



**FINAL DECISION**  
**Jemena Gas Networks (NSW)**  
**Ltd**  
**Access Arrangement 2015-20**

**Attachment 5 – Regulatory  
depreciation**

June 2015

© Commonwealth of Australia 2015

This work is copyright. In addition to any use permitted under the Copyright Act 1968, all material contained within this work is provided under a Creative Commons Attributions 3.0 Australia licence, with the exception of:

- the Commonwealth Coat of Arms
- the ACCC and AER logos
- any illustration, diagram, photograph or graphic over which the Australian Competition and Consumer Commission does not hold copyright, but which may be part of or contained within this publication. The details of the relevant licence conditions are available on the Creative Commons website, as is the full legal code for the CC BY 3.0 AU licence.

Requests and inquiries concerning reproduction and rights should be addressed to the Director, Corporate Communications, Australian Competition and Consumer Commission, GPO Box 4141, Canberra ACT 2601 or [publishing.unit@acc.gov.au](mailto:publishing.unit@acc.gov.au).

Inquiries about this publication should be addressed to:

Australian Energy Regulator  
GPO Box 520  
Melbourne Vic 3001

Tel: (03) 9290 1444  
Fax: (03) 9290 1457

Email: [AERInquiry@aer.gov.au](mailto:AERInquiry@aer.gov.au)

AER reference: 51741

## Note

This attachment forms part of the AER's final decision on Jemena Gas Networks' 2015–20 access arrangement. It should be read with other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 1 – services covered by the access arrangement

Attachment 2 – capital base

Attachment 3 – rate of return

Attachment 4 – value of imputation credits

Attachment 5 – regulatory depreciation

Attachment 6 – capital expenditure

Attachment 7 – operating expenditure

Attachment 8 – corporate income tax

Attachment 9 – efficiency carryover mechanism

Attachment 10 – reference tariff setting

Attachment 11 – reference tariff variation mechanism

Attachment 12 – non-tariff components

Attachment 13 – demand

# Contents

Note .....	5-2
Contents .....	5-3
Shortened forms .....	5-4
5 Regulatory depreciation.....	5-5
5.1 Final decision .....	5-5
5.2 JGN's revised proposal .....	5-6
5.3 AER's assessment approach.....	5-9
5.4 Reasons for final decision .....	5-9
5.4.1 Standard asset lives .....	5-11
5.4.2 Remaining asset lives .....	5-11

## Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
capex	capital expenditure
CAPM	capital asset pricing model
CCP	Consumer Challenge Panel
Code	National Third Party Access Code for Natural Gas Pipeline Systems
CPI	consumer price index
DRP	debt risk premium
ERP	equity risk premium
JGN	Jemena Gas Networks (NSW) Ltd (ACN 003 004 322)
MRP	market risk premium
NGL	national gas law
NGO	national gas objective
NGR	national gas rules
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
WACC	weighted average cost of capital

## 5 Regulatory depreciation

When determining the total revenue for JGN, we must decide on the depreciation for the projected capital base (otherwise referred to as 'return of capital').<sup>1</sup> Regulatory depreciation is used to model the nominal asset values over the 2015–20 access arrangement period and the depreciation allowance in the total revenue requirement. Our final decision on JGN's annual regulatory depreciation allowance is outlined in this attachment.<sup>2</sup> Our consideration of specific matters that affect the estimate of regulatory depreciation over the 2015–20 access arrangement period is also outlined in this attachment. These include:

- the standard asset lives for depreciating new assets associated with forecast capex<sup>3</sup>
- the remaining asset lives for depreciating existing assets in the opening capital base.<sup>4</sup>

### 5.1 Final decision

Consistent with our draft decision, we approve the real straight-line method used by JGN to calculate its regulatory depreciation allowance. However, we do not approve the amount of the regulatory depreciation allowance in JGN's revised proposal for the 2015–20 access arrangement period. This is because of our determination on forecast capex (attachment 6), another component of JGN's revised proposal that affects the regulatory depreciation allowance.

Our final decision on JGN's regulatory depreciation allowance is \$428.9 million (\$nominal) over the 2015–20 access arrangement period as set out in Table 5-1. We have made all revisions necessary to give effect to this final decision in the *Approved Access Arrangement, JGN's NSW distribution networks 1 July 2015 – 30 June 2020* (May 2015).<sup>5</sup>

---

<sup>1</sup> NGR, r. 76(b).

<sup>2</sup> Regulatory depreciation allowance is the net total of the straight-line depreciation (negative) and the annual inflation indexation (positive) on the projected capital base.

<sup>3</sup> The term 'standard asset life' is also referred to as 'standard economic life' or 'economic asset life'.

<sup>4</sup> The term 'remaining asset life' is also referred to as 'remaining economic life' or 'remaining life'.

<sup>5</sup> NGR, rr. 64(1) & (5).

**Table 5-1 AER's final decision on JGN's regulatory depreciation allowance for the 2015–20 access arrangement period (\$million, nominal)**

	2015–16	2016–17	2017–18	2018–19	2019–20	Total
Straight-line depreciation	145.4	161.5	178.2	191.8	179.0	855.9
Less: indexation on opening capital base and capex at the first half of the regulatory year	78.8	82.5	85.9	88.9	91.0	427.0
<b>Regulatory depreciation</b>	<b>66.6</b>	<b>79.0</b>	<b>92.2</b>	<b>103.0</b>	<b>88.1</b>	<b>428.9</b>

Source: AER analysis.

## 5.2 JGN's revised proposal

JGN's revised proposal used the real straight-line approach approved in the draft decision to calculate the amount of annual regulatory depreciation for each asset class. The inputs for the calculation are based on JGN's:

- revised opening capital base as at 1 July 2015
- revised remaining asset lives for depreciating existing assets in the opening capital base, due to updates made for 2014–15 actual CPI, 2013–14 actual conforming capex and 2014–15 revised estimate of capex
- revised capex forecasts for the 2015–20 access arrangement period
- standard asset lives, consistent with those approved in the draft decision, for depreciating new assets associated with forecast capex. JGN's revised proposal adopted our draft decision standard asset lives.

JGN's revised proposed depreciation for the 2015–20 access arrangement period is set out in

Table 5-2.<sup>6</sup>

<sup>6</sup> JGN updated its proposed regulatory depreciation after the submission of its revised proposal. JGN, *Submissions on draft decision, Attachment N - updated appendix 10.1 - JGN revenue forecast model*, 27 March 2015.

**Table 5-2 JGN's revised proposal regulatory depreciation allowance for the 2015–20 access arrangement period (\$million, nominal)**

	2015–16	2016–17	2017–18	2018–19	2019–20	Total
Straight-line depreciation	145.9	163.2	181.1	196.2	184.8	871.2
Less: indexation on opening capital base and capex at the first half of the regulatory year	79.0	83.5	87.8	91.7	94.7	436.7
<b>Regulatory depreciation</b>	<b>66.9</b>	<b>79.6</b>	<b>93.3</b>	<b>104.5</b>	<b>90.1</b>	<b>434.4</b>

Source: JGN, *Submissions on draft decision, Attachment N - updated appendix 10.1 - JGN revenue forecast model*, 27 March 2015.

JGN's asset lives in its revised proposal for its existing asset classes used for the depreciation calculations are set out in

Table 5-3.<sup>7</sup>

---

<sup>7</sup> JGN updated its proposed remaining asset lives after the submission of its revised proposal. JGN, *Submissions on draft decision, Attachment N - updated appendix 10.1 - JGN revenue forecast model*, 27 March 2015.



**Table 5-3 JGN's revised proposal standard and remaining asset lives at 1 July 2015 (years)**

	Standard asset life	Remaining asset life
Trunk Wilton-Sydney	80.0	38.1
Trunk Sydney-Newcastle	80.0	46.2
Trunk Wilton-Wollongong	80.0	37.9
Contract meters	20.0	7.2
Fixed plant - distribution	50.0	50.0
HP mains	80.0	58.5
HP services	50.0	50.0
MP mains	50.0	26.2
MP services	50.0	36.9
Meter reading devices	20.0	20.0
Country POTS	50.0	31.6
Tariff meters	20.0	9.2
Buildings	48.0	48.0
Computers	5.0	5.0
Software	5.0	4.0
Fixed plant	10.0	8.6
Furniture	10.0	10.0
Land	n/a	n/a
Leasehold improvements	10.0	10.0
Low value assets	10.0	10.0
Mobile plant	10.0	8.4
Vehicles	6.0	3.2
Stock <sup>a</sup>	1.0	1.0
Equity raising costs	53.7 <sup>b</sup>	49.9

Source: JGN, *Submissions on draft decision, Attachment N - updated appendix 10.1 - JGN revenue forecast model*, 27 March 2015.

a The 'Stock' asset class is not separately listed in JGN's access arrangement information, but is present in JGN's models in order to handle legacy residual assets in this class. There is no forecast capex allocated to this asset class during the 2015–20 access arrangement period.

b The standard asset life for the 'Equity raising costs' asset class reflects the weighted average standard asset life of the opening capital base at the time of the 2010 access arrangement decision. There is no forecast capex allocated to this asset class during the 2015–20 access arrangement.

### 5.3 AER's assessment approach

We have not changed our assessment approach for the regulatory depreciation from our draft decision. Section 5.3 of our draft decision details that approach.<sup>8</sup>

### 5.4 Reasons for final decision

We do not approve JGN's revised proposed regulatory depreciation allowance of \$434.4 million (\$nominal) for the 2015–20 access arrangement period. Our final decision on JGN's regulatory depreciation allowance is \$428.9 million (\$nominal) over the 2015–20 access arrangement period, a reduction of \$5.5 million (\$nominal) or 1.3 per cent compared to the revised proposal. This is due to our reduction of JGN's revised proposed forecast net capex by \$161.1 million (\$2014–15) or 14.4 per cent. Our detailed assessment of the revised proposed forecast capex allowance is set out in attachment 6.

Consistent with our draft decision, we accept JGN's revised proposed standard asset lives for the 2015–20 access arrangement period.<sup>9</sup> We also accept JGN's revised proposed remaining asset lives (as at 1 July 2015) because they are calculated based on updated inputs as noted in our draft decision.<sup>10</sup>

Table 5-4 sets out our final decision on the standard and remaining asset lives as at 1 July 2015 for JGN.

---

<sup>8</sup> AER, *Draft decision, attachment 2*, November 2014, pp. 15–17.

<sup>9</sup> We have accepted JGN's proposed standard asset life for the 'Equity raising costs' asset class because there is no forecast capex allocated to this asset class and so it has no impact on total revenue.

<sup>10</sup> The updated inputs include 2014–15 actual CPI, 2013–14 actual conforming capex and 2014–15 revised capex estimate.

**Table 5-4 AER's final decision on JGN's standard and remaining asset lives at 1 July 2015 (years)**

	Standard asset life	Remaining asset life
Trunk Wilton-Sydney	80.0	38.1
Trunk Sydney-Newcastle	80.0	46.2
Trunk Wilton-Wollongong	80.0	37.9
Contract meters	20.0	7.2
Fixed plant - distribution	50.0	50.0
HP mains	80.0	58.5
HP services	50.0	50.0
MP mains	50.0	26.2
MP services	50.0	36.9
Meter reading devices	20.0	20.0
Country POTS	50.0	31.6
Tariff meters	20.0	9.2
Building	48.0	48.0
Computers	5.0	5.0
Software	5.0	4.0
Fixed plant	10.0	8.6
Furniture	10.0	10.0
Land	n/a	n/a
Leasehold improvements	10.0	10.0
Low value assets	10.0	10.0
Mobile plant	10.0	8.4
Vehicles	6.0	3.2
Stock <sup>a</sup>	1.0	1.0
Equity raising costs	53.7 <sup>b</sup>	49.9

Source: AER analysis.

n/a: not applicable (since land does not depreciate).

- a) The 'Stock' asset class is included in order to handle legacy residual assets in this class. There is no forecast capex allocated to this asset class during the 2015–20 access arrangement period.
- b) There is no forecast capex allocated to the 'Equity raising costs' asset class during the 2015–20 access arrangement, so the standard asset life does not affect total revenue.

## 5.4.1 Standard asset lives

Consistent with our draft decision, we accept JGN's revised proposed standard asset lives for its existing asset classes, because they are:

- consistent with our approved standard asset lives for the 2010–15 regulatory control period<sup>11</sup>
- comparable with the standard asset lives approved in our recent determinations for other gas distribution service providers.<sup>12</sup>

In the draft decision we accepted JGN's proposed standard asset lives assigned to each of its asset classes for the 2015–20 access arrangement period, with the exception of the 'Vehicles' asset class. For the 'Vehicles' asset class, we did not accept JGN's proposed standard asset life of four years, and instead required that this be set to six years.<sup>13</sup>

JGN's revised proposal adopted our draft decision approach to setting the standard asset life for the 'Vehicles' asset class.<sup>14</sup>

We are satisfied the revised proposed standard asset lives reflect the requirements of rule 89(1) of the NGR. Table 5-4 sets out our final decision on the standard asset lives for JGN.

## 5.4.2 Remaining asset lives

We accept JGN's revised proposed remaining asset lives as at 1 July 2015, which reflect the updates made in the capital base roll forward as discussed in attachment 2.<sup>15</sup>

In the draft decision, we noted that the remaining asset lives would be updated for the final decision because JGN's revised proposal would include revisions for 2013–14 actual conforming capex and revised (reflecting newly available information) 2014–15 estimated capex. This is because these capex values are used to calculate the closing capital base as at 30 June 2015, which affects the calculation of remaining asset lives

---

<sup>11</sup> For the 'Equity raising costs' asset class, JGN's proposed standard asset life reflects the weighted average standard asset life of the opening capital base at the time of the 2010 access arrangement decision. Since there is no forecast capex allocated to this asset class, the standard asset life has no impact on total revenue and so we have accepted the JGN proposal. The forecast of equity raising costs is dependent on complex interactions between many other aspects of the decision, and JGN adopts the standard AER approach to modelling the requirement for equity raising costs (if any).

<sup>12</sup> AER, *Draft decision: Envestra (Victoria) access arrangement proposal 2013–17 Part2: Attachments*, September 2012, p. 158; AER, *Draft decision: AusNet (SP AusNet) arrangement proposal 2013–17 Part2: Attachments*, September 2012, p. 134; AER, *Draft decision: Multinet Gas arrangement proposal 2013–17*, September 2012, p. 126.

<sup>13</sup> AER, *Draft decision, attachment 5*, November 2014, pp. 21–23.

<sup>14</sup> JGN, *Response to the AER's draft decision and revised proposal*, 27 February 2015, p. 94.

<sup>15</sup> The updated inputs include 2014–15 actual CPI, 2013–14 actual conforming capex and 2014–15 revised capex estimate.

under JGN's approach. We are satisfied that the updates for the 2013–14 actual conforming capex and revised 2014–15 capex estimate have been reflected in the revised proposed remaining asset lives.

Consistent with our draft decision, we note our concerns with JGN's proposed approach<sup>16</sup> to calculate the remaining asset lives which differs from the AER's preferred weighted average remaining life approach.<sup>17</sup> We consider JGN's proposed approach tends to systematically underestimate the remaining asset lives.<sup>18</sup> We note that in JGN's case the underestimation effect of the proposed approach is immaterial.<sup>19</sup> This is because there is less than 2 per cent difference between the AER's preferred approach (weighted average remaining life) and JGN's proposed approach when comparing total forecast building block revenue over the 2015–20 access arrangement period. However, given our concerns with JGN's proposed approach, we will review this matter further if this approach is proposed again at the next access arrangement review. Table 5-4 sets out our final decision on the remaining asset lives as at 1 July 2015 for JGN.

---

<sup>16</sup> JGN's approach uses depreciation from the final year of the 2010–15 access arrangement period to determine the remaining asset lives. In brief, the remaining asset value at 1 July 2015 is divided by the forecast depreciation for 2014–15, with additional calculations to account for end-of-period capex adjustments.

<sup>17</sup> The AER's approach rolls forward the remaining asset life for an asset class from the beginning of the 2010–15 access arrangement period. We consider this approach better reflects the mix of assets within that asset class, when they were acquired over that period (or if they were existing assets), and the remaining value of those assets (used as a weight) at the end of the period.

<sup>18</sup> The details of our assessment are set out in AER, *Draft decision, attachment 5*, November 2014, pp. 23–28.

<sup>19</sup> We did not accept a similar depreciation approach proposed by SA Power Network because the revenue difference is large. See AER, *Preliminary decision on SA Power Networks determination 2015–16 to 2019–20, attachment 5*, April 2015, pp. 11–18.