



# Jemena Gas Networks (NSW) Ltd

## Tariff Variation Notice

2023-24 reference tariffs

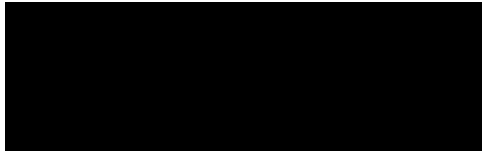


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Tariff Variation Notice

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Attachment 4: JGN Reference tariff schedule for 1 July 2023 to 30 June 2024

## Abbreviations

2020-25 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
$A_t$	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 (**2020-25 AA**) to apply for the period from 1 July 2020 to 30 June 2025.<sup>1</sup> The 2020-25 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 2020-25 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 2020-25 AA, the AER then has 30 Business Days to assess whether JGN's proposed reference tariffs are compliant.<sup>2</sup>

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

- provides JGN's proposed reference tariffs for the 2023-24 financial year (effective from 1 July 2023)
- demonstrates how these proposed 2023-24 reference tariffs comply with the tariff variation mechanism in clause 3.2 of the 2020-25 AA, including the side constraint
- sets out the calculation of the 2023-24 automatic adjustment factor in accordance with schedule 3 of the 2020-25 AA, and applies this factor in calculating 2023-24 proposed reference tariffs—this includes licence fee and unaccounted for gas (**UAG**) true-ups for 2021-22
- contains no determined pass through amounts or automatic adjustments for relevant tax or carbon costs.

## 1.2 Submission structure and 2020-25 AA compliance

JGN has structured this submission to demonstrate compliance with each relevant part of clause 3 and 4 of the 2020-25 AA:

- section 2—tariff classes (section 4 of the 2020-25 AA)
- section 3—variation notice (section 3.6 of the 2020-25 AA)
- section 4—annual tariff variation mechanism (section 3.2 of the 2020-25 AA).

### 1.2.1 Reference tariff model

JGN's reference tariff model (**Attachment 1**) provides the mathematical proof that JGN's proposed 2023-24 reference tariffs comply with relevant aspects of the 2020-25 AA.

The model demonstrates that for 2023-24, JGN has updated its reference tariffs using:

- CPI of 7.83%
- an X factor of -3.49%, which incorporates an updated cost of debt value
- verified gas quantity inputs for financial year t-2 (2021-22)
- The automatic adjustment factor, that reflects cost true-ups for licence fees and UAG costs.

<sup>1</sup> The Access Arrangement: JGN's NSW gas distribution networks, 1 July 2020 – 30 June 2025, published 5 June 2020. The 2020-25 AA is available at <http://www.aer.gov.au/> or <http://www.jemena.com.au/>.

<sup>2</sup> JGN 2020-25 AA, clause 3.8.

### 1.3 Submission values and terminology

This submission employs the following standards:

- unless otherwise indicated, all prices are expressed in \$2023-24.
- for the purpose of relevant clauses and formulae in the 2020-25 AA as applicable to this TVN:
  - *financial year t* is the 2023-24 financial year ending on 30 June 2024
  - *financial year t-1* is the 2022-23 financial year ending on 30 June 2023
  - *financial year t-2* is the 2021-22 financial year ending on 30 June 2022
- a reference to the AA or a clause in the AA is a reference to the 2020-25 AA (or a clause within the 2020-25 AA).

## 2. Tariff classes

This section sets out the tariff classes for JGN for 2023-24.

### 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 2022-23. Refer to **Attachment 4** for further details.

**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 2023-24 reference tariffs in accordance with section 3.6 of the 2020-25 AA.

### 3.1 Proposed revised reference tariff schedule

**Attachment 4** provides JGN's proposed reference tariff schedule for 1 July 2023 to 30 June 2024.<sup>3</sup>

### 3.2 Effective date of variation

The effective date of variation for JGN's 2023-24 reference tariffs is 1 July 2023.<sup>4</sup>

### 3.3 Compliance with annual tariff variation mechanism

JGN's compliance with the variation mechanism set out in section 3.2 of the 2020-25 AA is described in section 4 below and evidenced in JGN's reference tariff model at **Attachment 1**.<sup>5</sup>

### 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.<sup>6</sup> This statement is at **Attachment 2**.

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 2023-24 variation notice, JGN must use the actual quantities that correspond to financial year t-2 (i.e. 2021-22), which is the most recent financial year actual quantity inputs available at this time.

Core Energy has verified JGN's gas quantity inputs (see **Attachment 3**).

### 3.5 Determined pass through amount

There are no determined pass through amounts for the year (as defined in the 2020-25 AA and for the purposes of 3.6(a)(v) and 3.6(a)(vi) of the AA).

That is, for this 2023-24 TVN, the cost pass through factor ( $PT_t$ ) value in the tariff basket price control formula of clause 3.2(b) of the AA is zero.

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<sup>3</sup> As required under clause 3.6(a)(i) of the AA.

<sup>4</sup> As required under clause 3.6(a)(ii) of the AA.

<sup>5</sup> As required under clause 3.6(a)(iii) of the AA.

<sup>6</sup> 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 2020-25 AA and sets out its proposed 2023-24 reference tariffs.

### 4.1 Variation mechanism

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

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

JGN's reference tariff model, at **Attachment 1**, provides the mathematical proof that JGN's proposed 2023-24 reference tariffs comply with both elements.

### 4.2 Weighted average price cap formula

The weighted average price cap formula is:

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

It ensures the expected change in JGN's prices (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 (2021-22) to calculate notional revenues. These quantities have been externally verified by Core Energy (see **Attachment 3**).

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 2023-24 of 7.83% in accordance with clause 3.2(b) of the 2020-25 AA based on December to December quarter movement between 2021 and 2022 as published by the Australian Bureau of Statistics (**ABS**). This is set out in the 'Input I General' worksheet of **Attachment 1**.

The value of  $(1+CPI_t)$  is 1.0783.

#### 4.2.2 X factor adjustment

The X factor for 2023-24 updated for latest return on debt observation is -3.49 per cent. It reflects the real change in prices and is used in **Attachment 1** in accordance with the tariff basket price control formula in clause 3.2(b) of the AA.

The value of  $(1-X_t)$  is 1.0349.

#### 4.2.3 Automatic adjustment factor

The automatic adjustment factor ( $A_t$ ) provides for administrative true-ups for costs incurred in areas outside of JGN's control. JGN has calculated the 2023-24 automatic adjustment factor in accordance with the following formula in schedule 3 of the 2020-25 AA:

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

$A_t$  is calculated as:

$$A'_t = \frac{(L_{t-2} + U_{t-2} + C_{t-2} + T_{t-2})[(1 + \text{realWACC}_{t-1})(1 + \text{realWACC}_t)(1 + \text{CPI}_{t-1})]}{(1 - X_t) \sum_{x=1}^n \sum_{y=1}^m p_{t-1}^{xy} q_{t-2}^{xy}}$$

$A'_{t-1}$  is the value of  $A'_t$  in Financial Year  $t-1$  (2022-23), which is -5.42%.

As shown in the above formulas, 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 1**).

**Table 4–1: Automatic adjustment factor**

Automatic adjustment variable	Value (\$2021-22)
Licence fee factor ( $L_{t-2}$ )	(\$1,507,497) –see section 4.2.3.1
UAG factor ( $U_{t-2}$ )	(\$2,092,876) –see section 4.2.3.2
Carbon Cost factor ( $C_{t-2}$ )	0
Relevant Tax factor ( $T_{t-2}$ )	0
<b>Total adjustments</b>	<b>(\$3,600,373)</b>

In accordance with the automatic adjustment formula in schedule 3 of the 2020-25 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:
  - 2.042% for financial year  $t-2$  (2021-22)

- 2.018% for financial year  $t-1$  (2022-23)
- 2.134% for financial year  $t$  (2023-24), noting this has been updated to incorporate the cost of debt update.
- CPI  $t-1$  (2022-23) of 3.50%
- 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 -0.86%
- $A_t$  of 4.82%. The value of  $(1+A_t)$  is therefore 1.0482.

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

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

The licence fee factor ( $L_{t-2}$ ) calculates the difference between JGN's actual licence fee costs for financial year 2021-22 and the AER allowance in the 2020-25 AA ( $L_{2022}$ ).

In total, this results in a licence fee factor amount for  $t-2$  ( $L_{t-2}$ ) of -\$1,507,497 (\$2021-22), which is a refund to the customers.

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,  $L_{t-2}$  (\$2021-22)**

	Allowance	Actual cost	Difference
$L_{2022}$	\$4,695,195 (\$2019-20), which escalates to \$4,822,760	Pipeline fees: \$83,072	(\$1,507,497)
		IPART fees: \$0	
		Mains tax: \$3,232,190	
<b>Total (<math>L_{t-2}</math>)</b>	<b>\$4,822,760</b>	<b>\$3,315,262</b>	<b>(\$1,507,497)</b>

This calculation is provided in the 'Calc I General' worksheet of JGN's proposed reference tariff model of **Attachment 1**.

### 4.2.3.2 UAG factor

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

Schedule 3 of the 2020-25 AA sets out that when t-2 is financial year 2021-22, the UAG factor ( $U_{t-2}$ ) includes an amount from financial year 2021-22 ( $U_{2022}$ ).

JGN has calculated its UAG adjustment ( $U_{2022}$ ) for 2021-22 by calculating the difference between its recoverable UAG costs and the amount allowed in the 2020-25 AA.

#### Recoverable UAG cost

Clause 2.2 of schedule 3 of the 2020-25 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 Costs<sup>7</sup> for each financial year in \$/gigajoule, and
  - UAG target rate gas receipts of 5.593% for volume market and 0.665% for the demand market in 2021-22.
- Minus the allowed UAG amount for 2021-22.

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

**Table 4–3: Calculating the UAG recoverable cost**

	Volume market gas receipts (GJ)	Demand market gas receipts (GJ)	UAG cost (\$)	Target rate <sup>8</sup> (Volume)	Target rate (Demand)	Recoverable cost <sup>9</sup> (\$ 2021-22)
$U_{2022}$	██████████	██████████	██████████	5.593%	0.665%	<b>\$25,909,108</b>

#### Calculating the UAG factor

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

**Table 4–4: Calculating the UAG Factor amount  $U_{t-2}$  (\$2021-22)**

	UAG Allowance	Recoverable UAG	Difference
$U_{2022}$	\$ 27,261,317 (\$2019-20), which escalates to \$28,001,984	\$ 25,909,108	<b>(\$2,092,876)</b>
<b>Total (<math>U_{t-2}</math>)</b>			<b>(\$2,092,876)</b>

<sup>7</sup> 'UAG Costs' is defined in the 2020-25 AA as '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 financial year ending 30 June 22 is the weighted (by gas purchased) average of the successful tender prices during the financial year.

<sup>8</sup> Target rates are a defined term in JGN's 2020-25 AA for  $U_{2021}$ .

<sup>9</sup> Product of gas receipts target rate and UAG cost.

Therefore, in 2023-24 the UAG factor amount from financial year t-2 is - \$2,092,876 (\$2021-22).

This calculation is provided in the 'Calc I General' worksheet of JGN's proposed reference tariff model of **Attachment 1**.

#### 4.2.3.3 Carbon cost factor

As there was no carbon scheme operating in 2021-22 and JGN had no forecast allowance as part of its 2020-25 AA, the carbon cost factor ( $C_t$ ) amount is zero.

#### 4.2.3.4 Relevant tax factor

The relevant tax factor ( $T_t$ ) seeks to capture any new and unforeseen tax liability that JGN becomes subject to. The 2020-25 AA defines a Relevant Tax (see Schedule 1 of the 2020-25 AA)

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

#### 4.2.4 Determined pass through amount

The cost pass through factor ( $PT_t$ ) 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.

### 4.3 Proposed 2023-24 reference tariffs

JGN's proposed 2023-24 reference tariffs are set out in its proposed 2023-24 reference tariff schedule in **Attachment 4**.

JGN has also made the following adjustments to prudent discounts:

