Jemena Gas Networks (NSW) Ltd

Tariff Variation Notice

2021-22 reference tariffs

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Tariff Variation Notice

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Abbreviations

2015 AA	Access arrangement, JGN's NSW gas distribution networks, 1 July 2015 – 30 June 2020 (Incorporating revisions required by AER Remade Decision), published by the AER in February 2019.
2020 AA	Access arrangement, JGN's NSW gas distribution networks, 1 July 2020-30 Jun 2025, published by the AER in June 2020.
ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
AER Final Decision	AER Final Decision - JGN access arrangement 2020 - Approved Access Arrangement for Jemena Gas Networks (NSW) Ltd 2020-25 - Clean
A_t	Automatic Adjustment Factor
CPI	Consumer Price Index
C_t	Carbon Cost Factor
DC	Demand Capacity
DCFR	Demand Capacity – First Response
DMT	Demand Major End Customer Throughput
DMTFR	Demand Major end Customer Throughput – First Response
DT	Demand Throughput
JGN	Jemena Gas Networks (NSW) Ltd
L_t	Licence Fee Factor
PT_t	Pass through Factor
T_t	Relevant Tax Factor
TVN	Tariff Variation Notice
UAG	Unaccounted for Gas
VB	Volume Boundary
VI	Volume Individual
VRT	Volume Residential Distributed Generation Technology

1. Introduction

1.1 Overview

On 5 June 2020 the Australian Energy Regulator (**AER**) approved revisions to Jemena Gas Networks (NSW) Ltd (**JGN**) access arrangement (**2020 AA**) to apply for the period from 1 July 2020 to 30 June 2025.[1] The 2020 AA describes the reference services that JGN offers, sets out (in Schedule 2) the initial reference tariffs that apply to those services from 1 July 2020, and includes a mechanism for variation of tariffs annually, effective 1 July.

The 2020 AA requires that JGN submit its proposed reference tariffs to the AER for approval on or before 15 April each year. Unless it extends the time in accordance with the 2020 AA, the AER then has 30 Business Days to assess whether JGN's proposed reference tariffs are compliant.[2]

This Tariff Variation Notice (**TVN**):

- provides JGN's proposed reference tariffs for the 2021-22 financial year (effective from 1 July 2021)
- demonstrates how these proposed 2021-22 reference tariffs comply with the tariff variation mechanism in clause 3.2 of the 2020 AA, including the side constraint
- sets out the calculation of the 2021-22 automatic adjustment factor in accordance with schedule 3 of the 2020 AA, and applies this factor in calculating 2021-22 proposed reference tariffs—this includes licence fee and unaccounted for gas (**UAG**) true-ups for 2018-19 and 2019-20
- contains no determined pass through amounts or automatic adjustments for relevant tax or carbon costs.

1.2 Submission structure and 2020 AA compliance

JGN has structured this submission to demonstrate compliance with each relevant part of clause 3 and 4 of the 2020 AA:

- section 2—tariff classes (section 4 of the 2020 AA)
- section 3—variation notice (section 3.6 of the 2020 AA)
- section 4—annual tariff variation mechanism (section 3.2 of the 2020 AA).

1.2.1 Pricing model

JGN's reference tariff model (**Attachment A**) provides the mathematical proof that JGN's proposed 2021-22 reference tariffs comply with relevant aspects of the 2020 AA.

The model demonstrates that for 2021-22, JGN has updated its reference tariffs using:

- CPI of 0.86%
- an X factor of 4.54% (2 decimal places), which incorporates an updated cost of debt value
- verified gas quantity inputs for financial year t-2 (2019-20)
- The automatic adjustment factor, that reflects cost true-ups for licence fees and UAG costs.

[1] The Access Arrangement: JGN's NSW gas distribution networks, 1 July 2020 – 30 June 2025, published 5 June 2020. The 2020 AA is available at http://www.aer.gov.au/ or http://www.jemena.com.au/.

[2] JGN 2020 AA, clause 3.8.

1.3 Submission values and terminology

This submission employs the following standards:

- unless otherwise indicated, all prices are expressed in $2021-22.
- for the purpose of relevant clauses and formulae in the 2020 AA as applicable to this TVN:
  - *financial year t* is the 2021-22 financial year ending on 30 June 2022
  - *financial year t-1* is the 2020-21 financial year ending on 30 June 2021
  - *financial year t-2* is the 2019-20 financial year ending on 30 June 2020
- a reference to the AA or a clause in the AA is a reference the 2020 AA (or a clause within the 2020 AA)—references to the 2015 AA will be clearly identified as such.

2. Tariff classes

This section sets out the tariff classes for JGN for 2021-22.

2.1 JGN tariff classes

JGN's tariff classes for its reference service is set out below. The tariff classes within the reference service are unchanged from those in 2020-21.

Table 2–1: JGN tariff classes

Customer Type	Tariff Class
Volume Individual (VI)	VI – Coastal VI - Country
Volume Boundary (VB)	VB – Coastal VB - Country
Volume Residential Distributed Generation Technology (VRT)	VRT-03 VRT-04 VRT-06 VRT-10
Demand Capacity (DC)	DC-1 to DC-11 DC Country
Demand Throughput (DT)	DT
Demand Capacity - First Response (DCFR)	DCFR-1 and DCFR-6
Demand Major End Customer Throughput (DMT)	DMT-01 to DMT-05
Demand Major End Customer Throughput - First Response (DMTFR)	DMTFR-3

3. Variation notice compliance

This section sets out key details of how JGN will vary 2021-22 reference tariffs in accordance with section 3.6 of the 2020 AA.

3.1 Proposed revised reference tariff schedule

Attachment D provides JGN's proposed reference tariff schedule for 1 July 2021 to 30 June 2022.[3]

3.2 Effective date of variation

The effective date of variation for JGN's 2021-22 reference tariffs is 1 July 2021.[4]

3.3 Compliance with annual tariff variation mechanism

JGN's compliance with the variation mechanism set out in section 3.2 of the 2020 AA is described in section 4 below and evidenced in JGN's reference tariff model at **Attachment A**.[5]

3.4 Gas quantity inputs

JGN has included a statement to support the gas quantity inputs used in the reference tariff variation mechanism, with the quantity input reflecting the most recent actual financial year quantity available.[6] This statement is at **Attachment B**.

JGN's tariff variation mechanism relies upon actual haulage reference tariff quantity inputs from two years prior to the financial year in which the proposed tariffs will apply. For the 2021-22 variation notice, JGN must use the actual quantities that correspond to financial year t-2 (i.e. 2019-20), which is the most recent actual financial year quantity inputs available at this time.

Core Energy has verified JGN's gas quantity inputs (see **Attachment C**). Note that when Core Energy refer to "Attachment 2" in its verification, it is referring to our statement that we provide at Appendix B.

3.5 Determined pass through amount

There are no determined pass through amounts for the year or the 2015 AA period (as defined in the AA and for the purposes of 3.6(a)(v) and 3.6(a)(vi) of the AA).

That is, for this 2021-22 TVN, the cost pass through factor ($\mathbf{PT_t}$) value in the tariff basket price control formula of clause 3.2(b) of the AA is zero.

3 As required under clause 3.6(a)(i) of the AA.

4 As required under clause 3.6(a)(ii) of the AA.

5 As required under clause 3.6(a)(iii) of the AA.

6 As required under clause 3.6(a)(iv) of the AA.

4. Annual tariff variation mechanism

This section explains how JGN has varied its tariffs in accordance with section 3.2 of the AA and sets out its proposed 2021-22 reference tariffs.

4.1 Variation mechanism

JGN's annual tariff variation mechanism as set out in clause 3.2(b) pf the AA includes two formulae:

- weighted average price cap (tariff basket price control formula)
- side constraint.

JGN's reference tariff model, at **Attachment A**, provides the mathematical proof that JGN's proposed 2021-22 reference tariffs comply with both elements.

4.2 Weighted average price cap formula

The weighted average price cap formula is:

$$(1+CPI_t)(1-X_t)(1+A_t)(1+PT_t) \geq \frac{\sum_{x=1}^{n}\sum_{y=1}^{m} p_t^{xy} q_{t-2}^{xy}}{\sum_{x=1}^{n}\sum_{y=1}^{m} p_{t-1}^{xy} q_{t-2}^{xy}}$$

This ensures the expected change in JGN revenues (right-hand side of the formula) are constrained by movements in:

- CPI (CPI_t)
- the allowed X factor (X_t)
- the automatic adjustment factor that reflects cost true-ups from certain cost categories (A_t)
- costs arising with approved cost pass through events (PT_t)

The right hand side of the formula uses verified gas quantity inputs for financial year t-2 (2019-20) to calculate notional revenues. These quantities have been externally verified by Core Energy (see **Attachment C**).

Each element of the left hand side of the formula is discussed in the following sections.

4.2.1 CPI adjustment

This section shows how JGN has calculated the annual CPI adjustment.

JGN has calculated CPI_t in accordance with clause 3.2(b) of the AA. This is also set out in the 'Input I General' worksheet of **Attachment A**. The value of CPI_t in 2021-22 is:

- 0.86% (2 decimal places).[7]

The calculation for 2021-22 involved JGN obtaining the CPI: all groups index for the eight state capitals as published by the Australian Bureau of Statistics (**ABS**) for the December quarter in each of 2020 and 2019. JGN then divided the CPI December 2020 index value of 117.2 by the CPI December 2019 index value of 116.2 and subtracted one.

The value of $(1+CPI_t)$ is therefore 1.0086 (rounded to four decimal places).

4.2.2 X factor adjustment

The X factor for 2021-22 is 4.54 per cent. This is the X factor updated to give effect to the latest return on debt observation as required by the AA and is used in **Attachment A** to demonstrate JGN has varied its 2021-22 reference tariffs in accordance with the tariff basket price control formula in clause 3.2(b) of the AA.

The value of $(1-X_t)$ is 0.9546 (rounded to four decimal places).

4.2.3 Automatic adjustment factor

The automatic adjustment factor ($\mathbf{A_t}$) provides for administrative true-ups for costs incurred in areas outside of JGN's control. This section shows how JGN has calculated the 2021-22 automatic adjustment factor in accordance with schedule 3 of the AA. Via the definitions of licence fee (L_{t-2},) and UAG (U_{t-2},) the 2021-22 automatic adjustment includes adjustments for 2018-19 and 2019-20.

The automatic adjustment is calculated using the following formula in schedule 3 of the 2020 AA:

$$A_t = \frac{(1 + A'_t)}{(1 + A'_{t-1})} - 1$$

A_{t-1} is defined as zero in the schedule 3 of the 2020 AA.

A_t is the calculated as:

$$A'_t = \frac{(L_{t-2} + U_{t-2} + C_{t-2} + T_{t-2})\left[(1 + realWACC_{t-1})(1 + realWACC_t)(1 + CPI_{t-1})\right]}{(1 - X_t)\sum_{x=1}^{n}\sum_{y=1}^{m} p_{t-1}^{xy} q_{t-2}^{xy}}$$

As shown in the formula, the automatic adjustment factor (A_t) relies on the values for L_{t-2}, U_{t-2}, C_{t-2} and T_{t-2}.

Table 4-1 summarises these values with an outline of the calculations provided in the following sections (and also set out in **Attachment A**).

Table 4–1: Automatic adjustment factor

Automatic adjustment variable	Value ($2019-20)
Licence fee factor (L_{t-2})	($393,526) – refund to customers, see section 4.2.3.1
UAG factor (U_{t-2})	$15,867,202 – cost to customers, see section 4.2.3.2
Carbon Cost factor (C_{t-2})	0

[7] For the avoidance of doubt, JGN used the unrounded CPI in its reference tariff model at Attachment A.

Automatic adjustment variable	Value ($2019-20)
Relevant Tax factor (T_{t-2})	0
Total adjustments	**$15,473,675**

In accordance with the automatic adjustment formula in schedule 3 of the 2020 AA, JGN has adjusted for the time value of money to account for the period which elapses from when the costs were incurred and when these will be recovered from/returned to customers. For this calculation, JGN has used:

- the real vanilla WACC of:
  - 2.914% for financial year *t-2* (2019-20)
  - 2.162% for financial year *t-1* (2020-21)
  - 2.042% for financial year *t* (2021-22), noting this has been updated to incorporate the cost of debt update.
- CPI as set out in section 4.2.1
- X factor as set out in section 4.2.2
- The notional revenues for t-1 ($\sum p_{t-1} * q_{t-2}$).

JGN has applied the automatic adjustment to the reference tariffs consistent with the tariff basket price control formula in clause 3.2(b) of the AA.

Using the above values JGN has calculated a value for A_t of 3.91% (rounded to two decimal places). The value of $(1+A_t)$ is therefore 1.0391 (rounded to four decimal places).

The next subsections explain the calculations for licence fee factor, UAG factor, carbon factor and relevant tax factor.

4.2.3.1 Licence fee factor

Schedule 3 of the 2020 AA sets out that when t-2 is financial year 2019-20, the licence fee factor (L_{t-2}) includes an amount from financial years 2018-19 (L_{2019}) and 2019-20 (L_{2020}).

JGN has calculated its licence fee adjustment by calculating the difference between its actual licence fee costs for 2018-19 and 2019-20 and the amounts allowed in the 2015 AA.

In total, this results in a licence fee factor amount for t-2 (L_{t-2}) of $393,526 ($2019-20). This is a refund to customers and will be added to the Automatic Adjustment formula, where it is escalated into $2021-22.

Table 4-2 sets out the calculations and relevant data sources for each year of Licence fee true-up.

Table 4–2: Calculating the Licence Fee Factor amount, L_{t-2}

	Allowance ($ in year stated)	Actual cost ($ in year stated)	Refund to customers ($ in year stated)	Refund to customers ($2019-20)
L_{2019}	$3,908,299 ($2014-15), which adjusts to $4,255,123 ($2018-19) after inflation	Pipeline fees: $83,072 IPART fees: $0	$22,905 ($2018-19)	$24,006

	Allowance ($ in year stated)	Actual cost ($ in year stated)	Refund to customers ($ in year stated)	Refund to customers ($2019-20)
		Mains tax: $4,149,147 *Total: $4,232,219 (all $2018-19)*		
L_{2020}	$3,908,299 ($2014-15), which adjusts to $ 4,333,439 ($2019-20) after inflation	Pipeline fees: $83,072 IPART fees: $0 Mains tax: $3,880,846 *Total: $3,963,918 (all $2019-20)*	$369,520 ($2019-20)	$369,520
Total (L_{t-2})				**$393,526**

This calculation is provided in the 'Inputs I General' worksheet of JGN's proposed reference tariff model at **Attachment A.**

4.2.3.2 UAG factor

JGN has calculated its UAG adjustment in accordance with schedule 3 of the AA.

Schedule 3 of the 2020 AA sets out that when t-2 is financial year 2019-20, the UAG factor ($\mathbf{U_{t-2}}$) includes an amount from financial years 2018-19 (U_{2019}) and 2019-20 (U_{2020}).

JGN has calculated its UAG adjustment for 2018-19,and 2019-20 by calculating the difference between its recoverable UAG costs and the amount allowed in the 2015 AA.

Recoverable UAG cost

Clause 2.2 of schedule 3 of the 2020 AA provides that JGN's recoverable UAG cost is calculated as the product of:

- gas receipts in gigajoules for each financial year, and
- the UAG Cost[8] for each financial year in $/gigajoule, and
- the UAG target rate gas receipts of 5.16% for volume market and 0.427% for the demand market in 2018-19 and 2019-20.

minus the allowed UAG amount.

Table 4-3 provides JGN's calculation of the UAG recoverable cost.

[8] 'UAG Cost' is defined in the 2020 AA and means 'the cost incurred by the Service Provider to procure Replacement Gas to make up for unaccounted for gas (UAG) in the Network during a Financial Year, including costs for transportation and other direct costs reasonably incurred by the Service Provider in connection with that UAG'.

The average gas price for each financial year ending 30 June 19 and 30 June 2020 is the weighted (by gas purchased) average of the successful tender prices during the financial year.

Table 4–3: Calculating the UAG recoverable cost

	Volume market gas receipts (GJ)	Demand market gas receipts (GJ)	UAG cost ($)	Target rate[9] (Volume)	Target rate (Demand)	Recoverable cost[10] ($ stated)
U_{2019}				5.16%	0.427%	$25,269,280 ($2018-19)
U_{2020}				5.16%	0.427%	$24,806,403 ($2019-20)

Calculating the UAG factor

Table 4-4 provides JGN's calculation of U_{t-2}.

Table 4–4: Calculating the UAG Factor amount U_{t-2}

	UAG Allowance	Recoverable UAG	Difference (cost to customers)	Cost to customers ($2019-20)
U_{2019}	$17,116,636 ($2018-19)	$25,269,280 ($2018-19)	$8,152,644 ($2018-19)	$8,544,671
U_{2020}	$17,483,873 ($2019-20)	$24,806,403 ($2019-20)	$7,322,530 ($2019-20)	$7,322,530
Total (U_{t-2})				**$15,867,202**

Therefore, in 2021-22 the UAG factor amount from financial year t-2 involves a cost to customers of $15,867,202 ($2019-20). This is added to the Automatic Adjustment formula, where it is escalated into $2021-22.

This calculation is provided in the 'Inputs I General' worksheet of JGN's proposed reference tariff model at **Attachment A**.

4.2.3.3 Carbon cost factor

As there was no carbon scheme operational in 2019-20 and JGN had no forecast allowance as part of its 2015 AA, the carbon cost factor ($\mathbf{C_t}$) amount is zero.

4.2.3.4 Relevant tax factor

The relevant tax factor ($\mathbf{T_t}$) seeks to capture any new and unforeseen tax liability that JGN becomes subject to. The 2020 AA defines a Relevant Tax (see Schedule 1 of the 2020 AA) and this, for example, excludes income taxes, capital gains taxes, stamp duties, and penalties related to late tax payments.

JGN has not sought any adjustment in respect of any relevant tax amounts in this TVN. Accordingly, the relevant tax factor ($\mathbf{T_t}$) is zero.

4.2.4 Determined pass through amount

The cost pass through factor ($\mathbf{PT_t}$) value in the tariff basket price control formula of clause 3.2(b) of the AA is zero. The value of ($1+PT_t$) is therefore 1.

9 Target rates are a defined term in JGN's 2015 AA for U_{2019} and U_{2020}.

10 Product of gas receipts target rate and UAG cost.

4.3 Proposed 2021-22 reference tariffs

JGN's proposed 2021-22 reference tariffs are set out in its proposed 2021-22 reference tariff schedule at **Attachment D**.

These include the following adjustment to ancillary services:

- The 2021-22 price for expedited reconnections reflects the full cost of the service—prior to 2021-22, when JGN had a combined disconnection/reconnection ancillary service, customers who sought an expedited reconnection had already contributed to the cost of a standard reconnection through the combined fee. To ensure no double charging in 2020-21 this contribution was therefore removed from the price of the expedited reconnection. Now that the reconnection and disconnection services have been separated and are individually priced, the 2021-22 price for expedited reconnections reflects the full cost of the service.
- the $67 wasted visit charge is applied to both the separated disconnection and reconnection service. The conditions for when the wasted visit charge may or may not apply are unchanged from those in Schedule 2 of the 2020 AA.

JGN has also made the following adjustments to prudent discounts:

Appendix A
JGN proposed reference tariff model

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A1. JGN proposed reference tariff model (confidential)

Attached as separate document.

Appendix B
JGN gas quantity statement

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B1. JGN statement to support the Gas Quantity in the annual reference tariff variation mechanism

Jemena Gas Networks (**JGN**) considers the 2019-20 gas quantities suitable for the 2020-21 annual reference tariff variation mechanism to be as set out in the tables below.

These are presented as four quarters of gas quantity data that reconcile to the annual total gas quantity.

JGN has sourced data from its systems, the data is set out in the following spreadsheets:

- JGN Volume Market 2019-2020 - Updated.xlsx

  Summary of volume market customers consumption in 2019-20.

- Demand Market 2019-20_Updated 13_01_2021.xlsx

  Summary of demand market customers consumption in 2019-20 by station ID.

- Ancillary _Updated_11_01_2021_v2.xlsx

  Summary of number of disconnections, meter readings, and decommissions in 2019-20.

These gas quantities represent the most recent actual Financial Year quantity available at the time of submitting JGN's tariff variation notice (15 April 2021).

Volume Market

ANNUAL VOLUME THROUGHPUT | GJ

REGION	PERIOD	BLOCK_1	BLOCK_2	BLOCK_3	BLOCK_4	BLOCK_5	BLOCK_6	Customer numbers
VI-COASTAL	2019-20	8,482,679	5,650,438	6,102,727	10,871,722	3,072,120	1,160,967	1,352,566
VI-COUNTRY	2019-20	590,771	430,263	668,780	1,923,009	383,030	240,256	100,526
Grand Total		**9,073,450**	**6,080,701**	**6,771,507**	**12,794,731**	**3,455,151**	**1,401,222**	**1,453,093**

Q1 VOLUME THROUGHPUT | GJ

REGION	PERIOD	BLOCK_1	BLOCK_2	BLOCK_3	BLOCK_4	BLOCK_5	BLOCK_6	Customer numbers
VI-COASTAL	Jul-Sept	2,195,224,806	1,678,913,150	2,215,543,669	3,733,005,231	1,094,386,434	480,191,200	1,339,812
VI-COUNTRY	Jul-Sept	161,466,142	138,978,570	261,610,278	852,712,281	146,675,988	102,766,675	99767

Q2 VOLUME THROUGHPUT | GJ

REGION	PERIOD	BLOCK_1	BLOCK_2	BLOCK_3	BLOCK_4	BLOCK_5	BLOCK_6	Customer numbers
VI-COASTAL	Oct- Dec	2,064,713,980	1,236,160,364	1,038,058,042	2,145,902,190	708,845,333	227,655,962	1,349,539
VI-COUNTRY	Oct- Dec	139,390,837	87,151,907	102,375,505	230,174,811	71,120,418	41,542,092	100,324

Q3 VOLUME THROUGHPUT | GJ

REGION	PERIOD	BLOCK_1	BLOCK_2	BLOCK_3	BLOCK_4	BLOCK_5	BLOCK_6	Customer numbers
VI-COASTAL	Jan-Mar	2,022,114,189	1,102,896,294	787,535,475	1,790,035,466	560,300,252	174,243,994	1356710
VI-COUNTRY	Jan-Mar	130,298,293	71,523,839	69,196,588	155,688,492	59,492,706	33,814,228	100769

Q4 VOLUME THROUGHPUT | GJ

REGION	PERIOD	BLOCK_1	BLOCK_2	BLOCK_3	BLOCK_4	BLOCK_5	BLOCK_6	Customer numbers
VI-COASTAL	Apr-Jun	2,200,626,161	1,632,468,296	2,061,589,974	3,202,779,351	708,588,329	278,875,458	1364378
VI-COUNTRY	Apr-Jun	159,615,723	132,608,477	235,597,799	684,433,644	105,741,099	62,132,635	101256

VOLUME BOUNDARY | GJ

REGION	PERIOD	BLOCK_1	BLOCK_2	BLOCK_3	BLOCK_4	Customer numbers
VB - Coastal	2019/20	104258.618	74623.804	89559.226	134360.714	522
VB - Country	2019/20	108.435				1

Demand Market | Annual Throughput & Capacity

Annual	Demand Capacity (GJ of CD)						Demand Capacity Distance (GJ of CD)						Pressure Reduction (GJ of CD)						Demand Throughput - DT (GJ)			Demand Major End Customer Throughput - DMT (GJ)			
Demand Capacity	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Fixed (Num)	Block 1	Block2	Block 3
DC1	1,367	3,463	4,585	4,251	239	-																			
DC2	3,575	6,950	7,078	5,217	311	-																			
DC3	5,054	11,012	10,213	7,065	2,050	2,654																			
DC4	2,292	3,698	1,511	650	-	-																			
DC5	-	-	-	-	-	-																			
DC6	1,300	3,331	3,585	5,162	8,000	44,102																			
DC7	767	1,721	1,814	1,426	468	-																			
DC8	175	276	137	-	-	-																			
DC9																									
DC10	550	1,184	1,179	786	-	-																			
DC11	-	-	-	-	-	-																			
DC country							8,548	20,845	28,697	14,218	648	-	2,054	5,032	6,423	3,970	1,295	-							
Demand Throughput																									
DT																			268,096	133,337	734,954				
DMT-01																									
DMT-02																									
DMT-03																							-	-	-
DMT-04																							-	-	-
DMT-05																							-	-	-
Demand Capacity - First Response																									
DCFR-1																									
DCFR-2	-	-	-	-	-	-																			
DCFR-3	-	-	-	-	-	-																			
DCFR-4	-	-	-	-	-	-																			
DCFR-5	-	-	-	-	-	-																			
DCFR-6																									
DCFR-7	-	-	-	-	-	-																			
DCFR-8	-	-	-	-	-	-																			
DCFR-9	-	-	-	-	-	-																			
DCFR-10	-	-	-	-	-	-																			
DCFR-11	-	-	-	-	-	-																			
emand Throughput - First Response																									
DMTFR-01																							-	-	-
DMTFR-02																							-	-	-
DMTFR-03																									
DMTFR-04																							-	-	-
DMTFR-05																							-	-	-
Total	**15,329**	**32,275**	**31,703**	**28,557**	**19,068**	**91,655**	**8,548**	**20,845**	**28,697**	**14,218**	**648**	**-**	**2,054**	**5,032**	**6,423**	**3,970**	**1,295**	**-**	**268,096**	**133,337**	**734,954**	**2**	**1,497,687**	**1,189,305**	**1,758,266**

Demand Market | Annual Metering

Metering - Single Meter					Metering Double Meter				
MHQ < 10 GJ/hr	10 to < 50 GJ/hr	50 to < 100 GJ/hr	100 to < 1000 GJ/hr	1000GJ/hr and greater	MHQ < 10 GJ/hr	10 to < 50 GJ/hr	50 to < 100 GJ/hr	100 to < 1000 GJ/hr	1000GJ/hr and greater
5	12	6	1	-	-	2	3	2	-
23	37	6	4	-	2	-	1	1	-
24	60	10	1	-	1	2	1	3	-
18	24	-	1	-	-	1	2	-	-
-	1	-	-	-	-	1	-	-	-
6	12	3	-	1	-	2	-	3	0
1	12	2	-	-	-	1	-	-	-
1	3	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	1	1
3	3	-	1	-	-	4	-	-	-
-	-	-	-	-	-	-	-	-	-
9	27	4	-	-	-	-	1	1	-
3	7	2	1	-	1	2	-	-	-
-	-	-	-	-	-	-	-	1	-
-	-	-	-	-	-	-	-	1	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	1	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	1	1
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	1	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
93	**198**	**33**	**9**	**1**	**4**	**15**	**8**	**16**	**2**

Demand Market | Q1 Throughput & Capacity

Q1	Demand Capacity (GJ of CD)						Demand Capacity Distance (GJ of CD)						Pressure Reduction (GJ of CD)						Demand Throughput - DT (GJ)			Demand Major End Customer Throughput - DMT (GJ)			
Demand Capacity	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Fixed (Num)	Block 1	Block2	Block 3
DC1	1350	3504	4680	4251	239	0																			
DC2	3550	6922	7226	5217	311	0																			
DC3	5000	10843	9954	7065	2050	2654																			
DC4	2300	3723	1562	650	0	-																			
DC5	0	0	0	0	0	-																			
DC6	1300	3331	3585	5162	8000	44102																			
DC7	800	1821	2000	1426	468	0																			
DC8	200	294	137	0	0	0																			
DC9																									
DC10	550	1184	1179	786	-	-																			
DC11	-	-	-	-	-	-																			
DC country							8,375	20,945	28,963	14,695	648	-	2,050	5,132	6,689	4,446	1,295	-							
Demand Throughput																									
DT																			75,451	37,836	190,473				
DMT-01																									
DMT-02																									
DMT-03																							-	-	-
DMT-04																							-	-	-
DMT-05																							-	-	-
Demand Capacity - First Response																									
DCFR-1																									
DCFR-2	-	-	-	-	-	-																			
DCFR-3	-	-	-	-	-	-																			
DCFR-4	-	-	-	-	-	-																			
DCFR-5	-	-	-	-	-	-																			
DCFR-6																									
DCFR-7	-	-	-	-	-	-																			
DCFR-8	-	-	-	-	-	-																			
DCFR-9	-	-	-	-	-	-																			
DCFR-10	-	-	-	-	-	-																			
DCFR-11	-	-	-	-	-	-																			
Demand Throughput - First Response																									
DMTFR-01																							-	-	-
DMTFR-02																							-	-	-
DMTFR-03																									
DMTFR-04																							-	-	-
DMTFR-05																							-	-	-
Total	**15300**	**32,262**	**31,923**	**28,557**	**19,068**	**91,655**	**8,375**	**20,945**	**28,963**	**14,695**	**648**	**-**	**2,050**	**5,132**	**6,689**	**4,446**	**1,295**	**-**	**75,451**	**37,836**	**190,473**	**2**	**375,003**	**304,956**	**369,869**

Demand Market | Q2 Throughput & Capacity

Q2	Demand Capacity (GJ of CD)						Demand Capacity Distance (GJ of CD)						Pressure Reduction (GJ of CD)						Demand Throughput - DT (GJ)			Demand Major End Customer Throughput - DMT (GJ)			
Demand Capacity	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Fixed (Num)	Block 1	Block2	Block 3
DC1	1350	3440	4620	4251	239	0																			
DC2	3600	7076	7274	5217	311	0																			
DC3	5034	10944	10104	7065	2050	2654																			
DC4	2300	3723	1562	650	0	-																			
DC5	0	0	0	0	0	-																			
DC6	1300	3331	3585	5162	8000	44102																			
DC7	767	1722	1814	1426	468	0																			
DC8	200	294	137	0	0	0																			
DC9																									
DC10	550	1184	1179	786	-	-																			
DC11	-	-	-	-	-	-																			
DC country							8,617	20,845	28,698	14,219	648	-	2,067	5,033	6,424	3,971	1,295	-							
Demand Throughput																									
DT																			67,771	31,721	163,352				
DMT-01																									
DMT-02																									
DMT-03																							-	-	-
DMT-04																							-	-	-
DMT-05																							-	-	-
Demand Capacity - First Response																									
DCFR-1																									
DCFR-2	-	-	-	-	-	-																			
DCFR-3	-	-	-	-	-	-																			
DCFR-4	-	-	-	-	-	-																			
DCFR-5	-	-	-	-	-	-																			
DCFR-6																									
DCFR-7	-	-	-	-	-	-																			
DCFR-8	-	-	-	-	-	-																			
DCFR-9	-	-	-	-	-	-																			
DCFR-10	-	-	-	-	-	-																			
DCFR-11	-	-	-	-	-	-																			
emand Throughput - First Response																									
DMTFR-01																							-	-	-
DMTFR-02																							-	-	-
DMTFR-03																									
DMTFR-04																							-	-	-
DMTFR-05																							-	-	-
Total	**15351**	**32,354**	**31,875**	**28,557**	**19,068**	**91,655**	**8,617**	**20,845**	**28,698**	**14,219**	**648**	**-**	**2,067**	**5,033**	**6,424**	**3,971**	**1,295**	**-**	**67,771**	**31,721**	**163,352**	**2**	**375,663**	**288,336**	**416,698**

Demand Market | Q3 Throughput & Capacity

Q3	Demand Capacity (GJ of CD)						Demand Capacity Distance (GJ of CD)						Pressure Reduction (GJ of CD)						Demand Throughput - DT (GJ)			Demand Major End Customer Throughput - DMT (GJ)			
Demand Capacity	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Fixed (Num)	Block 1	Block2	Block 3
DC1	1400	3504	4620	4251	239	0																			
DC2	3550	6926	6995	5217	311	0																			
DC3	5100	11143	10399	7065	2050	2654																			
DC4	2300	3723	1562	650	0	-																			
DC5	0	0	-	-	-	-																			
DC6	1300	3331	3585	5162	8000	44102																			
DC7	750	1671	1720	1426	468	0																			
DC8	150	257	137	-	-	-																			
DC9																									
DC10	550	1184	1179	786	-	-																			
DC11	-	-	-	-	-	-																			
DC country							8,600	20,795	28,563	13,978	648	-	2,050	4,982	6,289	3,729	1,295	-							
Demand Throughput																									
DT																			61,416	31,824	163,797				
DMT-01																									
DMT-02																									
DMT-03																							-	-	-
DMT-04																							-	-	-
DMT-05																							-	-	-
Demand Capacity - First Response																									
DCFR-1																									
DCFR-2	-	-	-	-	-	-																			
DCFR-3	-	-	-	-	-	-																			
DCFR-4	-	-	-	-	-	-																			
DCFR-5	-	-	-	-	-	-																			
DCFR-6																									
DCFR-7	-	-	-	-	-	-																			
DCFR-8	-	-	-	-	-	-																			
DCFR-9	-	-	-	-	-	-																			
DCFR-10	-	-	-	-	-	-																			
DCFR-11	-	-	-	-	-	-																			
emand Throughput - First Response																									
DMTFR-01																							-	-	-
DMTFR-02																							-	-	-
DMTFR-03																									
DMTFR-04																							-	-	-
DMTFR-05																							-	-	-
Total	**15350**	**32,379**	**31,797**	**28,557**	**19,068**	**91,655**	**8,600**	**20,795**	**28,563**	**13,978**	**648**	**-**	**2,050**	**4,982**	**6,289**	**3,729**	**1,295**	**-**	**61,416**	**31,824**	**163,797**	**2**	**374,018**	**290,532**	**474,714**

Demand Market | Q4 Throughput & Capacity

Q4	Demand Capacity (GJ of CD)						Demand Capacity Distance (GJ of CD)						Pressure Reduction (GJ of CD)						Demand Throughput - DT (GJ)			Demand Major End Customer Throughput - DMT (GJ)			
Demand Capacity	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Block 4	Block 5	Block 6	Block 1	Block2	Block 3	Fixed (Num)	Block 1	Block2	Block 3
DC1	1366	3403	4419	4251	239	0																			
DC2	3600	6875	6814	5217	311	0																			
DC3	5084	11119	10399	7065	2050	2654																			
DC4	2266	3622	1358	650	0	-																			
DC5	0	0	-	-	-	-																			
DC6	1300	3331	3585	5162	8000	44102																			
DC7	750	1671	1720	1426	468	0																			
DC8	150	257	137	-	-	-																			
DC9																									
DC10	550	1184	1179	786	-	-																			
DC11	-	-	-	-	-	-																			
DC country							8,600	20,795	28,563	13,978	648	-	2,050	4,982	6,289	3,729	1,295	-							
Demand Throughput																									
DT																			63,458	31,956	217,332				
DMT-01																									
DMT-02																									
DMT-03																							-	-	-
DMT-04																							-	-	-
DMT-05																							-	-	-
Demand Capacity - First Response																									
DCFR-1																									
DCFR-2	-	-	-	-	-	-																			
DCFR-3	-	-	-	-	-	-																			
DCFR-4	-	-	-	-	-	-																			
DCFR-5	-	-	-	-	-	-																			
DCFR-6																									
DCFR-7	-	-	-	-	-	-																			
DCFR-8	-	-	-	-	-	-																			
DCFR-9	-	-	-	-	-	-																			
DCFR-10	-	-	-	-	-	-																			
DCFR-11	-	-	-	-	-	-																			
emand Throughput - First Response																									
DMTFR-01																							-	-	-
DMTFR-02																							-	-	-
DMTFR-03																									
DMTFR-04																							-	-	-
DMTFR-05																							-	-	-
Total	**15316**	**32,103**	**31,211**	**28,557**	**19,068**	**91,655**	**8,600**	**20,795**	**28,563**	**13,978**	**648**	**-**	**2,050**	**4,982**	**6,289**	**3,729**	**1,295**	**-**	**63,458**	**31,956**	**217,332**	**2**	**375,003**	**305,461**	**496,985**

RFS Hours

Demand Capacity	Q1	Q2	Q3	Q4
DC1	0	0	7	0
DC2	6	1	12	0
DC3	4	2	19	3
DC4	0	1	7	0
DC5	0	1	0	0
DC6	0	0	6	0
DC7	0	0	4	0
DC8	0	0	0	0
DC9	0	0	0	0
DC10	0	0	5	0
DC11	0	0	0	0
DC country	1	0	9	0
Demand Throughput				
DT	0	0	2	0
DMT1	0	0	1	0
DMT2	0	0	0	0
DMT3	0	0	0	0
DMT4	0	0	0	0
DMT5	0	0	0	0

Demand Capacity - First Response				
DC1FR	0	0	0	0
DC2FR	0	0	0	0
DC3FR	0	0	0	0
DC4FR	0	0	0	0
DC5FR	0	0	0	0
DC6FR	0	0	0	1
DC7FR	0	0	0	0
DC8FR	0	0	0	0
DC9FR	0	0	0	0
DC10FR	0	0	0	0
DC11FR	0	0	0	0
Demand Throughput - First Response				
DMT1FR	0	0	0	0
DMT2FR	0	0	0	0
DMT3FR	0	0	0	0
DMT4FR	0	0	0	0
DMT5FR	0	0	0	0

Volume	Q1	Q2	Q3	Q4
VI	0	0	1	0

Ancillary Services

Annual

Annual Output	Small Meter Disconnections	Meter Reading	Temporary disconnections domestic meter	Temporary disconnections large meter	Meter decommissions<=25m3/hr	Meter decommissions>25m3/hr
2019-20	48	512891	13957	0	3041	10

Quarterly

Annual Output	Small Meter Disconnections	Meter Reading	Temporary disconnections domestic meter	Temporary disconnections large meter	Meter decommissions<=6m3/hr	Meter decommissions>6m3/hr
Q1	10	129527	4489	0	646	2
Q2	18	124253	4082	0	1015	4
Q3	5	130255	5182	0	691	1
Q4	15	128856	204	0	689	3

Appendix C
Core verification of JGN gas quantity statement

Jemena
bringing energy to life

C1. Core verification

Attached as separate document.

Appendix D
Reference tariff schedule for 1 July 2021 to 30 June 2022

Jemena
bringing energy to life

D1. Reference tariff schedule for 1 July 2021 to 30 June 2022

Attached as separate document.