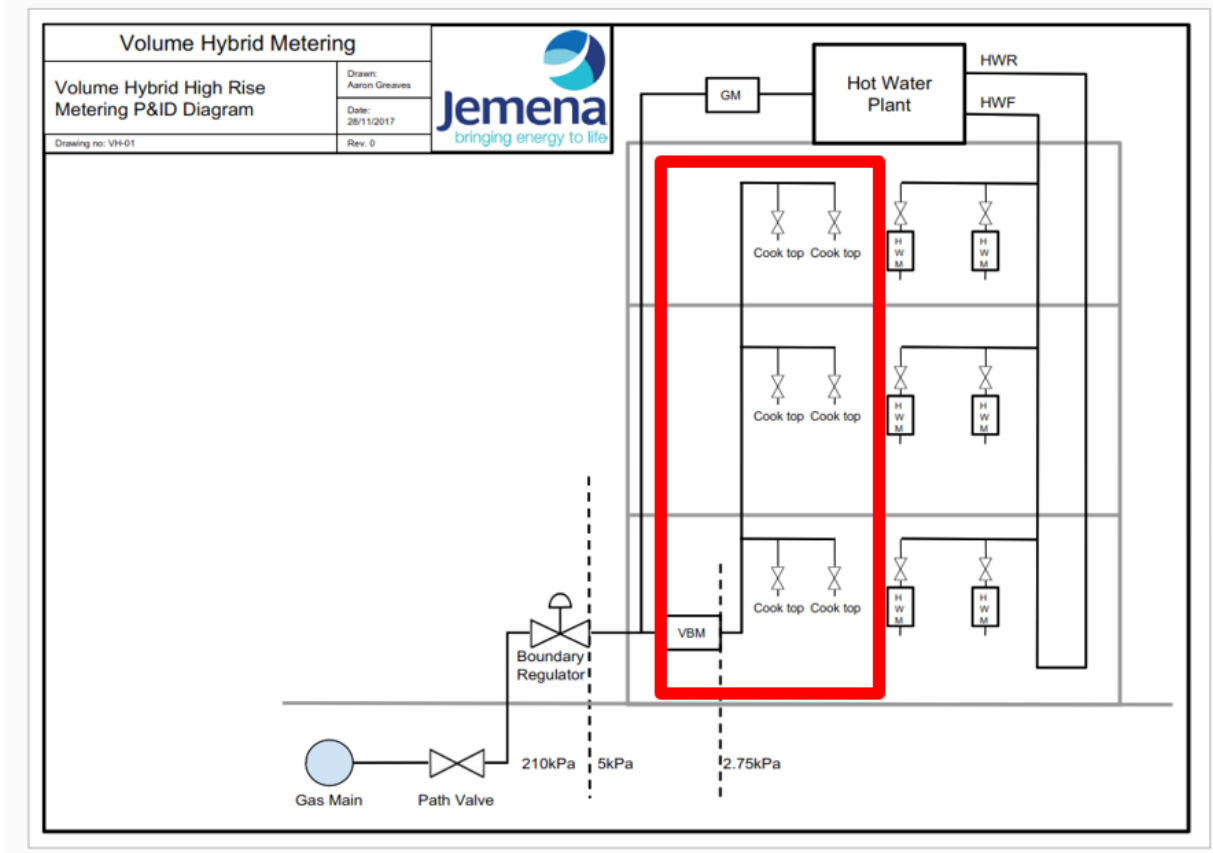


ATTACHMENT B – DOCUMENTATION CHANGES

Draft versions of the TPs showing tracked changes between the current version and the proposed changes are attached separately to this document. Blue underline means addition and ~~red-strikeout~~ means delete.

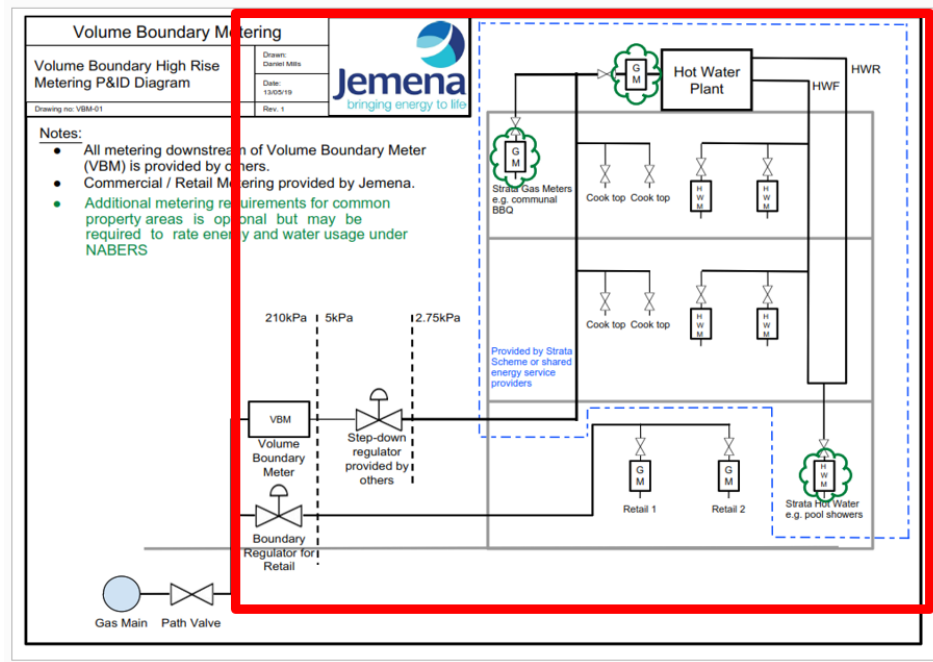


ATTACHMENT C – VOLUME BOUNDARY HYBRID





ATTACHMENT D – VOLUME BOUNDARY METER





ATTACHMENT E – ANNUAL VOLUME BOUNDARY ENERGY BY DWELLINGS AND TYPE

Forecast Annual Energy (GJ)		
VB-type	Hybrid	Pure
Dwellings	Cooking	Hot Water
10	23	142
20	47	285
50	117	712
75	175	1068
100	233	1425
200	467	2849
300	700	4274
400	934	5698
500	1167	7123
600	1401	8547
700	1634	9972
800	1867	11396
900	2101	12821
1000	2334	14245

Average VB installation



ATTACHMENT F – INDICATIVE PER-DWELLING BASE LOAD, TEMPERATURE SENSITIVITY FACTOR AND OCCUPANCY FACTORS

Indicative per dwelling Volume Boundary and Volume Boundary Hybrid Base Loads and Temperature Sensitivity Factors

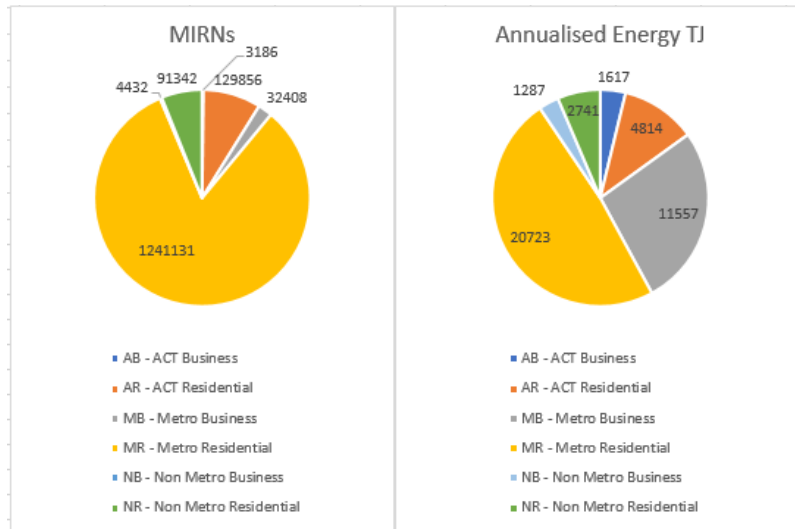
Region	Meter Type	Base Load MJ/day	Temperature Sensitivity Factor MJ/EDD
NSW	Volume Boundary	33.68	1.22
	Volume Boundary Hybrid	3.59	0.64
ACT	Volume Boundary	33.68	1.22
	Volume Boundary Hybrid	1.75	0.44

Indicative Occupancy Factor: 0.60



ATTACHMENT G – BL AND TSF CUSTOMER CHARACTERISATIONS

Current State (indicative MIRN and Energy values)



Note:

“Metro Business” is “RMP Metropolitan Business”

“Metro Residential” is “RMP Metropolitan Residential”

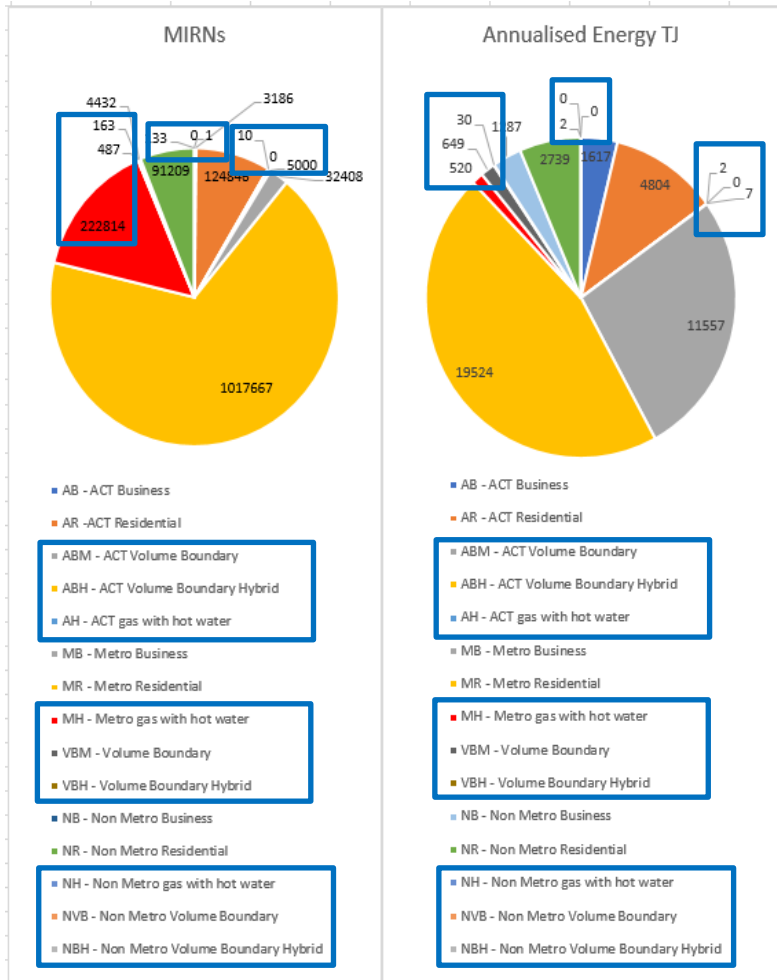
“Non Metro Business” is “RMP Non-metropolitan Business”

“Non Metro Residential” is “RMP Non-metropolitan Residential”



Proposed State (indicative MIRN and energy values)

Note: Additional characterisations beyond current RMP will be from segmentation in JGN's internal systems.





ATTACHMENT H – FEEDBACK GIVEN TO IN004/20 IIR

Section 1 - General Comments on the Impact and Implementation Report (IIR) for IN004/20.

General Comments on the Impact and Implementation Report				
<p>Sections 1 to 9 of the IIR sets out details of the proposal.</p> <p>In respect of the changes proposed for WA, does your organisation supports AEMO’s assessment of the proposal?</p> <p>If no, please specify areas in which your organisation disputes AEMO’s assessment (include IIR section reference number) of the proposal and include information that supports your organisation’s rationale for not supporting AEMO’s assessment.</p>	1	AGL	<p>AGL considers that the proposal has been well considered by both AEMO and industry.</p> <p>There are some minor additional comments proposed to ensure clarity in the procedures.</p>	<p>Since the RMP changes were substantively redrafted following the September 2021 GRCF meeting, AEMO has responded to participants’ comments on the proposal in Attachment I, where participants were provided the opportunity to comment on the reworked RMP changes under IN011/21.</p>
	2	Red / Lumo	<p>Section 6. CONSISTENCY WITH NATIONAL GAS RULES (NGR) AND NATIONAL GAS OBJECTIVE (NGO)</p> <p>On further reflection over the proposed changes, Red Energy and Lumo Energy (Red and Lumo) believe that the proposed changes are not consistent with the National Gas Rules and therefore cannot support AEMO’s assessment of the proposal because the proposed ‘Residential medium-density high-rise’ cannot be limited to residential classification. The proposed ‘Residential medium-density high-rise’ characterisation</p>	<p>See Ref #1.</p>



		<p>also encompasses customers without Volume Boundary (VB) or Volume Boundary Hybrid (VBH) meters and would impact the calculation of the BL And TSF values for these meters.</p> <p>JGN proposes to improve the quality of estimated reads for medium-density high-rise behind a Volume Boundary (VB) or Volume Boundary Hybrid (VBH) meter with the introduction of a new Estimation Methodology for BL and TSF calculation for 'medium-density high-rise'. However the proposal currently assumes that medium-density high-rise is Residential, when the characterisation of customers as Residential or Business is dependent upon the customer's use of the premises, not the fact that the meter is VB or VBH.</p> <p>While the use of the Estimation Type is restricted to VB and VBH meter types, the</p>	
--	--	---	--



		<p>characterisation itself would be applicable to other customers/meters.</p> <p>Since 'medium-density high-rise' does not require a VB or VBH meter, any medium-density high-rise site with an individual meter could readily be a Business customer. JGN's own "Portal Guide: Medium Density / High Rise Applications" indicates that individual metering is available and may be applicable to a Commercial customer. The NSWACT RMP uses the NERL for the definition of customer.</p> <p>Under the NERL, <i>residential customer</i> means a customer who purchases energy principally for personal, household or domestic use at premises.</p> <p>The NSWACT RMP then defines Customer characterisation In relation to a Customer at a delivery point, whether the Customer is:</p>	
--	--	--	--



		<p>(a) 'metropolitan' or 'non-metropolitan', where metropolitan indicates the delivery point is on the NSW-Wilton or ACTCanberra network section; and</p> <p>(b) 'residential' or 'business', where residential indicates the primary use of the consumed energy is for household purposes and business indicates the primary use of the consumed energy is for commercial purposes, as determined by the Customer's Retailer.</p> <p>There is nothing to preclude a customer in a 'medium-density high-rise' being a business customer. There is also nothing precluding the customer use behind a VB or VBH meter from being, or becoming, predominantly business-related which should then require the reclassification of the customer.</p> <p>Furthermore, while Red and Lumo agree that there may be some benefits from the intent of this proposed change, we disagree with the</p>	
--	--	--	--



			<p>assertion that a new characterisation or estimation methodology will result in more actual readings. There may be better quality reads, however, the networks are not proposing to read these meters more frequently.</p> <p>Extract from IIR</p> <p>4.OVERALL COST AND BENEFITS The specific benefits are:</p> <ul style="list-style-type: none">• More actual readings and better-quality estimates will improve overall customer satisfaction in the medium density/high rise dwellings and enhance trust and confidence in the volume boundary (VB) meter product. <p>In conclusion, Red and Lumo feel that there are too many unintended consequences to support the proposed changes.</p>	
--	--	--	--	--

Section 2 - Feedback on the documentation changes.

Retail Market Procedures (NSW/ACT)						
Item #	Who	RMP Clause #	Issue / Comment	Proposed text and	AEMO (AEMO only)	Response
				<p>Red strikeout means delete</p> <p><u>blue underline</u> means insert</p>		
3	AGL	A2.1 (b)(v)	This section relates to non-daily read meters, which AGL assumes would include any non-daily meter read cycle (eg monthly), therefore AGL suggests that the clause be amended slightly to align with the section header.	(v) For <u>non-daily</u> quarterly read meters which have at least 12 months' consumption history and are ineligible for Type 1 calculation of <i>base load</i> and <i>temperature sensitivity factor</i> due to.....	AEMO has made the requested change.	
4	AGL	A3.2(a)(v)	This section relates to non-daily read meters, which AGL assumes would include any non-daily meter read cycle (eg monthly), therefore AGL suggests that the clause be amended slightly to align with the section header.	(v) For <u>non-daily</u> quarterly read meters which have at least 12 months' consumption history and are ineligible for Type 1 calculation of <i>base load</i> and <i>temperature sensitivity factor</i> due to.....	See Ref #3.	
5	AGL		Question for clarity – can a volume boundary / volume boundary-hybrid be daily read meters or are they always non-daily read meters ?		JGN has provided advice that VB and VBH meters are always non-daily under JGN's Schedule of Reference Tariffs & Ancillary Services.	
6	AGL	A2.1(c)	As headers are generally only for convenience, should the meter read type be clearly spelt out as being 'non-daily'?	A <i>Network Operator</i> must use this estimation methodology where a <i>delivery point</i> in respect of which the <i>estimated meter reading</i> is to be undertaken has less than 12 months' consumption history and where the <i>delivery point</i> is not	See Ref #5.	

				metered by a non-daily volume boundary meter or a non-daily volume boundary hybrid meter.																												
7	AGL	A2.1 (c1)	As headers are generally only for convenience, should the meter read type be clearly spelt out as being 'non-daily';	A <i>Network Operator</i> must use this estimation methodology where a <i>delivery point</i> in respect of which the <i>estimated meter reading</i> is to be undertaken has less than 12 months' consumption history and where the <i>delivery point</i> is not metered by a non-daily volume boundary meter or a non-daily volume boundary hybrid meter.	See Ref #5.																											
8	AGL	A2.1(c1) various A3.2 (b1) various		Insert non-daily against volume boundary and volume boundary hybrid	See Ref #5.																											
9	Red Lumo	A2.1	'medium-density high-rise' is not a defined term and cannot be restricted to Residential classification. We note that there are meters that could be both residential or businesses. There are too many unintended consequences for us to support at this time.	<p>(c) Type 2 Estimation Methodology (Gas non-daily metered)</p> <table> <thead> <tr> <th></th> <th>NSW metro</th> <th>NSW</th> </tr> </thead> <tbody> <tr> <td>Nonmetropolitan</td> <td></td> <td></td> </tr> <tr> <td>Residential</td> <td>R1</td> <td>R2</td> </tr> <tr> <td>Residential medium-density high-rise</td> <td>R3</td> <td>R4</td> </tr> <tr> <td>Business</td> <td>B1</td> <td>B2</td> </tr> <tr> <td></td> <td colspan="2">ACT metropolitan</td> </tr> <tr> <td>Residential</td> <td>R1</td> <td></td> </tr> <tr> <td>Residential medium-density high-rise</td> <td>R3</td> <td></td> </tr> <tr> <td>Business</td> <td>B1</td> <td></td> </tr> </tbody> </table>		NSW metro	NSW	Nonmetropolitan			Residential	R1	R2	Residential medium-density high-rise	R3	R4	Business	B1	B2		ACT metropolitan		Residential	R1		Residential medium-density high-rise	R3		Business	B1		See Ref #1.
	NSW metro	NSW																														
Nonmetropolitan																																
Residential	R1	R2																														
Residential medium-density high-rise	R3	R4																														
Business	B1	B2																														
	ACT metropolitan																															
Residential	R1																															
Residential medium-density high-rise	R3																															
Business	B1																															

10	Red Lumo	A3.2	<p>'medium-density high-rise' is not a defined term and cannot be restricted to Residential classification. We note that there are meters that could be both residential or businesses. There are too many unintended consequences for us to support at this time.</p>	<p>(c) Type 2 Estimation Methodology (Gas non-daily metered)</p> <table border="0"> <tr> <td></td> <td style="text-align: center;">NSW metro</td> <td style="text-align: center;">NSW</td> </tr> <tr> <td colspan="3">Nonmetropolitan</td> </tr> <tr> <td>Residential</td> <td style="text-align: center;">R1</td> <td style="text-align: center;">R2</td> </tr> <tr> <td>Residential medium-density high-rise R3</td> <td style="text-align: center;">R3</td> <td style="text-align: center;">R4</td> </tr> <tr> <td>Business</td> <td style="text-align: center;">B1</td> <td style="text-align: center;">B2</td> </tr> <tr> <td colspan="3">ACT metropolitan</td> </tr> <tr> <td>Residential</td> <td style="text-align: center;">R1</td> <td></td> </tr> <tr> <td>Residential medium-density high-rise R3</td> <td></td> <td></td> </tr> <tr> <td>Business</td> <td style="text-align: center;">B1</td> <td></td> </tr> </table>		NSW metro	NSW	Nonmetropolitan			Residential	R1	R2	Residential medium-density high-rise R3	R3	R4	Business	B1	B2	ACT metropolitan			Residential	R1		Residential medium-density high-rise R3			Business	B1		See Ref #1.
	NSW metro	NSW																														
Nonmetropolitan																																
Residential	R1	R2																														
Residential medium-density high-rise R3	R3	R4																														
Business	B1	B2																														
ACT metropolitan																																
Residential	R1																															
Residential medium-density high-rise R3																																
Business	B1																															

ATTACHMENT I – FEEDBACK GIVEN TO DRAFT RMP CHANGES FOR IN011/21

General Comments on the RMP Changes			
Ref #	Participant	Participant Comments	AEMO Response
11	Red / Lumo	Red Energy and Lumo Energy (Red and Lumo) support the IN011/21 BL and TSF Factors initiative which has replaced IN004/20. There are a few minor suggested amendments below.	AEMO notes Red / Lumo’s support for the proposal. AEMO has provided response to the specific additional comments below.

Retail Market Procedures (NSW/ACT)						
Item #	Who	RMP Clause #	Issue / Comment	Proposed	text and	AEMO (AEMO only) Response
12	JGN	A3.2(a)(v)	In Substitution A3.2 (a) (v) the drafting needs to be made consistent with Estimation A2.1 (b) (v) – replace “reading periods between 24 March and 7 October” with “readings in the alternative winter period”.	(iv) <u>(v)</u> For quarterly 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 summer and winter period winter periods, the Network Operator may use readings in the alternative summer period between 23 September and 7 April for the purposes of calculating a base load and reading periods between 24 March and 7 October for the purposes of calculating the temperature sensitivity factor.	Red strikeout means delete blue underline means insert	AEMO has made the requested change.

				load and reading periods between 24 March and 7 October readings in the <i>alternative winter period</i> for the purposes of calculating the a temperature sensitivity factor.	
13	JGN	A2.1(a)(v)	Also replace “the” with “a” in Estimation A2.1 (a) (v)		AEMO has made the requested change.
14	JGN	A3.2(b1)(ix)	In Substitution A3.2 (b1) (ix) make consistent with Estimation A2.1 (c1) (ix)	'...actual <u>meter</u> readings divided by the sum of Type 2 Substitution Methodology consumption...' (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 eligible for Type 2 Substitution Methodology with actual <u>meter</u> readings 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).	AEMO has made the requested change.
15	JGN	A3.2(a)(iii)	Make “winter period” as italics in Substitution A3.2 (a) (iii) consistent with Estimation A2.1 (b) (iii)	Correct drafting in A2.1 (b) (iii)	AEMO has made the requested change.

				<p>TSF = $\max(0, (LE - (BL \times PLE)) / \Sigma EDD (LE))$</p> <p>Where:</p> <ul style="list-style-type: none"> • TSF is the temperature sensitivity factor; • LE is largest <i>consumed energy</i> between two consecutive scheduled reads during the <i>winter period</i>; • BL is the <i>base load</i>; • PLE is the number of days in the <i>reading period</i> during the <i>winter period</i>; and • $\Sigma EDD (LE)$ is the sum of the effective degree days over the <i>reading period</i> during the <i>winter period</i>. <p>Drafting to be corrected in A3.2 (a) (iii)</p> <p>TSF = $\max(0, (LE - (BL \times PLE)) / \Sigma EDD (LE))$</p> <p>Where:</p> <ul style="list-style-type: none"> • TSF is the temperature sensitivity factor; • LE is largest <i>consumed energy</i> between two consecutive scheduled reads during the <i>winter period</i>; • BL is the <i>base load</i>; • PLE is the number of days in the <i>reading period</i> during the <i>winter period</i>; and • $\Sigma EDD (LE)$ is the sum of the effective degree days over the <i>reading period</i> during the <i>winter period</i>. 	
16	Red / Lumo	A3.2 Gas Meters (a)(v)	The new definition of " alternative winter period " should apply here, not the dated period; periods between 24 March and 7 October	(v) For quarterly 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 readings in the alternative winter period periods between 24 March and 7 October for the purposes of calculating the temperature sensitivity factor.	See Ref #12.

17	Red / Lumo	A2.1 Gas Meters (c1)(ix)	<p>There seems to be a space missing at the end of the clause between 'than' and '1'.</p> <p>It is unclear how a VB or VBH meter can be eligible for Type 2 Estimation Methodology but contribute an actual meter reading for the calculation of the Type 2 Estimation Methodology, unless we're referring to other VB or VBH meters with less than 12 months consumption that have actual meter readings?</p>	<p>(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 eligible for Type 2 Estimation Methodology 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).</p>	AEMO has made the requested change.
18	Red / Lumo	A3.2 Gas Meters (b1)(ix)	<p>The term <i>actual readings</i> should be amended to <i>actual meter readings</i> for consistency,</p> <p>There seems to be a space missing at the end of the clause between 'than' and '1', and</p> <p>It is unclear how a VB or VBH meter can be eligible for Type 2 Substitution Methodology but contribute an actual meter reading for the calculation of the Type 2 Substitution Methodology unless we're referring to other VB or VBH meters with less than 12 months consumption</p>	<p>(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 eligible for Type 2 Substitution Methodology with less than 12 months' consumption history and actual meter readings 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).</p>	See Ref #17.

			that have actual meter readings?		
--	--	--	----------------------------------	--	--