

NATIONAL GAS LAW

Undertaking to the Australian Energy Regulator given for the purposes of section 230A of the National Gas Law 2008

by

Jemena Gas Networks (NSW) Ltd (ACN 003 004 322)

Person giving this undertaking

1. This undertaking is given to the Australian Energy Regulator (the **AER**) by Jemena Gas Networks (NSW) Ltd (**JGN**) of Level 16, 567 Collins St, Melbourne, Victoria 3000 for the purposes of section 230A of the *National Gas Law* (the **NGL**).

Background

2. JGN provides natural gas transportation and associated services to users via a gas distribution network in New South Wales.
3. JGN's gas distribution network is made up of four covered gas pipelines: NSW Distribution System; Central West Distribution System; Wilton-Newcastle trunk pipeline (the 'northern trunk'); and Wilton-Wollongong trunk pipeline (the 'southern trunk'). These four covered pipelines are classified as distribution pipelines and are dealt with in a single consolidated access arrangement for the purposes of the NGL.
4. Section 7 of the *National Gas (New South Wales) Act 2008* (NSW) provides that the NGL, as set out in the Schedule to the *National Gas (South Australia) Act 2008* (SA), applies as a law of NSW. Section 26 of the NGL gives the National Gas Rules (**NGR**) the force of law in NSW.
5. The AER is responsible for the economic regulation of JGN's gas distribution network under section 27(1)(e) of the NGL and is empowered to make and revise access arrangements under Part 8 of the NGR.
6. On 3 June 2015 the AER published the *Final Decision – Jemena Gas Networks (NSW) Ltd Access Arrangements 2015-20 Overview, June 2015, including attachments* (JGN

Final Decision) pursuant to rule 62 of the NGR including the revisions the AER proposed to the access arrangement for JGN's gas distribution network in accordance with rule 64 of the NGR.

7. The *Access Arrangement, JGN's NSW gas distribution networks 1 July 2015 – 30 June 2020 (June 2015)* including the reference service agreement as revised in accordance with the JGN Final Decision (**JGN's AA**), and supporting access arrangement information, reflecting the JGN Final Decision, forms Schedule 1 of this undertaking.
8. On 24 June 2015, JGN filed an application to the Australian Competition Tribunal (the **Tribunal**) seeking leave to apply to the Tribunal for review of the JGN Final Decision in accordance with section 245 of the NGL.
9. On 30 July 2015 the Tribunal gave leave to JGN to seek review of the JGN Final Decision.
10. Pursuant to section 259(2)(c) of the NGL, on 26 February 2016 the Tribunal determined that the JGN Final Decision be set aside and remitted to the AER to make the decision again in accordance with its directions on:
 - a. cost of debt;
 - b. estimated cost of corporate income tax (**Gamma**);
 - c. capital expenditure; and
 - d. any other appropriate variations necessary in light of the other directions given by the Tribunal.
11. On 24 March 2016 the AER applied to the Federal Court for a judicial review of the Tribunal's decision.
12. In light of the ongoing legal proceedings, there was expected to be a significant delay in the AER remaking its decision with respect to JGN's revised access arrangement. This delay was expected to create some uncertainty for users about applicable reference tariffs and the legal effect of the terms and conditions of access to reference services.
13. Therefore, on 20 April 2016 JGN proffered an enforceable undertaking (**2016 EU**) which required JGN, for the period 1 July 2016 to 30 June 2017, to:
 - a. impose reference tariffs consistent with the initial reference tariffs identified in the Schedule of reference tariffs and charges 1 July 2015 to 30 June 2016, which formed Schedule 2 of the 2016 EU; and
 - b. otherwise provide reference services in accordance with all aspects of JGN's AA, including but not limited to:
 - i. Reference service agreement;

- ii. Efficiency carryover mechanism; and
 - iii. Pass through provisions.
- 14. On 20 May 2016, the AER accepted the 2016 EU.
- 15. Since the 2016 EU was accepted by the AER, the AER's application for judicial review of the Tribunal's decision has been heard by the Full Federal Court, however there was a further delay between the hearing of the review by the Court, and the publication of the Court's judgment.
- 16. As a consequence, on 18 May 2017, JGN proffered a further enforceable undertaking (2017 EU) which applied to the period 1 July 2017 to 30 June 2018, under which the AER and JGN agreed:
 - a. to make changes to the time periods for submission and assessment of the annual reference tariff variation notice, specified in clauses 3.6 and 3.8 of JGN's AA;
 - b. to apply modifications to the reference tariff variation mechanism in clause 3.2 of JGN's AA, including to fix the X-factor for the period 1 July 2017 to 30 June 2018 at 7%; and
 - c. that JGN would otherwise provide reference services in accordance with all aspects of JGN's AA, consistent with the equivalent provisions in the 2016 EU.
- 17. In a judgment published on 24 May 2017, the Full Federal Court ordered that the Tribunal's determination for JGN in relation to Gamma be set aside, and that the AER's application be otherwise dismissed. As a consequence, other than in relation to Gamma, the JGN Final Decision was remitted to the AER to make the decision again.
- 18. On 31 May 2017, the AER accepted the 2017 EU.
- 19. Since the 2017 EU was accepted by the AER, the AER has taken steps to consider its remittal approach for JGN. This has taken some time, as the AER awaited the outcome of proceedings in the Tribunal involving other distribution businesses, which the AER considered to be of relevance to the remittal.
- 20. JGN acknowledges that until such time as there is resolution of the matters covered by the Tribunal's remittal, there may be a further delay in the AER remaking its decision with respect to JGN's revised access arrangement. Such a delay may create uncertainty for users about applicable reference tariffs and the legal effect of the terms and conditions of access to reference services for the period 1 July 2018 to 30 June 2019.
- 21. To ameliorate this uncertainty, JGN has agreed to proffer this undertaking to the AER in respect of reference tariffs and other terms and conditions of access to reference services for the period 1 July 2018 to 30 June 2019.

Acknowledgements

22. JGN and the AER each acknowledge that:

- a. the reference tariffs provided for under the 2016 EU, 2017 EU and this undertaking are 'placeholder' reference tariffs, to apply while the legal proceedings were being resolved and the AER is remaking its decision with respect to JGN's revised access arrangement;
- b. as part of remaking its decision with respect to JGN's revised access arrangement, the AER will determine a revised revenue allowance for the current access arrangement period (i.e. the five-year period from 1 July 2015), and make adjustments to the X-factors for the remainder of the period to ensure that the total revenue allowance is equal to expected revenue over the five-year period, in NPV terms. The determination of tariff adjustments will reflect the application of a weighted average price cap form of control for the entirety of the current access arrangement period to ensure that JGN bears the demand forecasting risk (positive and negative) for the entirety of the current access arrangement period;
- c. JGN has submitted a rule change proposal to the Australian Energy Market Commission (AEMC) which, if the NGR is amended to include a new rule as proposed by JGN, would allow the recovery of JGN's revised revenue allowance for the current access arrangement period (as determined by the AER) to be spread over both the current access arrangement period and the next access arrangement period. The AEMC has commenced consultation on this rule change;
- d. the AER will make this undertaking publicly available including by publishing it on the AER's website; and
- e. the AER will, from time to time, make public reference to the undertaking including in news media statements and in AER publications.

Undertaking by JGN

23. JGN undertakes for the purposes of section 230A of the NGL that for the period from 1 July 2018 to 30 June 2019 JGN will:

- a. impose reference tariffs that have been set in accordance with the reference tariff variation mechanism in clause 3 of JGN's AA, subject to the following:

- i. the Variation Notice to be submitted under clause 3.6(a) in respect of variations to reference tariffs to apply from 1 July 2018 is to be submitted on or before 4 May 2018;
- ii. for the purposes of assessment of the Variation Notice referred to in subparagraph (i), the time periods referred to in clause 3.8 of JGN's AA are amended as follows:
 - A. the time period referred to in clause 3.8(a) and in line 1 of clause 3.8(c) is shortened to 20 Business Days;
 - B. the absolute time limit referred to in clause 3.8(c) is shortened to 30 Business Days;
 - C. the time period referred to in clause 3.8(d) is shortened to 30 Business Days;
- iii. in determining variations to reference tariffs to apply from 1 July 2018, the reference tariff variation mechanism specified in clause 3.2 of JGN's AA is to be applied with the following modifications:
 - A. t is the period 1 July 2018 to 30 June 2019;
 - B. p_t^{xy} is the proposed tariff for component y of Reference Tariff x for the period 1 July 2018 to 30 June 2019;
 - C. p_{t-1}^{xy} is the tariff for component y of Reference Tariff x that was imposed by JGN for the period 1 July 2017 to 30 June 2018 pursuant to the 2017 EU;
 - D. q_{t-2}^{xy} is the quantity of component y of Reference Tariff x that was sold in the period 1 July 2016 to 30 June 2017;
 - E. CPI_t means 1.91 per cent;
 - F. X_t means 0.054;
 - G. A_t and PT_t are zero;
- b. otherwise provide reference services in accordance with all aspects of JGN's AA, including but not limited to:
 - i. Reference service agreement
 - ii. Efficiency carryover mechanism
 - iii. Pass through provisions

Commencement and expiry of undertaking

24. This undertaking comes into effect when:
 - a. the undertaking is executed by JGN; and
 - b. the AER accepts the undertaking so executed.
25. Upon the commencement of this undertaking, JGN undertakes to assume the obligations set out in paragraph 23, to the extent that those obligations do not prevent JGN from complying with an applicable access arrangement made under Part 8 of the NGL.
26. Pursuant to section 230A(2) of the NGL, JGN may withdraw or vary this undertaking at any time with the consent of the AER.
27. Subject to paragraph 26, this undertaking expires immediately prior to revisions to JGN's access arrangement coming into effect in accordance with the AER's remade decision, or on 30 June 2019 (whichever is the earlier).

Withdrawal of 2017 EU

28. With the execution of the undertaking, the AER accepts the withdrawal of the 2017 EU effective 1 July 2018.

Executed by

Jemena Gas Networks (NSW) Ltd ACN 003 004 322, by its authorised officers pursuant to section 127(1) of the Corporations Act 2001



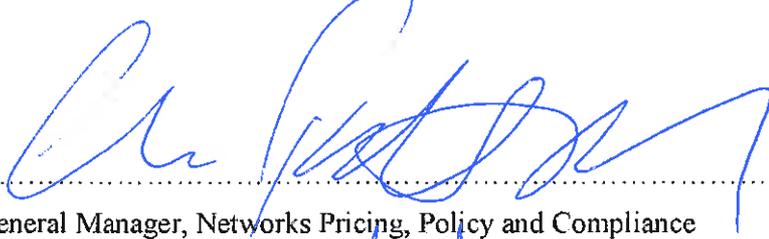
.....
Secretary/Director



.....
Director

This 18th day of April 2018

ACCEPTED BY THE AUSTRALIAN ENERGY REGULATOR PURSUANT TO SECTION 230A OF THE NATIONAL GAS LAW



.....
General Manager, Networks Pricing, Policy and Compliance

This 20th day of April 2018

SCHEDULE 1

Access arrangement

JGN's NSW gas distribution networks

1 July 2015 – 30 June 2020

[June 2015]

**(Incorporating revisions required by AER Final
Decision 3 June 2015)**

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JEMENA GAS NETWORKS (NSW) LTD

ACCESS ARRANGEMENT

1 Introduction

1.1 Access Arrangement

This document sets out the Access Arrangement that applies to the Network on and from the Effective Date. It contains revisions that have been made to the 2010-15 Access Arrangement, in accordance with the National Gas Law and the National Gas Rules. Supporting information is provided in the Access Arrangement Information that has been submitted as a separate document. There is also supporting information in the AER's Final Decision.

1.2 The Network

- (a) As at the Effective Date, the Network consists of approximately 25,400 kilometres of natural gas distribution systems in NSW with over 1,200,000 customer connections to these systems. A description of the Network is contained below and can also be found at <http://www.jemena.com.au>.
- (b) The Network is made up of four Covered Pipelines:
 - (i) NSW Distribution System;
 - (ii) Central West Distribution System;
 - (iii) Wilton-Newcastle trunk pipeline (the '**northern trunk**'); and
 - (iv) Wilton-Wollongong trunk pipeline (the '**southern trunk**').
- (c) The Network provides gas to consumers across Sydney, Newcastle, and Wollongong, as well as to more than 20 country centres.
- (d) The Service Provider is the authorised reticulator for the NSW Distribution System and the Central West Distribution System, under the Gas Supply Act.
- (e) The northern and southern trunks are part of the gas distribution system in the Newcastle, Sydney, Central Coast and Wollongong areas. On 29 June 2009, the NCC approved the reclassification of these trunk pipelines as distribution pipelines.
- (f) The northern trunk consists of the following four pipeline sections, between Wilton and Newcastle, each of which is licensed under the Pipelines Act:
 - (i) Wilton to Horsley Park Natural Gas Pipeline (Pipeline Licence No. 1);
 - (ii) Horsley Park to Plumpton Natural Gas Pipeline (Pipeline Licence No. 3);
 - (iii) Plumpton to Killingworth Natural Gas Pipeline (Pipeline Licence No. 7);
 - (iv) Killingworth to Kooragang Island Natural Gas Pipeline (Pipeline Licence No. 8).

- (g) The southern trunk consists of one pipeline section between Wilton and Wollongong, which is licensed under the Pipelines Act:
 - (i) Wilton to Wollongong Natural Gas Pipeline (Pipeline Licence No. 2).
- (h) Natural gas is delivered into the Network from the Moomba-Sydney Pipeline and its laterals, and from the Jemena-owned Eastern Gas Pipeline. A list of receipt points is set out at Schedule 9. This list may be updated by the Service Provider from time to time by notice to Users.
- (i) Schedule 10 provides maps which describe the location of the Network as at the Effective Date.

1.3 Review Submission Date

The review submission date is 30 June 2019.

1.4 Revision Commencement Date

The revision commencement date is 1 July 2020.

1.5 Definitions and interpretation

- (a) In this Access Arrangement, a term or expression starting with a capital letter:
 - (i) which is defined in Schedule 1 of this Access Arrangement, has the meaning given to it in Schedule 1; or
 - (ii) if not defined in Schedule 1 of this Access Arrangement, has the meaning given to it in the Reference Service Agreement,unless the context otherwise requires.
- (b) The interpretation clause in Schedule 1 sets out rules of interpretation for this Access Arrangement.

2 Services policy

2.1 The Services

- (a) The Service Provider provides the following Services on the Network:
 - (i) the reference service, being the Haulage Reference Service; and
 - (ii) Non-Reference Services.
- (b) A User or Prospective User who seeks to obtain the Reference Service or a Non-Reference Service must comply with the Request for Service procedures set out in Schedule 6 regardless of whether the User or Prospective User seeks to obtain a Service for the first time or a change to an existing Service to a Delivery Point.
- (c) The Service Provider's ability to offer a Service in response to a Request is subject to the Queuing Policy.
- (d) All Users of a Service are required to enter into a Service Agreement specific to the relevant User and that Service before receiving the Service and must agree to be bound by the provisions of the Operational Schedules in Schedule 7.

2.2 Haulage Reference Service

- (a) The Service Provider will make the Haulage Reference Service available to Users and Prospective Users.
- (b) The Haulage Reference Service is a Service for:
 - (i) the transportation of Gas by the Service Provider through the Network to a single eligible Delivery Point for use and consumption within the premises served by that Delivery Point;
 - (ii) meter reading and associated data activities, and the provision and maintenance of a standard metering installation at the Delivery Point as appropriate for the required capacity and meter reading frequency; and
 - (iii) ancillary activities as set out in the Reference Tariff Schedule, as may be requested by a User.
- (c) A delivery point is eligible for a Haulage Reference Service if:
 - (i) it is a Delivery Point existing on the Network to which a service designated as a reference service under the 2010-15 Access Arrangement is provided on the Effective Date; or
 - (ii) it is a new delivery point, established on or after the Effective Date, that is served from existing Network facilities, where:
 - (A) the maximum allowable operating pressure is less than or equal to 500 kPa and the Service Provider reasonably expects that the delivery point will consume less than 10 TJ per annum; or

- (B) the maximum allowable operating pressure is less than or equal to 1,050 kPa and the Service Provider reasonably expects that the delivery point will consume 10 TJ per annum or greater.

2.3 Terms and Conditions

- (a) Subject to clause 2.3(b), the terms and conditions upon which the Service Provider will supply the Haulage Reference Service are set out in the Reference Service Agreement in Schedule 4.
- (b) The Service Provider may seek the AER's approval to amend the terms of the Reference Service Agreement during the Access Arrangement Period in accordance with Division 10 of Part 8 of the National Gas Rules.

2.4 Non-Reference Services

The Service Provider offers the following Non-Reference Services on the Network to Users and Prospective Users:

- (a) the Interconnection of Embedded Network Service, which is described in clause 2.5 below; and
- (b) Negotiated Services, which are described in clause 2.6 below.

2.5 Interconnection of Embedded Network Service

The Interconnection of Embedded Network Service is a service provided by the Service Provider to an Embedded Network Operator for the establishment of a single Delivery Point on an Embedded Network connected to the Network, on the terms and conditions specified by the Service Provider upon application for this service ordinarily including those contained in Schedule 5.

2.6 Negotiated Services

- (a) Where a Prospective User has specific needs which differ from those which would be satisfied by the Reference Service or the Interconnection of Embedded Network Service, the Prospective User may seek to negotiate different terms and conditions as a Negotiated Service and enter into a Negotiated Service Agreement with the Service Provider.
- (b) Should a dispute arise between the Service Provider and a Prospective User about the provision of a Negotiated Service it will be resolved in accordance with the dispute resolution procedures in the National Gas Law and the National Gas Rules, unless the parties agree otherwise in the Negotiated Service Agreement.

3 Reference Tariff variation mechanism

3.1 Initial Reference Tariffs

- (a) The Initial Reference Tariffs for the Reference Service are set out in the Initial Reference Tariff Schedule. These will apply on and from the Effective Date, until varied in accordance with this clause 3.
- (b) The Service Provider may vary Reference Tariffs at any time during the Access Arrangement Period with the approval of the AER in accordance with this clause 3. Such variations may be effected through:
 - (i) Reference Tariff components, elements or variables comprised within any Reference Tariff;
 - (ii) the introduction of a new Reference Tariff (to apply in place of any pre-existing Reference Tariff);
 - (iii) the withdrawal of any Reference Tariff; or
 - (iv) any combination of these changes.

3.2 Annual Reference Tariff variation mechanism: Haulage Reference Tariffs

- (a) Where the Service Provider proposes to vary Reference Tariffs to apply from the start of the next Financial Year, the mechanisms set out below will apply.
- (b) The Service Provider may propose to vary Reference Tariffs consistent with the following tariff basket price control formula:

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

and rebalancing side constraint formula, for each Reference Tariff:

$$(1 + CPI_t)(1 - X_t)(1 + A_t)(1 + PT_t)(1 + 0.1) \geq \frac{\sum_{x=1}^n \sum_{y=1}^m p_t^{xy} q_{t-2}^{xy}}{\sum_{x=1}^n \sum_{y=1}^m p_{t-1}^{xy} q_{t-2}^{xy}}$$

where the Service Provider has n Reference Tariffs, which each have up to m tariff components, and where:

t is the Financial Year for which the tariffs are being set;

p_t^{xy} is the proposed tariff for component y of Reference Tariff x in Financial Year t , i.e. the new tariff to apply from the commencement of Financial Year t ,

- p_{t-1}^{xy} is the tariff for component y of Reference Tariff x that is being charged at the time the Variation Notice is submitted to the AER for assessment;
- q_{t-2}^{xy} is the quantity of component y of Reference Tariff x that was sold in Financial Year $t-2$;
- CPI_t means:
- (i) for the Financial Year beginning 1 July 2014 and ending 30 June 2015, 1.72 per cent;
 - (ii) for Financial Years beginning after 30 June 2015:
 - (A) the CPI for the December Quarter immediately preceding the start of the relevant Financial Year; divided by
 - (B) the CPI for the December Quarter immediately preceding the December Quarter referred to in paragraph (i);
 minus one,

provided that if the Australian Bureau of Statistics does not, or ceases to, calculate and publish the CPI, then in this Access Arrangement CPI will mean an inflation index or measure agreed between the AER and the Service Provider;
- X_t means the X factor for each Financial Year, determined in accordance with the JGN Revenue Model, updated for the return on debt in accordance with section 5;
- A_t is the automatic adjustment factor calculated in accordance with Schedule 3; and
- PT_t is the Cost Pass Through factor calculated in accordance with Schedule 3.

3.3 Intra-year Reference Tariff variation mechanism

The Service Provider can propose to vary Reference Tariffs during a Financial Year to apply at a date prior to the start of the next Financial Year, including for the purposes of passing-through an amount relating to a Cost Pass Through Event, as long as the Service Provider complies with the tariff basket price control formula set out in clause 3.2(b), and making such adjustments as necessary to vary the Reference Tariff for the remainder of the Financial Year.

3.4 Cost pass through

Cost Pass Through Events

- (a) The following are Cost Pass Through Events:
 - (i) Terrorism Event;
 - (ii) Natural Disaster Event;

- (iii) [DELETED]
- (iv) Insurance Cap Event;
- (v) Insurer Credit Risk Event;
- (vi) Network User Failure Event;
- (vii) Regulatory Change Event; and
- (viii) Service Standard Event.

Notification and AER determination of Cost Pass Through Events

- (b) The Service Provider may seek the approval of the AER to pass through costs where as a result of a Cost Pass Through Event , the Service Provider has incurred, or is likely to incur, higher costs in providing the Reference Service than it would have incurred but for that event and the change in costs (as opposed to the revenue impact) that the Service Provider has incurred and is likely to incur in any regulatory year of the access arrangement period, as a result of that event, exceeds one per cent of the smoothed total revenue for that regulatory year approved by the AER.
 - (i) [DELETED]
 - (A) [DELETED]
 - (B) [DELETED]
 - (ii) [DELETED].
- (c) The AER may require the Service Provider to pass through costs where, as a result of a Cost Pass Through Event, the Service Provider has incurred, or is likely to incur, lower costs in providing the Reference Service than it would have incurred but for that event and the change in costs (as opposed to the revenue impact) that the Service Provider has incurred and is likely to incur in any regulatory year of the access arrangement period, as a result of that event, is or is reasonably estimated to exceed one per cent of the smoothed total revenue for that regulatory year approved by the AER.
 - (i) [DELETED]
 - (ii) [DELETED].
- (d) If the Service Provider wishes to seek the approval of the AER to pass through costs pursuant to clause 3.4(b), the Service Provider must notify the AER within 90 Business Days of becoming aware that the relevant Cost Pass Through Event has occurred. Notification under this clause 3.4(d) is not an application to vary Reference Tariffs.
- (e) If a Cost Pass Through Event has occurred, or is likely to occur, which may or is likely to meet the relevant thresholds identified in clause 3.4(c), the Service Provider must notify the AER within 90 Business Days of becoming aware that the relevant Cost Pass Through Event has occurred. Notification under this clause 3.4(e) is not an application to vary Reference Tariffs.

- (f) The notification to the AER that a Cost Pass Through Event has occurred or is likely to occur pursuant to clause 3.4(d) or 3.4(e) is to take the form of a written statement which specifies:
 - (i) the details of the Cost Pass Through Event; and
 - (ii) the date on which the Cost Pass Through Event occurred.
- (g) Where the costs that are, or are likely to be, incurred, as a result of the Cost Pass Through Event are known (or able to be estimated to a reasonable extent), then those costs shall be notified to the AER together with the matters specified in clause 3.4(f).
- (h) Where the costs that have been, or are likely to be, incurred as a result of the Cost Pass Through Event are not known in whole or in part (or not able to be estimated to a reasonable extent) such that the costs cannot be included in the notification pursuant to clause 3.4(f), the Service Provider, must, as soon as practicable after the costs are known or can be estimated to a reasonable extent, provide a supplementary notice to the AER setting out those costs.
- (i) Within 40 Business Days of a Service Provider notifying the AER of the costs that have been or are likely to be incurred as a result of a Cost Pass Through Event (pursuant to either clause 3.4(g) or 3.4(h), as relevant), the AER must notify the Service Provider of its determination as to whether it considers a Cost Pass Through Event has occurred which satisfies the thresholds in clause 3.4(b) or clause 3.4(c), as relevant. The AER's determination must set out the amount that it has determined should be passed through in Reference Tariffs in respect of that Cost Pass Through Event (**Determined Pass Through Amount**).
- (j) In making a determination pursuant to clause 3.4(i), the AER must take into account:
 - (i) the matters and proposals set out in any statement given to the AER by the Service Provider under clause 3.4(f);
 - (ii) the change in the costs in the delivery of the Reference Service arising, or estimated to arise, as a consequence of the Cost Pass Through Event, as given to the AER by the Service Provider pursuant to clause 3.4(g) or 3.4(h), as relevant;
 - (iii) the efficiency of the Service Provider's decisions and actions in relation to the risk of the Cost Pass Through Event, including whether the Service Provider:
 - (A) has failed to take any action that could reasonably have been taken in respect of that event; or
 - (B) has taken or omitted to take any action in response to the event, where such action or omission has materially increased the magnitude of the change in costs in respect of the event;
 - (iv) the time cost of money based on the WACC for the Service Provider;
 - (v) the need to ensure that the Service Provider only recovers any actual or likely increment in costs to the extent that such increment is solely as a consequence of a Cost Pass Through Event;

- (vi) whether the costs of the Cost Pass Through Event have already been factored into the calculation of the Service Provider's annual revenue requirement, including in the calculation of the automatic adjustment factor; and
 - (vii) any other factors the AER considers relevant and consistent with the National Gas Law and National Gas Rules.
- (k) Subject to clause 3.4(l), the period in clause 3.4(i) can be extended:
- (i) by the time taken by the AER to obtain information from the Service Provider, obtain expert advice or consult about the notification in order to make a determination pursuant to clause 3.4(i); and/or
 - (ii) if the AER is satisfied that the making of a determination pursuant to clause 3.4(i) involves issues of such complexity or difficulty that the time limit fixed by clause 3.4(i) should be extended or further extended (if already extended by clause 3.4(k)(i) above). The AER may extend that time limit by a further period provided it has given written notice to the Service Provider of that extension not later than 10 Business Days before the expiry of that time limit.
- (l) Notwithstanding clause 3.4(k), there is an absolute time limit of 90 Business Days for the AER to make a determination pursuant to clause 3.4(i).
- (m) If the AER does not make a determination within the time limit fixed by clause 3.4(i) (if relevant, as extended by clause 3.4(k)) or clause 3.4(l) then:
- (i) in the case of a Cost Pass Through Event which results in an increase in costs, the AER is taken to have determined that the amount to be passed through is the amount set out in the Service Provider's notification (provided that if no amount is set out in such notification, the AER must go on to make a determination notwithstanding the time limit has expired);
 - (ii) in the case of a Cost Pass Through Event which results in a decrease in costs, the AER is taken to have determined that the amount to be passed through is zero.
- (n) Following the AER's determination, the Service Provider may, in the case of an event which increases costs, and must, in the case of an event which decreases costs, include some or all of that amount in any annual or intra-year Variation Notice.

3.5 Cost pass through events from immediately prior access arrangement period

- (a) Where a cost pass through event (as that term is defined in the access arrangement that applied to the Network in the immediately prior access arrangement period) occurs during the immediately prior access arrangement period and the increase or decrease in costs associated with the event was not passed through in Reference Tariffs in the immediately prior access arrangement period and is not included in the calculation of the automatic adjustment factor in the subsequent access arrangement period:
 - (i) where the AER has made a decision as to the amount that should be passed through as a consequence of the cost pass through event, the Service Provider may, in the case of an event which increases costs, and

must, in the case of an event which decreases costs, include some or all of that amount in any annual variation notice or intra-year variation notice in the access arrangement period in which the AER makes its decision or, to the extent it is impracticable to do so, in the subsequent access arrangement period;

- (ii) where the timing of the event was such that it was notified to the AER but the AER had not made a decision on the amount that should be passed through as a consequence of the cost pass through event before the end of the access arrangement period in which the event occurred, the AER must make a decision on the amount that should be passed through in respect of that event in the subsequent access arrangement period. Following the AER's decision (pursuant to the access arrangement that applied to the access arrangement period in which the event occurred), the Service Provider may, in the case of an event which increases costs, and must, in the case of an event which decreases costs, include some or all of that amount in any annual variation notice or intra-year variation notice in that subsequent access arrangement period;
- (iii) where the timing of the event was such that it was not notified to the AER in the immediately prior access arrangement period, the Service Provider may in the case of an event which increases costs, and must, in the case of an event which decreases costs, notify the AER of the event and make an application to pass through the increase or decrease in costs associated with that event. The notification by the Service Provider and AER's decision is to be made in accordance with the procedure set out in the access arrangement that applied in the immediately prior access arrangement period, but applying the relevant thresholds in the access arrangement that applies at the time at which the Service Provider notifies the AER. Following the AER's decision, the Service Provider may, in the case of an event which increases costs, and must, in the case of an event which decreases costs, include some or all of that amount in any annual variation notice or intra-year variation notice in that subsequent access arrangement period.

- (b) The principle in this clause 3.5 (that costs associated with cost pass through events in one access arrangement period which are not passed through in that period may be passed through in a later access arrangement period) is a fixed principle (as provided for in Rule 99 of the National Gas Rules). This fixed principle remains in force for the Access Arrangement Period covered by this Access Arrangement.

3.6 Reference Tariff variation procedures

Annual Variation Notice

- (a) If the Service Provider proposes to vary one or more Reference Tariffs to apply from the start of the next Financial Year, the Service Provider will submit a Variation Notice to the AER on or before 15 March or the next closest Business Day prior to the commencement of the next Financial Year that:
 - (i) includes a proposed revised Reference Tariff Schedule;
 - (ii) states the effective date of the proposed variation;

- (iii) demonstrates and explains how the proposal complies with the annual Reference Tariff variation mechanism specified in clause 3.2;
- (iv) includes a statement to support the Gas Quantity inputs in the annual Reference Tariff variation mechanism. The statement will be independently audited or verified, and the Quantity input must reflect the most recent actual Financial Year Quantity available at the time of submitting the Variation Notice. The actual Quantity will be provided as four quarters of Gas Quantity data reconciling to an annual total Gas Quantity;
- (v) sets out any Determined Pass Through Amount the Service Provider proposes to pass through in whole or in part in the next Financial Year; and
- (vi) sets out any pass through amounts arising from cost pass through events (as that term is defined in the access arrangement applying to this Network in the immediately prior access arrangement period) occurring in the immediately prior access arrangement period that the Service Provider is proposing to pass through in whole or in part in the next Financial Year.

3.7 Intra-year Variation Notice

- (a) If the Service Provider proposes in any Financial Year to vary one or more Reference Tariffs to apply at a date prior to the start of the next Financial Year, the Service Provider will submit a Variation Notice to the AER at least 50 Business Days prior to the date upon which it intends the varied Reference Tariffs to come into effect, that:
 - (i) includes a proposed revised Reference Tariff Schedule;
 - (ii) states the effective date of the proposed variation;
 - (iii) demonstrates and explains how the proposal complies with the intra-year Reference Tariff variation mechanism, as set out in clause 3.3;
 - (iv) includes a statement to support the Gas Quantity inputs in the Reference Tariff variation mechanism. The statement will be independently audited or verified, and the Gas Quantity inputs will reflect the most recent actual Quantity available at the time of submitting the Variation Notice;
 - (v) if the intra-year variation is for the purposes of passing through an amount relating to a Cost Pass Through Event, sets out any Determined Pass Through Amount the Service Provider proposes to pass through in whole or in part; and
 - (vi) sets out any pass through amounts arising from cost pass through events (as that term is defined in the access arrangement applying to this Network in the immediately prior access arrangement period) occurring in the immediately prior access arrangement period that the Service Provider is proposing to pass through in whole or in part.

3.8 Variation Notice assessment

- (a) Within 30 Business Days of receiving a Service Provider's Variation Notice, the AER will inform the Service Provider in writing of whether or not it has approved the proposed variation(s) to Reference Tariffs in the Service Provider's Variation Notice as compliant with the relevant Reference Tariff variation mechanism(s).

- (b) The AER must approve the proposed variation(s) to Reference Tariffs if they are compliant with the relevant Reference Tariff variation mechanism(s).
- (c) The 30 Business Day period may be extended (by giving written notice to the Service Provider) to account for the time taken by the AER to obtain further information from the Service Provider about the Variation Notice, obtain expert advice or to consult about the Variation Notice. There is an absolute time limit of 50 Business Days for the AER to complete the assessment of a Variation Notice.
- (d) If the AER fails to provide the Service Provider with written notification of its decision within 50 Business Days of receiving the Service Provider's Variation Notice, the AER will be deemed to have approved the variation proposed in the Variation Notice.
- (e) If the AER declines to approve any part of the proposal in the Variation Notice, the AER must provide the Service Provider with a written statement of reasons for that decision at the time it informs the Service Provider of its decision.
- (f) In the event that:
 - (i) the Service Provider does not submit proposed Reference Tariffs to apply from the start of the next Financial Year t in accordance with the procedure set out in clause 3.6(a); or
 - (ii) the AER decides that any part of the proposal in an annual Variation Notice is not compliant with the relevant Reference Tariff variation mechanism for a new Financial Year t ,

the AER will determine the Reference Tariffs for the Financial Year t that are compliant with the annual Reference Tariff variation mechanism by scaling all Reference Tariffs for Financial Year $t-1$, in the case of clause 3.8(f)(i) above, or non-compliant Reference Tariffs in the case of clause 3.8(f)(ii) those Reference Tariffs applicable in Financial Year $t-1$ in respect of which the AER has disallowed the Service Provider's proposed variations for Financial Year t , through application of the following formula:

$$(1 - CPI_t)(1 - X_t)(1 + A_t)(1 + PT_t)$$

where CPI_t , X_t , A_t and PT_t are as defined in clause 3.2(b).

- (g) For an intra-year Reference Tariff variation the AER will vary Reference Tariffs consistent with clause 3.3.
- (h) In the event that the AER decides that any part of the proposal in an intra-year Variation Notice is not compliant with clause 3.3, the Reference Tariffs will not be varied.
- (i) If a Determined Pass Through Amount is passed-through in Reference Tariffs under an intra-year variation, this amount is excluded from consideration for the purposes of calculating PT_t for any annual Reference Tariff variation proposed for the next Financial Year.

3.9 Revised Reference Tariff Schedule

- (a) Where Reference Tariffs are varied in accordance with clause 3.6, the Service Provider will publish a revised Reference Tariff Schedule on the Service Provider's website (which will replace the previously published version).
- (b) The revised Reference Tariff Schedule, including the changed Reference Tariffs, will take effect from the date specified in that revised Reference Tariff Schedule.

3.10 Other relevant matters

- (a) The Service Provider determines its Reference Tariffs based on a revenue requirement that uses a building block approach, which calculates total revenues for each Financial Year of the Access Arrangement Period on the basis that depreciation for establishing the opening Capital Base for the current Access Arrangement Period is based on forecast regulatory depreciation.
- (b) It is a fixed principle (as provided for in Rule 99 of the National Gas Rules) that depreciation for establishing the opening Capital Base will be based on forecast regulatory depreciation. This fixed principle remains in force for the Access Arrangement Period covered by this Access Arrangement. This principle is also fixed for the next access arrangement period.
- (c) In applying a Reference Tariff variation mechanism the Service Provider will adopt the following rounding conventions:
 - (i) all proposed Reference Tariff components, elements or variables will be rounded before being applied in a tariff variation formula; and
 - (ii) the number of decimal places used for rounding a component will be consistent with that used for the relevant Reference Tariff component, element or variable.
- (d) Where a clerical mistake, an accidental slip or omission, or a miscalculation, has been identified in the application of the annual Reference Tariff variation mechanism that applied in Financial Year $t-1$, that mistake, slip, omission or miscalculation may be corrected for the purposes of determining the value of Reference Tariff x in the application of the annual Reference Tariff variation mechanism for Financial Year t .
- (e) For the avoidance of doubt:
 - (i) to the extent the calculation of a Reference Tariff or component, element or variable of a Reference Tariff is based on a forecast or estimate, the fact that the actual amount of the parameter being forecast or estimated is different to the forecast or estimated amount does not constitute a mistake, slip, omission or miscalculation;
 - (ii) to the extent the Service Provider may have over or under recovered revenue as a consequence of a mistake, slip, omission or miscalculation being made in relation to the setting of a tariff that has been approved by the AER, no adjustment may be made to the Reference Tariffs or component, element or variable of a Reference Tariff under this clause 3.10(e)(ii) to reflect any over or under recovery amount; and

- (iii) the Service Provider may submit in an annual Variation Notice, a correction for past clerical mistakes, accidental slips or omissions or miscalculations. The AER may also make the Service Provider aware that a past clerical mistake, accidental slips or omissions or miscalculations has occurred and require all future tariff variation notifications to take account of that past clerical mistake, accidental slip or omission or miscalculation. The Service Provider may consult with the AER on past clerical mistakes, accidental slips or omissions or miscalculations.

4 Tariff Classes

4.1 Tariff Class Assignment

- (a) The Service Provider will assign each Delivery Point that receives a Haulage Reference Service with a Tariff Class in accordance with the tariff assignment criteria set out in the Reference Tariff Schedule. The Initial Tariff Classes are set out in the Initial Reference Tariff Schedule.
- (b) The assigned Tariff Class will determine which Reference Tariffs are payable by a User or to be paid by a Prospective User for receipt of a Haulage Reference Service at a specific Delivery Point, in accordance with the Reference Tariff Schedule.
- (c) Where a Delivery Point is eligible for more than one Tariff Class in accordance with the tariff assignment criteria set out in the Reference Tariff Schedule, the User or Prospective User may nominate in its Request for Service the Tariff Class to which it wants its Delivery Point assigned. The Service Provider may refuse such a nomination by a User or Prospective User if it does not consider the Delivery Point to be eligible for the Tariff Class nominated.
- (d) On request, a User or Prospective User must provide the Service Provider with sufficient information to enable the Service Provider to apply the tariff assignment criteria set out in the Reference Tariff Schedule and assign each Delivery Point that receives a Haulage Reference Service with a Tariff Class.

4.2 Tariff Class Re-assignment

- (a) The Service Provider may re-assign a Delivery Point to one or more different Tariff Classes in accordance with the tariff assignment criteria set out in the Reference Tariff Schedule at any time where:
 - (i) the Delivery Point has previously been wrongly assigned to a Tariff Class;
 - (ii) the Delivery Point no longer qualifies for the assigned Tariff Class; or
 - (iii) the Tariff Class has been withdrawn.
- (b) A User may request re-assignment of a Tariff Class for the Delivery Point:
 - (i) at any time if it can demonstrate to the Service Provider's reasonable satisfaction that there has been a change in Energy requirements of an end customer(s) who is supplied with, and consumes, Energy at the premises served by the Delivery Point, in which case re-assignment may be requested based on that change; and
 - (ii) for any other reason, but not more than once a Year in respect of the same Delivery Point.
- (c) The Service Provider will determine a User's request for re-assignment of a Delivery Point in accordance with the tariff assignment criteria set out in the Reference Tariff Schedule. The Service Provider will inform the User of its decision in respect of the request for re-assignment. If the Service Provider decides not to re-assign a Delivery Point or decides to re-assign a Delivery Point

to a Tariff Class other than that proposed by the User, the Service Provider must inform the User of its reasons for the decision.

5 Return on debt

5.1 Return on debt formula

The return on debt for each Financial Year of the Access Arrangement Period is to be calculated as follows:

- (a) For Financial Year 2015-16: $kd_{2015-16} = R_{2015-16}$;
- (b) For Financial Year 2016-17: $kd_{2016-17} = (0.9 \times R_{2015-16}) + (0.1 \times R_{2016-17})$;
- (c) For Financial Year 2017-18: $kd_{2017-18} = (0.8 \times R_{2015-16}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18})$;
- (d) For Financial Year 2018-19: $kd_{2018-19} = (0.7 \times R_{2015-16}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18}) + (0.1 \times R_{2018-19})$;
- (e) For Financial Year 2019-20: $kd_{2019-20} = (0.6 \times R_{2015-16}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18}) + (0.1 \times R_{2018-19}) + (0.1 \times R_{2019-20})$,

where:

kd_t is the return on debt for Financial Year t of the Access Arrangement Period;

and

R_t is the annual return on debt observation for each Financial Year t of the Access Arrangement Period (other than Financial Year 2015-16), calculated in accordance with section 5. For Financial Year 2015–16, $R_t = 4.28$ per cent.

5.2 Calculation of the annual return on debt observation

- (a) The return on debt observation for each Financial Year will be calculated by automatic application of the following formula. This requires three stages:
 - (i) the adjusted RBA estimate
 - (ii) the adjusted BVAL estimate
 - (iii) the final estimate—where the AER combines its implementations of the RBA estimate and the BVAL estimate.
- (b) These formula steps relate to the approach specified in the AER's Final Decision . In the event that data availability changes during the access arrangement period, the formulas below will change to reflect the contingencies set out in section 5.4.

Calculation of the adjusted RBA estimate

- (c) Download RBA table F3—'Aggregate measures of Australian corporate bond yields' from the RBA website.
- (d) From this file, download the 7 and 10 year 'Non-financial corporate BBB-rated bonds—Yield' entries for dates:

- (i) from the most recent published RBA date prior to the commencement of the nominated averaging period for debt
 - (ii) to the first published RBA date following the conclusion of the nominated averaging period for debt
 - (iii) all published dates between i. and ii.
- (e) Download, from RBA table F16—'Indicative Mid Rates of Commonwealth Government Securities - 2013 to Current', daily yields on CGSs for dates within the service provider's averaging period.
- (f) Linearly interpolate between the two nearest bonds straddling 7 years remaining term to maturity, and the two nearest CGS bonds straddling 10 years remaining term to maturity. This should be done using the following formula:
- (i)
$$\text{yield}_{\text{interpolated}} = \text{yield}_{\text{lower straddle bond}} + (\text{yield}_{\text{upper straddle bond}} - \text{yield}_{\text{lower straddle bond}}) * (\text{date}_{10 \text{ years from interpolation date}} - \text{maturity}_{\text{lower straddle bond}}) / (\text{maturity}_{\text{upper straddle bond}} - \text{maturity}_{\text{lower straddle bond}}).$$
- (g) Linearly extrapolate the published RBA 10 year yield (from step 5.2(d)) from its published effective term to an effective term of 10 years using the formula in schedule 8—clause 1.1.
- (h) Linearly extrapolate the published RBA 7 year yield (from step 5.2(d)) from its published effective term to an effective term of 7 years using the formula in schedule 8—clause 1.2(b).
- (i) Subtract from the extrapolated 10 year RBA yield on each publication date the interpolated CGS yield on that date. For the 10 year term, use the RBA series as adjusted in step 5.2(g). These are the adjusted RBA 10 year spreads.
- (j) Obtain daily RBA spread estimates by linear interpolation of the adjusted RBA spreads (from steps 5.2(g) and 5.2(h)) for both 7 and 10 year terms between the published dates identified in step 5.2(d). Use the adjusted RBA spread estimates as calculated in step 5.2(i). This should be done using the following formula:
- (i)
$$\text{spread}_{\text{interpolated}} = \text{spread}_{\text{first straddling publication date}} + (\text{date}_{\text{interpolation}} - \text{date}_{\text{first straddling publication date}}) * (\text{spread}_{\text{second straddling publication date}} - \text{spread}_{\text{first straddling publication date}}) / (\text{date}_{\text{second straddling publication date}} - \text{date}_{\text{first straddling publication date}})$$
- (k) If the annual return on debt estimate must be finalised before a final published RBA month-end estimate is available, hold the last observed RBA spread constant to the end of the averaging period.
- (l) Add to these daily spreads (from step 5.2(j)), daily interpolated estimates of the CGS (from step 5.2(f)) for all business days in the service providers averaging period. Specifically:
- (i) add the 7 year interpolated CGS estimates to the 7 year interpolated RBA spreads. These are the interpolated RBA daily 7-year yield estimates.
 - (ii) add the 10 year interpolated CGS estimate to the 10 year interpolated RBA spread. These are the interpolated RBA daily 10-year yield estimates.

- (m) Convert the interpolated daily yield estimates (from step 5.2(l)) to effective annual rates, using the formula:
- (i) $\text{effective annual rate} = ((1 + \text{yield} / 200)^2 - 1) * 100$
- (n) Average the yield estimate for the 10 year RBA yield estimate over all business days in the service provider's averaging period. This is the adjusted RBA estimate.

Calculation of the adjusted BVAL estimate

- (o) For dates after 14 April 2015, download the 10 year Corporate BBB rated Australian BVAL curve (BVCSAB10). For dates before 14 April 2015, download from Bloomberg the 7 year Corporate BBB rated Australian BVAL curve (BVCSAB07 index) for all business days in the Service Provider's averaging period.
- (p) For dates before 14 April 2015, add to the 7 year yield the difference between the 7 and 10 year daily RBA adjusted yields (as calculated in steps 5.2(g) and 5.2(h) of the RBA process). This is the extrapolated daily estimate of the BVAL 10 year yield.
- (q) For all dates, convert the 10 year yields into effective annual rates, using the formula:
- (i) $\text{effective annual rate} = ((1 + \text{yield} / 200)^2 - 1) * 100$
- (r) Average the extrapolated daily estimates of the BVAL 10 year yield over all business days in the service provider's averaging period. This is the adjusted BVAL estimate.

Final estimate

- (s) Take the simple average of the adjusted RBA estimate (from step 5.2(n) in the RBA data section) and the adjusted BVAL estimate (from step 5.2(r) in the BVAL data section). This is the annual estimate of the return on debt.
- (t) For the purposes of clause 5.2, business day means a day other than a Saturday, Sunday or a day recognised as a national public holiday or a public holiday in NSW.

5.3 [DELETED]

5.4 Annual return on debt observation where relevant data not available

For any Financial Year of the Access Arrangement Period, with the exception of the Financial Year 2015-16, for which an annual return on debt observation cannot be calculated in accordance with clause 5.2, due to changes in data availability, adjust the approach in accordance with the contingencies as follows:

Event	Change to approach
Either the RBA or Bloomberg ceases publication of Australian	The AER will estimate the annual return on debt using the remaining curve.

Event	Change to approach
yield curves that reflect a broad BBB rating.	
A different third party commences publication of a 10 year yield estimate.	The AER will not apply estimates from a third party data provider that it has not evaluated and included during the determination process. The AER will consider any new data sources in future determinations.
Either Bloomberg or RBA substitutes its current methodology for a revised or updated methodology.	The AER will adopt the revised or updated methodology. Then, at the next regulatory determination, the AER will review this updated methodology. As noted above, the AER would also review any new data sources.
Bloomberg reduces the maximum published BVAL term from 7 years	<p>If Bloomberg still publishes the BVAL curve to 5 or more years, the AER will extrapolate the BVAL curve from the longest published term using the 5 to 10 year yield margin from the RBA curve. The AER has adopted this approach for the period from 15 September 2014 to 3 November 2014 where the 7 year BVAL curve was unavailable.</p> <p>If Bloomberg no longer publishes the BVAL curve to 5 years, the AER will rely entirely on the RBA curve.</p>
The RBA ceases publication of a 10 year yield estimate.	<p>If the RBA ceases publication of a 10 year yield estimate, the AER will extrapolate the RBA estimate to 10 years using:</p> <ul style="list-style-type: none"> • if available, the margin between spreads in the Bloomberg curve,¹ from the RBA's longest published effective term to 10 years <p>otherwise, the actual CGS margin from the RBA's longest published estimate to 10 years, plus the average DRP spread for the same term margin over the last month prior to the end of its publication.</p>
Bloomberg increases the maximum published BVAL term from 7 years.	<p>If the longest published term is between 7–10 years, the AER will extrapolate it to a 10 year term using the corresponding margin from the RBA curve.</p> <p>If the longest term is 10 or more years, the AER will apply the 10 year BVAL curve un-extrapolated, but still adjusted to be an effective annual rate.</p>
The RBA commences publication of daily estimates.	The AER will cease interpolating the RBA monthly yields. Instead, the AER will estimate both the RBA yield and the RBA year

¹ Specifically, the spread to CGS.

Event	Change to approach
	extrapolation margin (used with the BVAL curve) using these daily estimates.
Either Bloomberg or the RBA publishes a BBB+ or utilities specific yield curve.	The AER will adopt the BBB+ or utilities curve in place of the provider's existing curve, on the basis that it is a closer fit to the AER's benchmark efficient entity.

5.5 Averaging periods

- (a) The averaging periods specified in confidential appendix J of attachment 3 of the AER's Final Decision must be used for the purposes of calculating the annual return on debt observation for each Financial Year of the Access Arrangement Period,

5.6 [DELETED]

5.7 [DELETED]

5.8 Notification and AER determination of the annual return on debt observation

- (a) In the 'Inputs|Costs' sheet of JGN's revenue model, update the relevant cell to reflect the updated return on debt estimate (kd_t). This is:
- (i) $kd_{2016-17}$: Cell O240
 - (ii) $kd_{2017-18}$: Cell P240
 - (iii) $kd_{2018-19}$: Cell Q240
 - (iv) $kd_{2019-20}$: Cell R240.
- (b) Then, set all subsequent estimates equal to the most recently updated return on debt value. For example, when updating the return on debt portfolio for $kd_{2017-18}$, update the cells for 2018–19 (Q240) and 2019–20 (R240) so they are equal to $kd_{2017-18}$ (P240).
- (c) On the 'Calc|X factor' sheet of JGN's revenue model, update the relevant X factor as follows:
- (i) $kd_{2016-17}$: 'Solve year 2'
 - (ii) $kd_{2017-18}$: 'Solve year 3'
 - (iii) $kd_{2018-19}$: 'Solve year 4'
 - (iv) $kd_{2019-20}$: 'Solve year 5'.
- (d) The AER will notify JGN of the updated Return on Debt and X factor within 15 business days after the end of JGN's averaging period.

5.9 [DELETED]

5.10 [DELETED]

6 Speculative capital expenditure and investment policy

6.1 General

- (a) If, during the Access Arrangement Period, the Service Provider makes capital expenditure (in whole or in part) that is non-conforming capital expenditure under the National Gas Rules, it may:
 - (i) recover the amount of the expenditure in full or in part by means of a capital contribution by a User or Users; and/or
 - (ii) notify the AER that it proposes to recover the amount or part of the amount of the expenditure by means of a surcharge to be approved by the AER,in accordance with the National Gas Rules.
- (b) To the extent that the amount of the non-conforming capital expenditure is not to be recovered pursuant to clause 6.1(a) above, the Service Provider will add that amount to its speculative capital expenditure account in accordance with the National Gas Rules.

7 Queuing policy

7.1 Forming a queue

- (a) Where the Service Provider receives a Request from a User or Prospective User, and there is insufficient capacity to satisfy the Request, a queue will be formed.
- (b) A queue will include all relevant Requests which cannot be satisfied. When the queue is formed, the following priorities will apply:
 - (i) where an offer to provide a Service has been made in response to a Request received prior to formation of the queue, that Request will take first position in the queue;
 - (ii) where a number of offers have been made in response to Requests received prior to the formation of the queue, those Requests will take positions in the queue according to the Priority Date of those Requests on a “first in, first served” basis, and will be ahead of any Requests for which offers have not been made at the time of the formation of the queue;
 - (iii) other Requests made before the formation of the queue will take their positions in the queue according to the Priority Date of those Requests, on a “first in, first served” basis, but subject to clauses 7.3 and 7.4 and behind any Requests described in clauses 7.1(b)(i) or 7.1(b)(ii) above;
 - (iv) subject to clauses 7.3 and 7.4, requests made after the formation of the queue will take their positions in the queue according to the Priority Date of those Requests on a “first in, first served” basis.
- (c) At the time a Request is placed in a new or existing queue, the Service Provider will advise a User or Prospective User of:
 - (i) its position in the queue;
 - (ii) the aggregate capacity sought by Requests which are ahead in the queue;
 - (iii) its estimate of when capacity may become available; and
 - (iv) the amount any surcharge that may apply to Developable Capacity.
- (d) When the position of a Request changes relative to other Requests which are ahead in the queue (such as where a Request ceases to be in the queue) or where the timing of availability of a new tranche of Developable Capacity changes, the Service Provider will provide revised information to the User or Prospective User.
- (e) Where a Request is made for a Service to a Delivery Point and the Service Provider is satisfied that the Request is for the same tranche of capacity which is already provided to another User in respect of that Delivery Point, then the Service Provider may make that tranche of capacity available in response to the Request to the extent that the existing User is otherwise entitled to maintain or extend that tranche of capacity. That Request does not form part of the queue.

7.2 Conditions applicable on queue

- (a) Following a Prospective User's Request forming, or being added, to a queue:
 - (i) the Prospective User may, by notice to the Service Provider, reduce but not increase the capacity sought in a Request which is in a queue;
 - (ii) once every three months, the Service Provider may seek confirmation from the Prospective User that it wishes to continue with its Request. If the Prospective User fails to respond within 14 days, the Request will be deemed to have lapsed.
- (b) A Prospective User must advise the Service Provider if it does not wish to proceed with a Request that is in a queue, which will then lapse.
- (c) Any lapsed Request will be removed from the queue and priority will be lost.
- (d) A Prospective User may only assign a Request in a queue to a bona fide purchaser of the Prospective User's business and/or assets, subject to that purchaser being able to demonstrate, if requested by the Service Provider, its ability to meet all financial obligations and demonstrate credit worthiness pursuant to clause 28 of the Reference Service Agreement.
- (e) If there is a transfer of a controlling interest in the shares of the Prospective User that has a Request in a queue, the Service Provider may request that the transferee of those shares demonstrate its ability to provide security pursuant to clause 28 of the Reference Service Agreement in the event that an offer of capacity is made to the Prospective User. In the event the transferee fails to demonstrate that ability, the Service Provider may deem a Request to have lapsed.

7.3 Procedure when capacity can be made available

When capacity can be made available which meets in full or in part the requirements of any Request in a queue:

- (a) the Service Provider will advise each of those Users and Prospective Users of its plans to make capacity available, the capacity that is available, and the terms and conditions on which the capacity will be available;
- (b) the available capacity will be progressively offered to each User and Prospective User in the queue in order of priority (notwithstanding that such capacity may not be sufficient to meet the needs of any such User or Prospective User); and
- (c) a Prospective User will have 20 Business Days after an offer of capacity is made to enter into a Service Agreement (conditional, if necessary, on the Service Provider entering into Service Agreements with other Prospective Users), failing which:
 - (i) if the offer of capacity meets in full the requirements of a Request, that Request will lapse and lose priority to those entering into such a Service Agreement (upon that Service Agreement becoming unconditional);
 - (ii) if the offer of capacity meets in part the requirements of the Request, the position of the Request in the queue will be held until capacity that meets the requirements of the Request in full is available, at which point the

Request will be prioritised ahead of others in the queue that were received at a later date.

7.4 Priority of Prospective Users in obtaining Services

- (a) The Priority Date of a Request is the date a complete Request is received by the Service Provider.
- (b) Where the Service Provider determines that two or more Requests relate to the same tranche of capacity for the same Delivery Point, all those Requests will have the Priority Date of the earliest of those Requests.
- (c) A Request for a Service relating to less than 1 TJ of Gas per annum will have priority over a Request for a Service relating to more than 1 TJ of Gas per annum.
- (d) A Request for the Reference Service will have priority over a Request for a Negotiated Service.

7.5 Compensation for holding capacity

- (a) The Service Provider may require the User or Prospective User to pay compensation for the Service Provider agreeing to commence a Service more than 20 Business Days from the execution of a Service Agreement where the commitment of capacity to meet the requirements of the User or Prospective User contributes to:
 - (i) the continuation of a queue,
 - (ii) the formation of a queue at any time prior to the commencement date for that Service; or
 - (iii) the acceleration of investment by the Service Provider to provide capacity for other Users on the transportation route.

7.6 General

- (a) A Request will not lapse and will retain its priority in a queue in the event of a dispute about that Request being notified, until that dispute has been resolved in accordance with the National Gas Law and National Gas Rules.
- (b) Where a queue exists a Prospective User must on request demonstrate to the Service Provider that the Prospective User will have access to a supply of gas at the time it is anticipated that the Prospective User will be offered access to the Service.
- (c) When administering a queue (including but not limited to forming a queue, assigning priority within a queue and determining when to or when not to offer capacity in response to a Request), the Service Provider may take into account a connection contract that the Service Provider has entered into, including a connection contract under Part 12A of the National Gas Rules. In that circumstance the Priority Date of the corresponding Request will be the earlier of the date of the Request and the date on which the connection contract was made.

8 Extensions and expansions policy

8.1 Method for determining if extension or expansion forms part of the Covered Pipeline

The method below shall be used to determine whether an extension or expansion of a Covered Pipeline should be taken to form part of the Covered Pipeline.

- (a) Subject to clause 8.1(d) , if the Service Provider proposes a new network section of the Covered Pipeline, it must apply to the AER in writing to decide whether the Access Arrangement will apply to incremental services to be provided by the new network section. The application must include the information required by clause 8.1(c);
- (b) For the purposes of this clause 8.1, a new network section means an extension to the Service Provider's Covered Pipeline where that extension has a direct connection to a transmission pipeline and which is designed to provide reticulated Gas either to a new development or an existing development not serviced with reticulated Gas;
- (c) The Service Provider must apply to the AER under clause 8.1(a) before the proposed new network section comes into service:
 - (i) in writing;
 - (ii) stating whether the Service Provider intends for the Access Arrangement to apply to incremental services to be provided as a result of the proposed new network section; and
 - (iii) describing the new network section and setting out why it is being undertaken.
- (d) The Service Provider is not required to advise the AER under clause 8.1(a) if the cost of the new network section has already been included in the calculation of Reference Tariffs, in which case the Access Arrangement applies to the incremental services to be provided by the new network section.
- (e) After considering the Service Provider's application, and undertaking such consultation as the AER considers appropriate, the AER will inform the Service Provider of its decision on the Service Provider's proposed coverage approach for the new network section.
- (f) The AER's decision referred to in clause 8.1(e) above, may be made on such reasonable conditions as determined by the AER and will have the effect stated in the decision.

8.2 General

- (a) This Access Arrangement will apply to incremental services to be provided as a result of any extensions to and expansions of the capacity of the Network which are not new network sections within the meaning of clause 8.1(b).
- (b) This Access Arrangement will apply to incremental services to be provided by all extensions to existing low or medium pressure pipelines and expansions of low and medium pressure capacity of the Network carried out by the Service Provider.

- (c) The Service Provider will offer the Reference Service in respect of any extensions or expansions to which this Access Arrangement applies at the Reference Tariffs.
- (d) The Service Provider will notify the AER of any proposed surcharge to be levied on users of incremental services and designed to recover non-conforming capital expenditure or a specified portion of non-conforming capital expenditure (non-conforming capital expenditure which is recovered by means of a surcharge will not be rolled into the capital base).

9 Capacity trading

9.1 Transfer of contracted capacity for a Haulage Reference Service

A User may transfer all or any of its contracted capacity for a Haulage Reference Service to another User in accordance with the provisions of the Reference Service Agreement.

9.2 Transfer of contracted capacity for a Pipeline Service other than a Haulage Reference Service

A User may transfer all or any of its contracted capacity for a Pipeline Service other than a Haulage Reference Service to another User in accordance with the provisions of its Service Agreement with the Service Provider to the extent those provisions are consistent with the capacity trading requirements in the National Gas Rules.

10 Changing receipt and delivery points

10.1 Change of Receipt Point or Delivery Point for a Haulage Reference Service

A User may, with the Service Provider's consent, change the User's Receipt Point or Delivery Point for the delivery of a Haulage Reference Service in accordance with the provisions of the Reference Service Agreement.

10.2 Change of Receipt Point or Delivery Point for a Pipeline Service other than a Haulage Reference Service

A User may, with the Service Provider's consent, change the User's Receipt Point or Delivery Point for the delivery of a Pipeline Service other than a Haulage Reference Service in accordance with the provisions of its Service Agreement with the Service Provider to the extent those provisions are consistent with the provisions governing the change of Receipt and Delivery Points by Users in the National Gas Rules.

10.3 Service Provider's consent

The Service Provider must not withhold its consent under clause 10.1 or clause 10.2, as relevant, unless it has reasonable grounds, based on technical or commercial considerations, for doing so.

11 Consolidated Access Arrangement

11.1 Consolidated Access Arrangement

- (a) The AER issued a direction to the Service Provider under Rule 53 of the National Gas Rules to consolidate the access arrangements for its four Covered Pipelines:
 - (i) Wilton-Newcastle trunk pipeline;
 - (ii) Wilton-Wollongong trunk pipeline;
 - (iii) NSW Distribution System; and
 - (iv) Central West Distribution System,subject to the following conditions:
 - (v) the consolidation remains in force until revoked by the AER; and
 - (vi) the Service Provider must separately prepare, maintain and keep information about the Capital Base of the:
 - (A) Wilton-Newcastle trunk pipeline;
 - (B) Wilton-Wollongong trunk pipeline; and
 - (C) the NSW Distribution System and the Central West Distribution System.
- (b) The AER must notify the Service Provider no later than 18 months prior to the Revision Commencement Date if it intends to revoke its direction to the Service Provider to consolidate the access arrangements for its four Covered Pipelines.

11.2 Fixed principle

The principle in clause 11.1 is a fixed principle (as provided for in Rule 99 of the National Gas Rules). This fixed principle remains in force for the Access Arrangement Period covered by this Access Arrangement. The principle is also fixed for the next access arrangement period.

12 Operating expenditure efficiency carryover mechanism

12.1 Incentive mechanism

- (a) The incentive mechanism will apply to operating expenditure.
- (b) The incentive mechanism will operate in the following way:
 - (i) the Service Provider will retain the benefit of actual operating expenditure being lower, or incur the cost of actual operating expenditure being higher, than forecast operating expenditure included in the Total Revenue in each Financial Year of the Access Arrangement Period;
 - (ii) the mechanism carries forward the Service Provider's incremental efficiency gains (or losses) for five Financial Years from the Financial Year those gains (or losses) occur;
 - (iii) annual carryover amounts accrue in each Financial Year of the subsequent access arrangement period as the summation of the incremental efficiency gains (or losses) in the immediately prior access arrangement period that are carried forward for five years or less into the Financial Year; and
 - (iv) the annual carryover amounts are added to the Service Provider's Total Revenue in each Financial Year of the subsequent access arrangement period. If necessary, the annual efficiency gain (or loss) is carried forward into the access arrangement period commencing 1 July 2020 until it has been retained by the Service Provider for a period of five years.
- (c) The incremental efficiency gain (or loss) for the Financial Year 2015-16 will be calculated as:

$$F_{2015-16} - A_{2015-16}$$

where:

$F_{2015-16}$ is the forecast operating expenditure for Financial Year 2015-16; and

$A_{2015-16}$ is the actual operating expenditure for Financial Year 2015-16.

- (d) The incremental efficiency gain (or loss) for Financial Years 2016-17 to 2018-19 (inclusive) will be calculated as:

$$E_t = (F_t - A_t) - (F_{t-1} - A_{t-1})$$

where:

E_t is the incremental efficiency gain (or loss) in Financial Year t of the Access Arrangement Period;

F_t is the forecast operating expenditure in Financial Year t of the Access Arrangement Period;

A_t is the actual operating expenditure in Financial Year t of the Access Arrangement Period;

F_{t-1} is the forecast operating expenditure in Financial Year $t-1$ of the Access Arrangement Period; and

A_{t-1} is the forecast operating expenditure in Financial Year $t-1$ of the Access Arrangement Period.

- (e) Actual operating expenditure in the Financial Year 2019-20 is to be estimated using the following equation:

$$A_{2019-20} * = A_{2018-19} + F_{2019-20} - F_{2018-19}$$

where:

$A_{2019-20} *$ is the estimate of operating expenditure for Financial Year 2019-20;

$A_{2018-19}$ is the actual operating expenditure for Financial Year 2018-19;

$F_{2019-20}$ is the forecast operating expenditure for Financial Year 2019-20; and

$F_{2018-19}$ is the forecast operating expenditure for Financial Year 2018-19.

- (f) For the avoidance of doubt:
- (i) the incremental efficiency gain (or loss) for Financial Year 2019-20 will be assumed to equal zero;
 - (ii) the incremental efficiency gain (or loss) for Financial Year 2020-21 will be carried over for 5 years and be calculated with reference to the actual operating expenditure for Financial Year 2019-20 and not $A_{2019-20} *$; and
 - (iii) the incremental efficiency gains (or losses) are carried over from Financial Year to Financial Year in real dollars to ensure that these gains (or losses) are not eroded by inflation. The price indices used in this calculation are to be consistent with those used in the Access Arrangement Information.
- (g) Increments or decrements from the summation of incremental efficiency gains or losses calculated in accordance with the approved incentive mechanism in the Access Arrangement Period will give rise to an additional 'building block' in the calculation of the Total Revenue amounts for each Financial Year of the subsequent access arrangement period.
- (h) The following costs will be excluded from the operation of the efficiency carryover mechanism:
- (i) UAG Costs;
 - (ii) licence fee costs;
 - (iii) debt raising costs;
 - (iv) Carbon Costs;
 - (v) the cost of any Relevant Tax; and

- (vi) any cost category that: (1) is not forecast using a single year revealed cost approach in the access arrangement period following this Access Arrangement Period (intended to commence 1 July 2020); and (2) the AER determines, as part of a decision on revisions to apply to this Access Arrangement (and following the consultation processes associated with that decision), to exclude from the operation of the efficiency carryover mechanism because it is satisfied that it would not promote the National Gas Objective.
- (i) For the avoidance of doubt, the forecast expenditure amounts that are used as the basis for measuring efficiencies are equal to the forecast operating cost for that year as shown in the table below, which exclude the costs listed in clause 12.1(h), adjusted for any Determined Pass Through Amounts:

	2015-16	2016-17	2017-18	2018-19	2019-20
Forecast operating expenditure for incentive mechanism purposes (\$million, real 2015)	137.08	137.92	138.84	143.45	142.67

- (j) Where the Service Provider changes its approach to classifying costs as either capital expenditure or operating expenditure during the Access Arrangement Period, the Service Provider will adjust the forecast operating expenditure in the Access Arrangement Information so that the forecast expenditures are consistent with the capitalisation policy changes.
- (k) If there is a change in the Service Provider's approach to classifying costs as either capital expenditure or operating expenditure, the Service Provider must provide to the AER a detailed description of the change and a calculation of its impact on forecast and actual operating expenditure.

12.2 Fixed principle

Except for clause 12.1(h)(vi), the principle in clause 12.1 is a fixed principle (as provided for in Rule 99 of the National Gas Rules). This fixed principle remains in force for the Access Arrangement Period covered by this Access Arrangement. The principle is also fixed for the next two access arrangement periods.

Schedule 1 Definitions and interpretation

1 Definitions

In this Access Arrangement:

2010-15 Access Arrangement means the Access Arrangement that applied to the Network immediately prior to the Effective Date, as approved by the AER on 11 June 2010, amended by order of the Australian Competition Tribunal on 30 June 2011, and further amended by the AER on 26 September 2011;

2010-15 Access Arrangement Period means the period during which the 2010-15 Access Arrangement applied to the Network;

Access Arrangement means this arrangement setting out terms and conditions for access to the Services provided by the Service Provider that is lodged with, and approved by, the AER under the National Gas Rules;

Access Arrangement Information means the information relating to this Access Arrangement and submitted by the Service Provider pursuant to Rule 42 of the National Gas Rules, amended to reflect the AER's Final Decision;

Access Arrangement Period means, for this Access Arrangement, the period commencing from the Effective Date until the revisions to this Access Arrangement take effect (intended to be 1 July 2020);

AER means the Australian Energy Regulator established by section 44AE of the *Competition and Consumer Act 2010* (Cth);

AER's Final Decision means the final decision of the AER under Rule 62 of the National Gas Rules;

Applicable Law means any legislation, subordinate legislation, licence, code, rules, sub-code, guideline, safety case, order or regulation that applies to the Service Provider, the Network, the operation of the Network, and / or provision of services on the Network, whether specific to the Service Provider or regulating the gas industry or aspects of the gas industry more generally;

Business Customer means a Customer who is not a Residential Customer;

Capital Base means the capital value to be attributed, in accordance with Part 9 of the National Gas Rules, to pipeline assets;

Carbon Costs means the costs incurred in connection with an obligation that is imposed under any Carbon Scheme, including without limitation any charges or fees payable in respect of greenhouse gas emissions, costs of acquiring permits, allowances, credits, or certificates, costs associated with undertaking activities to abate or sequester greenhouse gas emissions and costs associated with reducing liability under any Carbon Scheme;

Carbon Scheme means any law or regulation of the Commonwealth of Australia or of a State or Territory of Australia, with respect to the production or emission of, or to reduce, limit, cease, prevent, offset, remove or sequester greenhouse gas emissions;

Central West Distribution System means the covered natural gas distribution pipelines owned by the Service Provider and as described in Schedule 9;

Charge for a Service means the amount that is payable by a User to the Service Provider for the provision of the Service to that User;

Cost Pass Through Event means the events listed in clause 3.4;

Coverage Determination means a determination of a Relevant Minister under Chapter 3 Part 1 Division 1 of the National Gas Law;

Covered Pipeline means a pipeline:

- (a) to which a Coverage Determination applies; or
- (b) deemed to be a Covered Pipeline by operation of section 126 or 127 of the National Gas Law;

CPI means the All Groups Consumer Price Index that is the weighted average of the 8 capital cities as first published by the Australian Bureau of Statistics;

Customer means:

- (a) the person who purchases the Gas supplied at a Delivery Point; or
- (b) a consumer of hot water in a residential unit where hot water is supplied through a centralised gas-fired hot water system and whose Energy consumption is individually metered by the Service Provider to measure Gas withdrawn at the relevant Delivery Point;

Developable Capacity means the difference between the current capacity of a Covered Pipeline and the capacity of a Covered Pipeline which would be available if a new facility was constructed, but does not include any new capacity of a Covered Pipeline resulting from an extension to the geographic range of a Covered Pipeline;

Effective Date means the later of:

- (a) 1 July 2015; and
- (b) if the AER's approval of this Access Arrangement takes effect under the National Gas Rules on a date after 1 July 2015, that date;

Embedded Network means a distribution system or a pipeline not owned and operated by the Service Provider, which is connected to and receives gas from the Network for the purpose of use by third parties;

Embedded Network Operator means the licensed owner or operator of an Embedded Network;

Energy means energy (or an energy source) in any form and includes natural gas, electricity or thermal energy in any form (for example, steam or hot water, and whether used for heating, cooling or some other purpose);

Financial Year means the 12-month period ending on 30 June in any year;

Fixed Charge means a fixed charge as specified in the Reference Tariff Schedule;

Gas Supply Act means the *Gas Supply Act 1996* (NSW);

Haulage Reference Service means the Service described in clause 2.2(b) and provided by the Service Provider in accordance with the Reference Service Agreement;

Haulage Reference Tariff or **Reference Tariff** means a tariff which relates to a Haulage Reference Service, as specified in the Reference Tariff Schedule;

Initial Reference Tariffs means the Reference Tariffs applying on and from the Effective Date, until amended in accordance with clause 3;

Initial Reference Tariff Schedule means Schedule 2 of this Access Arrangement;

Initial Tariff Classes means the Tariff Classes applying and from the Effective Date, until amended in accordance with clause 3;

Insurance Cap Event means an event where:

- (a) the Service Provider makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy;
- (b) the Service Provider incurs costs beyond the relevant policy limit; and
- (c) the costs beyond the relevant policy limit increase the costs to the Service Provider of providing the Reference Service.

For this Insurance Cap Event:

- (a) the relevant policy limit is the greater of:
 - (i) the Service Provider's actual policy limit at the time of the event that gives, or would have given rise to the claim; and
 - (ii) the policy limit that is explicitly or implicitly commensurate with the allowance for insurance premiums that is included in the forecast operating expenditure allowance approved in the AER's final decision for the Access Arrangement Period;
- (b) a relevant insurance policy is an insurance policy held during the Access Arrangement Period or a previous period in which access to the pipeline services was regulated; and
- (c) the Service Provider will be deemed to have made a claim on a relevant insurance policy if the claim is made by a related party of the Service Provider in relation to any aspect of the Network or the Service Provider's business

Note for the avoidance of doubt, in making a determination on an Insurance Cap Event pursuant to clause 3.4(j), the AER will have regard to, amongst other things:

- (i) the insurance policy for the event, and
- (ii) the level of insurance that an efficient and prudent Service Provider would obtain in respect of the event;

Insurer Credit Risk Event means an event where:

- (a) A nominated insurer of the Service Provider becomes insolvent, and as a result, in respect of an existing, or potential, claim for a risk that was insured by the insolvent insurer, the Service Provider:
 - (iii) is subject to a higher or lower claim limit or a higher or lower deductible than would have otherwise applied under the insolvent insurer's policy; or
 - (iv) incurs additional costs associated with self-funding an insurance claim, which would otherwise have been covered by the insolvent insurer.

Note for the avoidance of doubt, in making a determination on an Insurer Credit Risk Event pursuant to clause 3.4(j), the AER will have regard to, amongst other things:

- (i) the Service Provider's attempts to mitigate and prevent the event from occurring by reviewing and considering the insurer's track record, size, credit rating and reputation, and
- (ii) in the event that a claim would have been made after the insurance provider became insolvent, whether the Service Provider had reasonable opportunity to insure the risk with a different provider.

Interconnection of Embedded Network Service means the Service described in clause 2.5;

JGN Revenue Model means the revenue model that is used by the Service Provider to calculate Reference Tariffs for the Access Arrangement Period and as approved in the AER's final decision for this Access Arrangement Period;

Maximum Daily Quantity or **MDQ** means the maximum Quantity of Gas (in GJ) which the Service Provider is obliged to transport and delivery to a particular Delivery Point on behalf of the User on any Day (excluding Overruns);

Maximum Hourly Quantity or **MHQ** means the maximum Quantity of Gas (in GJ) which the Service Provider is obliged to transport and delivery to a particular Delivery Point on behalf of the User in any Hour (excluding Overruns);

Month means calendar month;

National Gas Law means the *National Gas Law* adopted under the *National Gas (New South Wales) Act 2008* (NSW);

National Gas Objective means the objective set out in section 23 of the National Gas Law;

National Gas Rules or **Rules** means the National Gas Rules made by the AEMC under the National Gas Law;

Natural Disaster Event means Any major fire, flood, earthquake or other natural disaster that occurs during the 2015-20 Access Arrangement Period and increases the costs to the Service Provider in providing the Reference Service, provided the fire, flood or other event was not a consequence of the acts or omissions of the Service Provider.

The term 'major' in the above paragraph means an event that is serious and significant.

Note for the avoidance of doubt, in making a determination on a Natural Disaster Event pursuant to clause 3.4(j), the AER will have regard to, amongst other things:

- (i) whether the Service Provider has insurance against the event

- (ii) the level of insurance that an efficient and prudent service provider would obtain in respect of the event, and
- (iii) whether a relevant government authority has made a declaration that a natural disaster has occurred.

NCC means National Competition Council;

Negotiated Service means a service for the transportation of Gas on terms and conditions different to those applicable to the Reference Service or an Interconnection of Embedded Network Service;

Negotiated Service Agreement means a contract between the Service Provider and a User or Prospective User for the provision of a Negotiated Service;

Network User Failure Event means an event where:

- (a) a Retailer of Last Resort (RoLR) Event as defined in section 122 of the National Energy Retail Law has occurred, and
- (b) the Service Provider incurs costs in responding to the RoLR event in accordance with its obligations under the NERL, NERR, NGL or NGR (including Guidelines and procedures that are binding under those instruments), and
- (c) the costs are not recoverable by the Service Provider under other provisions of the NERL, NERR, NGL or NGR as in force at the time of the event, including but not limited to rule 531 of the NGR and other pass through events in this Access Arrangement.

Note for the avoidance of doubt, in making a determination on a Network User Failure Event pursuant to clause 3.4(j), the AER will have regard to, amongst other things, the extent to which the Service Provider has taken steps to minimise the costs associated with its responsibilities in a RoLR Event, both prior to, and after, the RoLR Event was triggered;

Non-Reference Service means each of:

- (a) the Interconnection of Embedded Network Service; and
- (b) a Negotiated Service;

NSW Distribution System means the covered natural gas distribution pipelines owned by the Service Provider, which have Receipt Points and service the areas in New South Wales as described in Schedule 9;

Pipeline Service has the meaning given to it in the National Gas Law;

Pipelines Act means the *Pipelines Act 1967* (NSW);

Priority Date means the date a complete Request is received by the Service Provider from a Prospective User;

Prospective User means:

- (a) a person who seeks or wishes to be provided with a Pipeline Service by means of the Network;

- (b) for the avoidance of doubt, a User is also a Prospective User if the User seeks or wishes to be provided with a Pipeline Service by means of the Network other than a Pipeline Service already provided to them under:
 - (i) a contract; or
 - (ii) an access determination;

Provision of Basic Metering Equipment Charge means an annual charge specified in the Reference Tariff Schedule;

RBA means the Reserve Bank of Australia;

Receipt Station means the facilities at which Gas is received into the Network;

Reference Service means the Haulage Reference Service specified in clause 2.2;

Reference Service Agreement means the contract between the Service Provider and a User or Prospective User for the provision of the Reference Service as set out in Schedule 4;

Reference Tariff Schedule means the schedule of Reference Tariffs currently in place, as approved by the AER and amended from time to time in accordance with this Access Arrangement;

Regulatory Change Event means a change in regulatory obligation or requirement that falls within no other category of Cost Pass Through Event and substantially affects the manner in which the Service Provider provides the Reference Service;

Relevant Minister means if, in a coverage recommendation, no-coverage recommendation, classification decision under the National Gas Rules or reclassification decision, the NCC determines the pipeline is:

- (a) a cross boundary transmission pipeline—the Commonwealth Minister;
- (b) a transmission pipeline situated wholly within a participating jurisdiction—the designated Minister;
- (c) a distribution pipeline situated wholly within a participating jurisdiction—the Minister of the participating jurisdiction;
- (d) a cross boundary distribution pipeline—the Minister of the participating jurisdiction determined by the NCC in the recommendation as being the participating jurisdiction with which the cross boundary distribution pipeline is most closely connected;

Relevant Tax means any Tax other than:

- (a) any tax in the nature of an income tax or a capital gains tax;
- (b) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any Tax;
- (c) stamp duty, or similar taxes and duties; and
- (d) any Tax that replaces or is the equivalent of or similar to any of the taxes referred to above;

Residential Customer means a Customer who consumes Energy principally for personal, domestic or household use;

Service means a service provided by the Service Provider in relation to the Network including the Reference Service;

Service Agreement means a contract between the Service Provider and a User or Prospective User for the provision of a Service;

Service Standard Event means a legislative or administrative act or decision that has the effect of:

- (a) Varying, during the course of an Access Arrangement Period, the manner in which the Service Provider is required to provide the Reference Service; or
- (b) Imposing, removing or varying, during the course of an Access Arrangement Period, minimum service standards applicable to the Reference Service; or
- (c) Altering, during the course of an Access Arrangement Period, the nature or scope of the Reference Service provided by the Service Provider;

Tariff means a rate by which a charge for a Pipeline Service is calculated;

Tariff Class means customers for the Reference Service who constitute a tariff class under this Access Arrangement;

Tax means any royalty, duty, excise, tax, impost, levy, fee, assessment, penalty or other compliance cost or charge (including without limitation, any goods and services tax) imposed by the Commonwealth of Australia, any State or Territory of Australia, any local government or statutory authority or any other body (authorised by law to impose such an impost, tax or charge) on or in respect of the Network (or any part of it) or on or in respect of the operation, repair, maintenance, administration or management of the Network (or any part of it) or on or in respect of the provision of any Network Service (other than a levy, fee or charge that arises as a result of the Service Provider's breach of a law or failure to pay a tax or charge by the due date for payment);

Terrorism Event means an act (including, but not limited to, the use of force or violence or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of or in connection with any organisation or government), which from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear) and which increases the cost to the Service Provider in providing the Reference Service.

Note for the avoidance of doubt, in making a determination on a Terrorism Event pursuant to clause 3.4(j), the AER will have regard to, amongst other things:

- (i) whether the Service Provider has insurance against the event,
- (ii) the level of insurance that an efficient and prudent service provider would obtain in respect of the event, and
- (iii) whether a declaration has been made by a relevant government authority that a terrorism event has occurred;

Total Revenue is the amount determined in accordance with rule 76 of the National Gas Rules;

UAG Costs means the average cost per gigajoule incurred by the Service Provider for purchases of gas as unaccounted for gas (**UAG**) during a Financial Year, including costs for transmission haulage and other direct costs reasonably incurred by the Service Provider to acquire UAG through a competitive market or process;

User means a person who:

- (a) is a party to a contract with the Service Provider under which the Service Provider provides or intends to provide a Pipeline Service to that person by means of the Network; or
- (b) has a right under an access determination to be provided with a Pipeline Service by means of the Network;

Variation Notice means a notice submitted by the Service Provider to the AER under clause 3.6;

WACC means the real vanilla Weighted Average Cost of Capital; and

Year means a period of 365 consecutive Days but, for any Year which contains a date of 29 February, means 366 consecutive Days.

2 Interpretation

In the construction of the Access Arrangement, unless the context otherwise requires:

- (a) a reference to a clause or a schedule is to a clause in, or schedule to, this Access Arrangement;
- (b) a word importing the singular includes the plural and vice versa, and a word of any gender includes the corresponding words of any other gender;
- (c) references to any statute, regulations, or other statutory instrument, standard or by-laws shall be deemed to be references to the statute, regulation, statutory instrument, standard or by-law as from time to time amended, consolidated, re-enacted or replaced including substituted provisions that substantially correspond to those referred to;
- (d) references to any agreement, deed, instrument, or publication shall be deemed to be references to the agreement, deed, instrument or publication as from time to time amended, supplemented, novated or replaced;
- (e) clause or condition headings are inserted for convenience only and do not affect the interpretation of the Access Arrangement;
- (f) expressions referring to writing will be construed as including references to words printed, type-written, telexed, lithographed, facsimiled or otherwise traced, copied or reproduced;
- (g) a reference to a party includes a reference to its successors in title and permitted assigns;
- (h) an agreement, representation or warranty on the part of two or more persons binds them jointly and severally or if given in favour of two or more persons may be enjoyed by them jointly or severally or jointly and severally;

- (i) when referring to a particular Day, the date of the Day shall be the date on which that Day begins; and
- (j) the words "include", "including", "for example" or "such as" are not used as, nor are they to be interpreted as, words of limitation, and, when introducing an example, do not limit the meaning of the words to which the example relates to that example or examples of a similar kind.
- (k) if a word or phrase is given a defined meaning, any other part of speech or grammatical form of that word or phrase has a corresponding meaning;
- (l) a reference to a person includes an individual, the estate of an individual, a corporation, an authority, an association or parties in a joint venture, a partnership and a trust;
- (m) a reference to an agency or body if that agency or body ceases to exist or is reconstituted, renamed or replaced or has its powers or function removed (obsolete body), means the agency or body which performs most closely the functions of the obsolete body; and
- (n) a reference to \$ or dollar is to Australian currency.

Schedule 2 Initial Reference Tariff Schedule

1 Introduction

- (a) This Initial Reference Tariff Schedule sets out the Initial Reference Tariffs that apply for the Reference Service under this Access Arrangement.
- (b) The Initial Reference Tariffs are expressed in real 2015/2016 dollars, and are exclusive of GST.
- (c) There may be more than one Initial Reference Tariff for the Reference Service.
- (d) The Initial Reference Tariffs available for the Reference Service depend upon the Initial Tariff Class assigned by the Service Provider to the Delivery Point to which the Reference Service will be provided.
- (e) In addition to setting out the Initial Tariff Classes and the Initial Reference Tariffs, this Initial Reference Tariff Schedule sets out and explains the tariff components and assignment criteria used in determining the availability of different Initial Reference Tariffs.
- (f) The Initial Reference Tariffs will take effect from the Effective Date and will apply until amended in accordance with clause 3 of the Access Arrangement. When the Reference Tariffs are amended, the updated Reference Tariff Schedule will be published on the Service Provider's website.

2 Assignment criteria for a Tariff Class

2.1 Elements for tariff assignment

- (a) The Service Provider determines the appropriate Tariff Class for a Delivery Point based on each of the following elements:
 - (i) customer groups;
 - (ii) tariff categories; and
 - (iii) classification by location.
- (b) The assignment criteria for each relevant element must be satisfied in order for a Delivery Point to qualify for a particular Tariff Class.
- (c) Each Tariff Class is allocated a code which reflects the assignment criteria for each of the elements using the following format:

[G][CAT]-[Location]

where:

[G] is a single character defining the customer group (V for Volume or D for Demand). Customer groups are described in clause 2.2 below;

[CAT] is a category name or abbreviation. If omitted then the Tariff Class is not described by reference to a tariff category. The assignment criteria for the tariff categories are described in clause 2.3 below; and

[Location] is the location identifier. If equal to 0, or omitted, then the Tariff Class is not described by reference to a specific part of the Network. The assignment criteria for classification by location is described in clause 2.4 below.

2.2 Tariff customer groups

- (a) The tariff customer group that applies to a Delivery Point to which a Haulage Reference Service is provided is determined on the basis of the characteristics of the Energy requirements of the Customer and any other end customer that is supplied with, and consumes, Energy as a result of Gas being delivered to that Delivery Point under that Haulage Reference Service.
- (b) The assignment criteria are as follows:
 - (i) **Demand Tariff:** A Delivery Point can be assigned a Demand Tariff customer group where:
 - (A) all Gas delivered to that Delivery Point is used on the premises to meet the production or Energy requirements of:
 - a single Business Customer occupying those premises; or
 - a Customer operating a centralised gas-fired electricity generation plant or system that supplies electricity and cogenerated thermal energy directly to a group of substantially non-residential end customers² occupying the same or nearby premises³;
 - (B) the Quantity of Gas withdrawn at that Delivery Point is reasonably expected to be equal to or greater than 10 TJ of Gas per annum; and
 - (C) the Service Provider has accurate and complete information to enable Load Shedding procedures to be implemented at the Delivery Point.
 - (ii) **Volume Tariff:** A Delivery Point can be assigned a Volume Tariff customer group where the Delivery Point does not satisfy the Demand Tariff customer group assignment criteria and all Gas delivered to that Delivery Point is used on the premises to meet the production or Energy requirements of:
 - (A) a single Residential Customer;
 - (B) a single Business Customer who is reasonably expected to consume less than 10 TJ of Gas per annum;

Assignment to a Demand Tariff is for a minimum period of 12 months;

² As a guide, the Service Provider will consider a group of end customers to be substantially non-residential where less than 50% (by number of end customers) of the group use Energy principally for personal, domestic or household purposes.

³ In these circumstances, only the Delivery Point of the Customer would be recognised in the Service Provider's systems. Subsequent on-supply to end customers by that Customer would not be individually represented in the Service Provider's or retail market systems (subject to application of the exempt seller regime in the National Energy Retail Law).

- (C) a Customer operating a centralised gas-fired electricity generation plant or system that supplies electricity and cogenerated thermal energy directly to a group of substantially non-residential end customers¹ occupying the same or nearby premises,² and the Delivery Point is reasonably expected to withdraw less than 10 TJ of Gas per annum; or
- (D) a group of end customers (business and/or residential) occupying a single, multi-occupancy premises where Gas is withdrawn by a single Customer at a single Delivery Point (other than as contemplated under paragraph (C) above).

2.3 Tariff category

- (a) Where convenient, the Service Provider uses a tariff category to group a number of Tariff Classes together to describe a common, but not complete, sub-set of assignment criteria. For example, the assignment criteria for all Demand Tariffs that fall into the capacity category have a common “category criteria” but separate “location criteria”.
- (b) Tariff categories for Demand Tariffs, and the corresponding category assignment criteria are as follows:

Abbreviation	Category	Criteria
DC	Capacity	This category is used for Delivery Points which meet the criteria for a Demand Tariff, and have not been assigned to another Demand Tariff category, such as the 'Capacity - 1st Response' or 'Throughput' categories.
DCFR	Capacity – 1st Response	<p>Tariffs within this category have been grandfathered from 1 July 2015 and this category is not available for new delivery points. See clause 5.2 of this schedule for more information. Grandfathered Delivery Points in this tariff category must satisfy (to the Service Provider’s reasonable satisfaction) the following criteria:</p> <ul style="list-style-type: none"> a) peak hourly historical demand is consistently greater than 350 GJ/hr, but no more than the MHQ; b) the User has provided the Service Provider with a documented Curtailment Plan for the Delivery Point which is acceptable to the Service Provider and contains ELMS Data required by the Service Provider, contact personnel and site procedures for reducing load in accordance with the ELMS Data, including times for various stages of load reduction; c) under the Curtailment Plan and ELMS Data held by the Service Provider, at least 40% of peak historical hourly demand is nominated for reduction in Load Shedding priority 1 and that reduction could be expected to be reduced within no more than 6 hours of first contact; d) the Curtailment Plan and all ELMS Data is up to date (with a minimum review period of 24 months); e) the Service Provider is able to continuously monitor hourly demand from the Delivery Station at the site, or other sampling frequency acceptable to the Service Provider; and f) in any Load Shedding procedure initiated by the Service Provider in the past two years which involved the Delivery Point, the level of hourly demand at the Delivery Point was no more than the hourly demand anticipated after each stage of reduction as set out in the

Abbreviation	Category	Criteria
		Curtailment Plan.
DT	Throughput	Assignment to this tariff category is made upon User request. This tariff category is used for Delivery Points which meet the criteria for a Demand Tariff.
DMT	Major End Customer Throughput	Assignment to this tariff category is made upon User request. This tariff category is used for Delivery Points which meet the criteria for a Demand Tariff and which also satisfy the following additional criteria: <ul style="list-style-type: none"> a) the average daily consumption in any 12 month period multiplied by 1.33 is greater than 10 times the contractual MHQ⁴ for the Delivery Point for the same period; and b) the Delivery Point is located in location identifiers 1, 2, 3, 4 or 5.
DMTFR	Major End Customer Throughput – First Response	Tariffs within this category have been grandfathered from 1 July 2015 and this category is not available for new delivery points. See section 5.2 of this schedule for more information. Grandfathered Delivery Points in this tariff category meet the criteria for a Major End Customer Throughput Tariff and must satisfy (to the Service Provider's reasonable satisfaction) the following additional criteria: <ul style="list-style-type: none"> a) peak hourly historical demand is consistently greater than 350 GJ/hr, but no more than the MHQ; b) the User has provided the Service Provider with a documented Curtailment Plan for the Delivery Point which is acceptable to the Service Provider and contains ELMS Data required by the Service Provider, contact personnel and site procedures for reducing load in accordance with the ELMS Data, including times for various stages of load reduction; c) under the Curtailment Plan and ELMS Data held by the Service Provider, at least 40% of peak historical hourly demand is nominated for reduction in Load Shedding priority 1 and that reduction could be expected to be reduced within no more than 6 hours of first contact; d) the Curtailment Plan and all ELMS Data is up to date (with a minimum review period of 24 months); e) the Service Provider is able to continuously monitor hourly demand from the Delivery Station at the site, or other sampling frequency acceptable to the Service Provider; and f) in any Load Shedding procedure initiated by the Service Provider in the past two years which involved the Delivery Point, the level of hourly demand at the Delivery Point was no more than the hourly demand anticipated after each stage of reduction as set out in the Curtailment Plan.

⁴ If the contractual MHQ has changed in a period then the lowest contractual MHQ is used.

(c) Tariff categories for Volume Tariffs and corresponding assignment criteria are as follows:

Abbreviation	Category	Criteria
VI	Individual	This category applies where either: <ul style="list-style-type: none"> all Gas withdrawn at the Delivery Point is measured by the Service Provider by individually metering the Energy consumption of the end customer(s) (including the consumption of hot water supplied through a centralised residential gas hot water system); or the Delivery Point meets the Volume Tariff customer group assignment criteria in paragraph 2.2(b)(ii)(C) above.
VB	Boundary	This category applies where a Delivery Point meets the Volume Tariff customer group assignment criteria in paragraph 2.2(b)(ii)(D) and the Gas withdrawn at the Delivery Point is measured by the Service Provider using a single gas metering installation for all Gas delivered to the Delivery Point (i.e. the Service Provider does not meter the Energy consumption of each individual end customers) and has not been assigned to a tariff in the VRT category. ²
VRT	Residential Distributed Generation Technology	Assignment to this category is made upon User request. This category is available for a Delivery Point at which all Gas is consumed on the premises by a Customer operating a gas-fired electricity generation plant or system that supplies electricity and cogenerated thermal energy directly to a group of substantially residential end customers ⁵ occupying the same or nearby premises, and the Delivery Point is reasonably expected to withdraw more than 50 TJ of Gas per annum. ²

(d) Where a Delivery Point is eligible for more than one tariff category, the User or Prospective User can nominate the discretionary element of the tariff category in accordance with clause 4 of this Schedule. For example, a User or Prospective User may request to be placed in the 'Throughput' category. The Service Provider may refuse a nomination by a User or Prospective User if it does not consider the Delivery Point to be eligible.

⁵ As a guide, the Service Provider will consider a group of end customers to be substantially residential where more than 50% (by number) of the group use Energy principally for person, domestic or household purposes.

2.4 Classification by Location

Where assignment criteria for a Tariff Class depends upon the location of the Delivery Point, the following location criteria will be used.

Location Identifier	Applies to Delivery Points located in:	
0 or omitted	All areas in the Network	
Coastal	The Wilton Network Section (used for VI and VB Volume Tariffs only – see identifiers 1 to 11 for location criteria in the Wilton Network Section for other Tariff Classes)	
Country	Network Sections other than the Wilton Network Section	
1	2164, 2171, 2175, 2571, 2761, 2762, 2766, 2768, Appin	Location identifiers refer to the first 4 numbers of the Delivery Station Identifier used by the Service Provider to identify individual Demand Customer and daily metered Delivery Points. Location identifiers are listed for existing Delivery Points. ⁶
2	2141, 2142, 2143, 2144, 2145, 2147, 2148, 2161, 2162, 2163, 2165, 2166, 2170, 2565, 2750, 2759, 2760, 2765, 2770	
3	2006, 2007, 2015, 2017, 2019, 2020, 2033, 2036, 2040, 2044, 2046, 2050, 2112, 2113, 2115, 2116, 2128, 2135, 2136, 2137, 2138, 2140, 2146, 2151, 2152, 2153, 2157, 2173, 2190, 2199, 2200, 2204, 2205, 2211, 2212, 2214, 2216, 2217, 2560 ⁷ , 2566, 2570, 2747, 2755, 2756, 2777	
4	2000, 2008, 2009, 2010, 2011, 2018, 2021, 2022, 2031, 2032, 2034, 2035, 2037, 2039, 2064, 2065, 2066, 2067, 2111, 2120, 2122, 2154, 2196, 2208, 2220, 2223, 2224, 2228, 2229, 2231, 2232	
5	2028, 2060, 2076, 2077, 2080, 2085, 2095, 2099, 2100, 2102, 2103, 2780	
6	2250, 2259, 2284, 2285, 2286, 2304, 2308, 2322	
7	2256, 2258, 2260, 2261, 2262, 2263, 2264, 2265, 2294, 2295, 2298, 2303, 2305, 2320, 2323, 2326, 2327	
8	2290, 2300, 2314, 2321, 2324, 2325, 2330	
9	2505-BHP	
10	2500, 2502, 2505, 2526, 2530	
11	2516, 2527	

⁶ The Service Provider shall assign new Delivery Points to location classifications on the basis of 1997 Australia Post postcode boundaries, and where new postcodes must be added to the table, the Service Provider will allocate a locational identifier to new postcode, which is comparable with the existing postcodes.

⁷ Excludes Appin - see location classification 1.

3 Initial Tariff Classes and Tariff charge components for the Haulage Reference Service

- (a) A User must pay the Service Provider all charges applicable to the Haulage Reference Service provided based on the relevant Tariff Class.
- (b) The tables below sets out the tariff charge components applicable to each Tariff Class.
- (c) In addition, other charges are payable in accordance with the Reference Service Agreement.
- (d) Volume Tariffs

Customer Type/Category	Tariff Class	Haulage Reference Service -- Reference Tariff Components
Volume Individual	VI-Coastal VI- Country	Volume Throughput Rate (clause 4.1(h)) Fixed Charge (clause 4.1(i)) Ancillary Charges (clause 4.1(j)) Clean Energy Act Repeal Settlement (clause 4.1(k))
Volume Boundary	VB-Coastal VB-Country	Volume Throughput Rate (clause 4.1(h)) Fixed Charge (clause 4.1(i)) Ancillary Charges (clause 4.1(j))
Volume Residential Distributed Generation Technology	VRT-03 VRT-04 VRT-06 VRT-10	Demand Capacity Rate (clause 4.1(a)) Provision of Basic Metering Equipment Charge (clause 4.1(g)) Ancillary Charges (clause 4.1(j))

(e) Demand Tariffs

Customer Type/Category	Tariff Class	Haulage Reference Service -- Reference Tariff Components
Demand Capacity	DC-1 To DC-11	Demand Capacity Rate (clause 4.1(a)) Provision of Basic Metering Equipment Charge (clause 4.1(g)) Ancillary Charges (clause 4.1(j))
	DC Country	Demand Capacity Rate comprised of: <ul style="list-style-type: none"> Capacity Distance Rate (clause 4.1(b)), and Pressure Reduction Rate (clause 4.1(c)) Provision of Basic Metering Equipment Charge (clause 4.1(g)) Ancillary Charges (clause 4.1(j))
Demand Throughput	DT	Demand Throughput Rate (clause 4.1(f)) Provision of Basic Metering Equipment Charge (clause 4.1(g)) Ancillary Charges (clause 4.1(j))
Demand Capacity - 1st Response	DCFR-6	Discounted Demand Capacity Rate (clause 4.1(d)) Provision of Basic Metering Equipment Charge (clause 4.1(g)) Ancillary Charges (clause 4.1(j))
Demand Major End Customer Throughput	DMT-01 To DMT-05	Fixed Charge (clause 4.1(i)) Demand Throughput Rate (clause 4.1(f)) Provision of Basic Metering Equipment Charge (clause 4.1(g)) Ancillary Charges (clause 4.1(j))
Demand Major End Customer Throughput - 1 st response	DMTFR-3	Discounted Fixed Charge (clause 4.1(e)) Discounted Demand Throughput Rate (clause 4.1(e)) Provision of Basic Metering Equipment Charge (clause 4.1(g)) Ancillary Charges (clause 4.1(j))

4 Initial Reference Tariffs

4.1 Haulage Reference Service

(a) Demand Capacity Rate

Customer Type	Tariff Class	Unit Rate – dollars per GJ of Chargeable Demand (CD) per annum (\$/GJ.CD.pa) Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars					
		First 50 GJ of CD	Next 150 GJ of CD	Next 400 GJ of CD	Next 1000 GJ of CD	Next 2000 GJ of CD	Rest of CD
Volume	VRT-03	450.556	421.884	202.012	146.522	123.378	112.812
	VRT-04	743.395	696.088	319.986	226.359	187.965	170.811
	VRT-06	155.014	145.15	73.616	63.358	63.338	63.104
	VRT-10	241.886	226.493	109.017	85.717	75.252	84.186
Demand	DC-1	306.002	286.53	135.142	103.138	90.965	90.904
	DC-2	339.929	318.297	148.975	112.346	95.232	20.707
	DC-3	450.556	421.884	202.012	146.522	123.378	112.812
	DC-4	743.395	696.088	319.986	226.359	187.965	170.811
	DC-5	2000.000	877.939	460.208	320.505	251.899	194.066
	DC-6	155.014	145.15	73.616	63.358	63.338	63.104
	DC-7	497.715	466.042	217.686	158.167	138.142	117.951
	DC-8	937.605	877.939	460.208	320.505	251.899	194.066
	DC-9	67.606	63.304	49.141	48.979	49.415	56.734
	DC-10	241.886	226.493	109.017	85.717	75.252	84.186
	DC-11	937.605	877.939	460.208	320.505	251.899	194.066
DC-Country	Demand Capacity Rate for DC-Country is comprised of two components of demand charge: (i) the Capacity Distance Rate; and (ii) the Pressure Reduction Rate. See tables Capacity Distance Rate (clause 4.1(b)), and Pressure Reduction Rate (clause 4.1(c)) below. These charges will be calculated for each Delivery Point and expressed as a single rate \$/GJ.CD.per annum for billing purposes.						

(b) DC Country Demand Capacity Rate, Component 1 – Capacity Distance Rate

Customer Type	Tariff Class	Distance Unit Rate – dollars per GJ of Chargeable Demand per annum per km (\$/(GJ.CD).pa per km) Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars					
		First 50 GJ of CD	Next 150 GJ of CD	Next 400 GJ of CD	Next 1000 GJ of CD	Next 2000 GJ of CD	Rest of CD
Demand	DC-Country	65.825	61.636	26.827	17.884	14.227	10.807
<i>Rates apply per km of the straight line distance from the relevant country Receipt Point rounded up to the nearest 0.5 km as determined by the Service Provider</i>							

(c) DC Country Demand Capacity Rate, Component 2 – Pressure Reduction Rate

Customer Type	Tariff Class	Pressure Reduction Unit Rate – dollars per GJ of Chargeable Demand per annum (\$/GJ.CD.pa) Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars					
		First 50 GJ of CD	Next 150 GJ of CD	Next 400 GJ of CD	Next 1000 GJ of CD	Next 2000 GJ of CD	Rest of CD
Demand	DC-Country	23.363	21.876	9.519	6.348	5.048	3.834

(d) Demand Capacity Rates for Discounted DCFR Tariffs

Customer Type	Tariff Class	Demand Capacity Unit Rate – dollars per GJ of Chargeable Demand per annum (\$/GJ.CD.pa) Period ending 30 June 2016
Demand	DCFR-6	Demand Capacity Rates set out in clause 4.1(a) for the DC-6 tariff less 50%.

(e) Fixed Charges and Demand Throughput Rates for Discounted DMTFR Tariff

Customer Type	Tariff Class	Fixed Charge – dollars per annum Period ending 30 June 2016	Demand Throughput Unit Rates – (\$/GJ) Period ending 30 June 2016
Demand	DMTFR-3	Fixed Charge set out in clause 4.1(i) for the DMT-3 tariff less 50%.	Demand Throughput Rates set out in clause 4.1(f) for the DMT-3 tariff less 50%

(f) Demand Throughput Rate

Customer Type	Tariff Class	Demand Throughput Rate (\$/GJ) Period ending 30 June 2016 Minimum chargeable quantity of 833 GJ/month Prices are real 2015-2016 GST exclusive dollars		
		First 1667 GJ per month	Next 2500 GJ per month	Rest
Demand	DT	5.16	4.18	3.71

Customer Type	Tariff Class	Demand Throughput Rate (\$/GJ) Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars		
		First 41,667 GJ per month	Next 41,667 GJ per month	Rest
Demand	DMT-1	0	0.227	0.206
	DMT-2	0	0.227	0.208
	DMT-3	0	0.394	0.336
	DMT-4	0	0.873	0.816
	DMT-5	0	1.073	1.162

(g) Provision of Basic Metering Equipment Charges

Customer Type	Tariff Class	Standing Charge : \$/pa per Delivery Station Charges based on Delivery Point MHQ Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars					
			MHQ < 10 GJ/hr	MHQ 10 to < 50 GJ/hr	MHQ 50 to < 100 GJ/hr	MHQ 100 to < 1000 GJ/hr	MHQ 1000 GJ/hr and greater
Demand	All Demand Classes	Single Run	8,289	10,284	17,549	22,797	29,198
		Double Run	13,991	17,981	32,511	43,007	55,811
Volume	VRT 03, 04, 06, 10	Single Run	8,289	10,284	17,549	22,797	29,198
		Double Run	13,991	17,981	32,511	43,007	55,811

(h) Volume Throughput Rate

Customer Type	Tariff Class	Volume Throughput Rate (\$/GJ) Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars					
		First 0.63 GJ	Next 0.62 GJ	Next 1.50 GJ	Next 80.75 GJ	Next 333.5 GJ	All additional
Volume Individual	Block size (GJ per month)	First 0.63 GJ	Next 0.62 GJ	Next 1.50 GJ	Next 80.75 GJ	Next 333.5 GJ	All additional
	Block size (GJ per qtr)	First 1.89 GJ	Next 1.86 GJ	Next 4.50 GJ	Next 242.25 GJ	Next 1000.5 GJ	
	VI-Coastal	21.195	9.384	8.886	8.693	7.612	4.108
	VI-Country	20.735	9.105	8.576	8.383	7.302	3.798

Customer Type	Tariff Class	Volume Throughput Rate (\$/GJ) Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars			
		First 20.83 GJ	Next 20.83 GJ	Next 41.66 GJ	All additional
Volume Boundary	Block size (GJ per month)	First 20.83 GJ	Next 20.83 GJ	Next 41.66 GJ	All additional
	Block size (GJ per qtr)	First 62.49 GJ	Next 62.49 GJ	Next 124.90 GJ	
	VB-Coastal	19.075	8.446	7.998	7.964
	VB-Country	18.661	8.195	7.719	7.685

(i) Fixed Charge

Customer Type	Tariff Class	Standing Charge – dollars per annum Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars	
Volume Individual	VI-Coastal & VI-Country		49,497
Volume Boundary	VB-Coastal & VB-Country		1,484,910
Demand	DMT-1		231,327.41
	DMT-2		255,481.11
	DMT-3		311,040.74
	DMT-4		576,102.53
	DMT-5		1,080,192.18

(j) Ancillary Charges

Ancillary Charges applicable to all Tariff Classes Period Ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars		
Fee Type	Description	Charge
Hourly Charge – non-standard User-initiated requests and queries	<p>The assessment of a User's or Prospective User's requirements, collation of information and provision of a response to a User or Prospective User in relation to non-standard requests and queries. Examples include, but are not limited to:</p> <ul style="list-style-type: none"> large customer connection or upgrade inquiries requiring additional investigation by the Service Provider due to the nature of the request; and requests for measurement data additional to data provided in standard reports. <p>Not applicable to the processing of connections and alterations under Part 12A of the National Gas Rules.</p>	\$100, plus \$100 per hour after the first hour
Disconnection (small and large customers)	<p>Disconnection of supply to a single Delivery Point at the request of the User or Customer and where the User or Customer also requests that the meter is not to be moved or removed.</p> <p>For small customers, the charge also covers the cost of subsequent reconnection made in accordance with National Energy Retail Law or Rules, the Reference Service Agreement, or in other circumstances (at the Service Provider's discretion, acting reasonably) where Delivery Station components and pipework are still installed at the Delivery Point and can be re-energised without alteration or replacement.</p> <p>A request for disconnection is also a request to remove a Delivery Point from the User's Service Agreement.</p> <p>The specific method of disconnection will be at the discretion of the Service Provider, to ensure the site is able to be left in a safe state.</p> <p>Reconnection of small customers in circumstances other than those described above and reconnection of large customers would require a new connection and a new Request for Service to be made.</p> <p>(This charge is for providing disconnection services in accordance with the relevant Applicable Law in force at the Effective Date.)</p>	\$150 Charge applies per meter set
Temporary disconnection for large customers	<p>Disconnection of supply to a single Delivery Point on a temporary basis at the request of a User for a large customer (as classified by the Service Provider at the time the request is received). The charge also covers the cost of subsequent reconnection.</p> <p>A request for temporary disconnection of a large customer is not a request to remove a Delivery Point from the User's Service Agreement. Distribution charges will continue to apply and the MHQ and MDQ (if any) for a Delivery Point will be maintained.</p> <p>The specific method of isolation will be at the discretion of the Service Provider, to ensure the site is able to be left in a safe state.</p> <p>(This charge is for providing disconnection and reconnection in accordance with the relevant Applicable Law in force at the Effective Date.)</p>	\$150 Charge applies per meter set
Decommissioning and meter removal	<p>Permanent decommissioning of a Delivery Point including the removal of the meter.</p> <p>A request for decommissioning and meter removal is also a request to remove a delivery point from the User's Service Agreement.</p> <p>The specific method of disconnection will be at the discretion of the Service Provider, to ensure the site is able to be left in a safe state.</p> <p>Subsequent reconnection of the Delivery Point is not included. Reconnection of small and large customers would require a new connection and a new Request for Service to be made.</p> <p>(This charge is for providing disconnection services in accordance with the relevant Applicable Law in force at the Effective Date.)</p>	Charges apply per meter: (i) meters with a capacity of less than or equal to 6m ³ /hr: \$1050 (ii) meters with a capacity of greater than 6m ³ /hr: \$2188

Ancillary Charges applicable to all Tariff Classes Period Ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars		
Special Meter Reads	For meter reading requested by a User for a Delivery Point that is in addition to the scheduled ordinary meter reading comprised in the Haulage Reference Service (for instance, when the meter reader makes a special visit to read a particular meter out of the usual meter reading route or schedule). This service must be scheduled by the User with the Service Provider in accordance with the NSW Retail Market Procedures.	\$14.80 per meter read

Note. Small customer and large customer have the meaning given to those terms in the National Energy Retail Law.

(k) Clean Energy Act repeal settlement⁸

Customer Type	Tariff Class	Clean Energy Act repeal settlement – dollars per annum Period ending 30 June 2016 Prices are real 2015-2016 GST exclusive dollars
Volume Individual	VI-Coastal & VI-Country	- 0.497

5 Initial Chargeable Demand, grandfathering of tariffs and assignment of 2010 AA V-Coastal and V-Country Tariff Classes

5.1 Initial Chargeable Demand

- (a) For existing Delivery Points that are assigned to a Tariff Class that includes the demand capacity rate charge component, if the Chargeable Demand applicable on the Effective Date is greater than the amount calculated in accordance with paragraph (b) below, the Service Provider will reduce the Chargeable Demand to equal the amount calculated in paragraph (b). These changes will be made with effect from the Effective Date.
- (b) The maximum Chargeable Demand for a Delivery Point existing on the Effective Date is the larger of the following three values:
- (i) the ninth highest Quantity of Gas withdrawn at that Delivery Point in any one Day between 1 July 2014 and 30 June 2015;
 - (ii) ten times the MHQ of that Delivery Point on 30 June 2015; and
 - (iii) the MDQ of that Delivery Point on 30 June 2015.

⁸ Consistent with the approach agreed by the AER in its November 2014 tariff variation notice, this Clean Energy Act repeal settlement tariff component applies only to the period ending 30 June 2016 and is not taken into account in the reference tariff variation mechanism at section 3 of the access arrangement for tariffs from 2016-17. As such, it will be removed from future reference tariff schedules.

- (c) A reduction in chargeable demand under paragraph (a) above will not change the current Demand Reset Date for a Delivery Point and will not be regarded as a reduction request in any future reduction request initiated by the User.

5.2 Grandfathering of first response Tariffs

- (a) From the Effective Date, the DCFR and DMTR Demand Tariffs are only available for an existing Delivery Point that was considered to be assigned to these Tariff Classes in the Service Provider's revenue forecast for the Access Arrangement Period.
- (b) No other Delivery Points may qualify for assignment to the DCFR and DMTR Tariff Classes from the Effective Date.
- (c) The Service Provider will confirm whether the DCFR or DMTR Demand Tariffs are available to a particular Delivery Point in response to reasonable requests from Users or Customers.

5.3 Delivery Points assigned to the 2010 AA V-Coastal and V-Country Tariffs

From the Effective Date, all Delivery Points previously assigned to the V-Coastal and V-Country Tariff Classes will be re-assigned to the VI-Coastal and VI-Country Tariff Classes, respectively.

Schedule 3 Reference Tariff adjustment factors

1 Automatic adjustment factor (A)

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

where:

A'_{t-1} is:

- (a) zero when $t-1$ refers to Financial Year 2015-16; or
- (b) the value of A'_t determined in the Financial Year $t-1$ for all other years;

and

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

where:

L_{t-2} is the licence fee factor amount, as defined in this schedule, for Financial Year $t-2$.

When $t-2$ is Financial Year 2014-15, L_{t-2} is $L_{2014} * (1 + realWACC_{2014-2015}) * (1 + CPI_{2014-15}) + L_{2015}$.

where:

L_{2014} is the licence fee factor amount, as defined in this schedule, for Financial Year 2013-14;

L_{2015} is the licence fee factor amount, as defined in this schedule, for Financial Year 2014-15;

$realWACC_{2014-15}$ means the real vanilla weighted average cost of capital of 7.63 per cent;

$CPI_{2014-15}$ means the consumer price index of 1.72 per cent;

U_{t-2} is the UAG factor amount, as defined in this Schedule 3, for Financial Year $t-2$;

C_{t-2} is the Carbon Cost factor amount, as defined in this Schedule 3, for Financial Year $t-2$. When $t-2$ is the Financial Year 2014-15 $C_{2014-15}=0$;

T_{t-2} is the Relevant Tax factor amount for Financial Year $t-2$;

$realWACC_t$ is the real vanilla weighted average cost of capital as per that set out in the AER's Final Decision and updated annually within JGN's revenue model;

CPI_t has the same meaning as set out in clause 3.2;

CPI_{t-1} is the value of CPI_t determined in the Financial Year $t-1$;

X_t has the same meaning as set out in clause 3.2;

p_{t-1}^{xy} has the same meaning as set out in clause 3.2; and

q_{t-2}^{xy} has the same meaning as set out in clause 3.2.

2 Factor amounts

2.1 Licence fee factor amount

The licence fee factor amount for Financial Year $t-2$ is to be calculated as follows:

- (a) the actual cost incurred by the Service Provider as a result of any AER, IPART, AEMO, EWON or any other relevant regulator, authority or State or Commonwealth Government's authorisation fees, licence fees or statutory charges imposed on the Service Provider which is related to the ownership or operation of the Network in Financial Year $t-2$,

minus

- (b) the forecast of the cost incurred by the Service Provider as a result of any AER, IPART, AEMO, EWON or any other relevant regulator, authority or State or Commonwealth Government's authorisation fees, licence fees or statutory charges imposed on the Service Provider which is related to the ownership or operation of the Network included in the AER's relevant final decision for Financial Year $t-2$.

2.2 UAG factor amount

When $t-2$ is 2014-15, the UAG factor amount for $t-2$ is to be calculated as follows:

- (a) the benchmark cost incurred by the Service Provider for purchases of gas as UAG, calculated as the product of:
- (i) gas receipts in gigajoules for Financial Year 2014-15;
 - (ii) the UAG Cost for Financial Year 2014-15 in \$/gigajoule;
 - (iii) the UAG target rate of 2.34 per cent of gas receipts,

minus

- (b) \$13.1M (\$2010), being the forecast of the total UAG costs included in the AER's final decision for Financial Year 2014-15 as set out in Schedule 8 of the 2010-15 Access Arrangement.

For all other Financial Years in the Access Arrangement Period, the UAG factor amount for Financial Year $t-2$ is to be calculated as follows:

- (a) the benchmark cost incurred by the Service Provider for purchases of gas as UAG, calculated as the sum of:

the product of:

- (i) aggregate gas withdrawals at all daily metered Delivery Points in gigajoules during Financial Year *t-2*;
- (ii) the UAG Cost for Financial Year *t-2* in \$/gigajoule; and
- (iii) the UAG component target rate of 0.427 per cent of daily metered withdrawals,

and the product of:

- (i) aggregate volume market residual receipts in gigajoules for Financial Year *t-2*, calculated as aggregate Gas receipts for Financial Year *t-2* less aggregate gas withdrawals at all daily metered Delivery Points during Financial Year *t-2*;
- (ii) the UAG Cost for Financial Year *t-2* in \$/gigajoule; and
- (iii) the UAG component target rate of 5.16 per cent of volume market residual receipts:

minus

- (b) the forecast allowance of the total UAG costs included in the AER's relevant final decision for Financial Year *t-2*.

Reference Tariffs will be adjusted in the event that total UAG costs cease to be a Network cost during the Access Arrangement Period.

2.3 Carbon Cost factor amount

The Carbon Cost factor amount for Financial Year *t-2* is to be calculated as follows:

- (a) the actual cost incurred by the Service Provider, as approved by the AER, as a result of the operation of a Carbon Scheme, in Financial Year *t-2*,

minus

- (b) the forecast of the cost incurred by the Service Provider, as approved by the AER, as a result of the operation of a Carbon Scheme and included in the AER's relevant final decision, in Financial Year *t-2*.

2.4 Relevant Tax factor amount

The Relevant Tax factor amount for Financial Year *t-2* is to be calculated as follows:

- (a) the actual cost incurred by the Service Provider in paying any Relevant Tax, in Financial Year *t-2*,

minus

- (b) the forecast of the cost incurred by the Service Provider in paying any Relevant Tax included in the AER's relevant final decision, in Financial Year *t-2*.

2.5 Cost Pass Through factor

$$PT_t = \frac{(1 + PT'_t)}{(1 + PT'_{t-1})} - 1$$

where:

PT'_{t-1} is:

- (a) zero when t-1 refers to Financial Year 2014-15;
- (b) the value of PT'_t determined in the Financial Year $t-1$ for all other Financial Years in the Access Arrangement Period,

and

$$PT'_t = \frac{AP_t}{(1 + CPI_t)(1 - X_t)(1 + A_t) \sum_{x=1}^n \sum_{y=1}^m p_{t-1}^{xy} q_{t-2}^{xy}}$$

where,

AP_t is:

- (a) any Determined Pass Through Amount that the Service Provider proposes to pass through in whole or in part in Financial Year t , and / or
- (b) any pass through amounts arising from cost pass through events (as that term is defined in the access arrangement applying to this Network in the immediately prior access arrangement period) occurring in the immediately prior access arrangement period that the Service Provider proposes to pass through in whole or in part in Financial Year t ,

that includes an amount to reflect the time value of money between incurring the costs and recovering the costs, and excludes any amounts already passed through in Reference Tariffs;

CPI_t has the same meaning as set out in clause 3.2;

X_t has the same meaning as set out in clause 3.2.;

A_t is the automatic adjustment factor for Financial Year t as defined in this Schedule 3;

p_{t-1}^{xy} has the same meaning as set out in clause 3.2;

q_{t-2}^{xy} has the same meaning as set out in clause 3.2.

Schedule 4 Reference Service Agreement

The terms and conditions for the Reference Service are set out in the separate Reference Service Agreement, 1 July 2015 – 30 June 2020. The Reference Service Agreement, 1 July 2015 – 30 June 2020 forms part of this Access Arrangement.

Schedule 5 Interconnection of Embedded Network Service

The Service Provider ordinarily provides the Interconnection of Embedded Network Service specified in clause 2.5 of the Access Arrangement on the following terms and conditions.

1.1 Availability

- (a) The Interconnection of Embedded Network Service is available to any Embedded Network Operator to establish a single Delivery Point connected to an Embedded Network.
- (b) A Prospective User of an Interconnection of Embedded Network Service may request the Service Provider to provide and maintain an interconnection between a Delivery Point on the Network and a pipe or system of pipes constructed and operated by that Embedded Network Operator.

1.2 MDQ and MHQ

- (a) The Embedded Network Operator will be required to specify an annual quantity, MHQ and MDQ which fairly reflects the maximum annual, Hourly and Daily requirements at the Delivery Point, as well as the 24 hour profile of hourly flow based on prior consumption where that information is available.
- (b) The Service Provider's maximum obligation to deliver gas to the Delivery Point under Service Agreements with all Users is the MHQ in any Hour and the MDQ on any Day specified by the Embedded Network Operator and agreed by the Service Provider.

1.3 Metering

- (a) The Service Provider will provide Measuring Equipment for the Delivery Point.
- (b) Measuring Equipment will be designed to accurately measure the quantities specified by the Embedded Network Operator and will provide daily meter reading.
- (c) The Measuring Equipment will be commissioned on the commencement of the first transportation service to the Embedded Network Delivery Point on behalf of any User.
- (d) The Measuring Equipment will be decommissioned when there is no agreement with any User under which a Service is provided to the Delivery Point.

1.4 Authorisation of Embedded Network

- (a) Conditions precedent to the Service Provider providing an Embedded Network Service will include the Embedded Network Operator:
 - (i) having in place all relevant authorisations, approvals and licences required to operate the Embedded Network; and
 - (ii) entering into an agreement with the Service Provider for an Interconnection of Embedded Network Service.
- (b) For the avoidance of doubt, an Interconnection of Embedded Network Service is separate from and additional to a Service(s) requested by a User for the

transportation of gas through the Network to the Embedded Network Delivery Point.

1.5 Delivery Station and Delivery Point

- (a) The location of the Embedded Network Delivery Point on the Network will be agreed by the Embedded Network Operator and the Service Provider. The Service Provider will only withhold its agreement to a location proposed by the Embedded Network Operator on the basis of legal, technical, operational or safety considerations.
- (b) The hot tap connection to connect the Delivery Station to the Network will be designed and constructed in accordance with the Service Provider's usual standards and requirements, including Australian Standard 2885.
- (c) The Delivery Station will comprise metering facilities sufficient to accurately measure the flow over the full range of anticipated flow conditions and will be designed and constructed in accordance with the Service Provider's usual standards and requirements, including Australian Standard 2885. If the hot tap connection is located at a point on the Network where the maximum allowable operating pressure is above 1,050kPa, the Delivery Station will include a remotely controlled isolation valve.
- (d) Unless otherwise specified by the Service Provider, the Delivery Point between the Network and the Embedded Network Operator's pipe or system of pipes will be at the flange immediately downstream of the Delivery Station described above.
- (e) All facilities upstream of the outlet flange of the Delivery Station will be designed, procured, constructed, installed, owned and operated by the Service Provider at the reasonable cost of the Embedded Network Operator.
- (f) All facilities downstream of the outlet flange of the Delivery Station will be the responsibility of the Embedded Network Operator.
- (g) Modifications to the Delivery Station and hot tap connection to the Network which are required:
 - (i) as a result of changes in law or applicable technical standards;
 - (ii) to enable enhanced measurement performance; or
 - (iii) as a result of changes in the flow conditions through the Embedded Network Delivery Point,

will be made by the Service Provider at the reasonable cost of the Embedded Network Operator unless the Service Provider has otherwise recovered the costs from Users of the Embedded Network Delivery Point.

1.6 Load Shedding

- (a) The Embedded Network Operator will be subject to Load Shedding arrangements. The Embedded Network Operator must have facilities available to it to reduce or discontinue the withdrawal of Gas if called upon to do so.
- (b) Unless there is an agreement on Load Shedding between the Service Provider and the Embedded Network Operator, all load of the Embedded Network Operator will be subject to Load Shedding priority 2 as described in Schedule 6. Network

transportation services for the delivery of Gas to the Embedded Network Delivery Point will be subject to the same Load Shedding priority.

- (c) The Embedded Network Operator will participate in gas balancing arrangements if required.

1.7 Cathodic Protection of Facilities

The Embedded Network Operator must design, install, and operate, any cathodic protection system necessary to protect its Embedded Network at its own cost. Cathodic protection facilities must be installed in such a manner as to avoid any interference which may be detrimental to the Service Provider's facilities and must be electrically isolated from the Service Provider's facilities.

1.8 Installation and Operation

In the interests of safety and ensuring the integrity of the Service Provider's pre-existing facilities, the Embedded Network Operator must cooperate with the Service Provider to establish, in a timely manner, appropriate arrangements and procedures for the safe installation and operation of the Embedded Network Operator's facilities, and for the management of emergency situations involving those facilities and the Network.

1.9 Abandonment/Disconnection

In the event that facilities cease to be used to take Gas at the Embedded Network Delivery Point then the Service Provider will, at the Embedded Network Operator's expense, ensure that the facilities are disconnected and isolated from the Service Provider's facilities. This requirement does not apply where the cessation of use is temporary.

1.10 Approvals and Indemnity

- (a) The Embedded Network Operator will provide the Service Provider with evidence that it has fulfilled all applicable statutory requirements and that it holds all necessary permits and licences in relation to its facilities downstream of the Embedded Network Delivery Point. That evidence must be provided before the commencement of any service to the Delivery Point, as well as subsequently, following the Service Provider's reasonable request.
- (b) The Embedded Network Operator will be liable for and indemnify the Service Provider against any claim of liability in relation to or arising out of those facilities.

1.11 Charges

The following charges will be agreed between the Embedded Network Operator and the Service Provider:

- (a) Charge for engineering investigation;
- (b) Charge for provision of interconnection facilities;
- (c) provision of Measuring Equipment.

Schedule 6 Request for Service

1 Access and Requests for Services

In order to obtain access to a Negotiated Service or a Haulage Reference Service a User or Prospective User will observe the following requirements:

- (a) A Prospective User must lodge a Request and meet all financial obligations and demonstrate creditworthiness pursuant to clause 28 of the Reference Service Agreement. Where the MHQ is expected to exceed 6m³/Hour a Request must include as a minimum the level of detail envisaged by this Schedule 6. Where the MHQ is expected to be less than 6m³/Hour the Request must include such details as requested by the Service Provider from time to time.
- (b) A Prospective User may have only one active Request in relation to the same tranche of capacity for a particular Delivery Point.
- (c) The Service Provider will within the shortest reasonable time and in any event within 20 Business Days of receiving a complete Request, respond to the Request in accordance with rule 112 of the National Gas Rules.
- (d) A Request will lapse unless, within 20 Business Days of the Service Provider advising that capacity is available for the Request, the Prospective User has either entered into a Reference Service Agreement or commenced bona fide negotiations to do so.⁹
- (e) Where there is sufficient capacity to meet a Request, there will be no queue.
- (f) Where there is insufficient capacity to satisfy a Request, then a queue will be formed and the Queuing Policy will apply.

⁹ A Request for Service will not lapse in the event of a dispute being notified under the National Gas Law until that dispute has been resolved in accordance with the National Gas Law.

Request for Service Form

Sections 1, 2, 3, 4, and 5 must be completed for all Requests.

Sections 6 and 7 must be completed for increased capacity at an existing site.

Sections 6, 7, 8, and 9 must be completed for new delivery points.

1 Prospective User Information

Name of Prospective User:

A.B.N

Contact
Officer

Position Title

Telephone

Email

Fax

Customer Contact Details:

Name

Position Title

Telephone

Fax

2 Receipt Point Information

Receipt Point

Location

Entity supplying inlet
gas

3 Delivery Point Information

Delivery Point Business Name

A.B.N.

Delivery Point Street Address

Postcode

Delivery Point is Metres (N, S, E or W) from (nearest cross Street)

.....

Delivery Point is located on the (N, S, E or W) side of the Street.

4 Transportation Information

Service Requested	Haulage Reference Service / Negotiated Service
	Increase in MDQ or MHQ / change in Delivery Station characteristics

Service Commencement Date

Duration of Service Agreement Sought

ANZIC code(s)

Gas Applications

AQ (GJ/yr) Annual Quantity

MDQ (GJ/day) Maximum Daily Quantity

MHQ (GJ/hr) Maximum Hourly Quantity

5 Delivery Station Pressure

Delivery Station Pressure (kPa) —

Metering pressure (1.38, 2.75, 7.0, 35, 100, if other please specify)

6 Appliance & Gas Load Information

Appliance Type	Hourly Rate (MJ/hr)	Operating Capacity (%)	Hour/Day	Days/week	Weeks/year	Total Annual Quantity (TJ/yr)
Total						

Do any of these appliances have pilots or small flow rates? If so, which ones?

7 Fuel Conversion Information

(if applicable)

Current Fuel Type

Current Annual Consumption (GJ/yr)

8 Delivery Station Information

If the customer requires other than a standard single run meter set, please specify:

Is the proposed meter set located indoors? Y / N

Is a security compound required? Y / N

9 DELIVERY STATION LOCATION SKETCH

Please provide a sketch showing the proposed location of the meter set and the following:

- length of customer service (path valve to meter set);
- surface restoration from front boundary to meter set;
- any walls to be pierced or other obstacle, e.g. stairs, retaining walls etc. to be negotiated;

4. all buildings and any other permanent structures on the site;
5. side and front building lines, and kerb line;
6. bearing (north).

Schedule 7 Operational Schedules

1 Load Shedding

1.1 Load Shedding Principles

- (a) Load shedding is defined as a controlled interruption to, or reduction in, the delivery of gas to Delivery Points. If at any time for any reason there is, or the Service Provider reasonably believes or anticipates that there may be, a failure of supply or shortfall in supply in or to any part of the Network, the Service Provider is entitled to curtail or interrupt the receipt, transportation or delivery of Gas and is entitled to implement Load Shedding.
- (b) Load shedding includes the process of contacting Users and/or User's customer sites to notify them of a requirement to reduce or cease withdrawals of Gas from the Network, and again when the requirements are lifted or relaxed. All Users of the Network and their customers are required to participate in and comply with Load Shedding and the provision of ELMS Data.
- (c) For prompt and effective responses during emergency events it is necessary for Users to take responsibility for notifying their customers to reduce Load to meet the Load Shedding requirements for each site. Contact of individual sites by the Service Provider is used to support and reinforce the site contact procedures where deemed necessary by the Service Provider to generate and monitor required levels and timeliness of User's customer responses.

1.2 Load Shedding Priorities

Load Shedding will be implemented by the Service Provider according to the following schedule of priorities:

Load Shedding Priority	Load Type
1	All interruptible Loads.
2	All Load at a Delivery Point which serves more than one customer or other end user, and where no arrangement exists between the Service Provider and the operator of the facilities beyond the Delivery Point for shedding loads served by those facilities.
3	All Load at sites where gas is not used for production.
4	All Load at sites where load is transferable to an alternative fuel.
5	Load that may be reduced without damage to product or plant.
6	Load that may be halted without damage to product or plant.
7	Load where halting will cause product damage.
8	Load where halting will cause plant damage.
9	Load not transferable to alternative fuel at hospital and essential service sites.
10	All Load at Volume Tariff Delivery Points expected to consume less than 10 TJ per annum (Residential, Commercial and Industrial).

1.3 Restoration of Service

Where feasible, permission to withdraw Gas from the Network will be restored in reverse order to that in which Load Shedding was implemented.

1.4 Suspension

If a User fails to cease or reduce deliveries, withdrawals or taking of Gas from the Network as requested by the Service Provider in accordance with these principles and their Service Agreement (or fails to procure that withdrawals be ceased or reduced), the Service Provider may suspend the delivery of Gas to any relevant Delivery Point.

1.5 Liability

The Service Provider will not be liable for any losses, liabilities or expenses incurred by the User and/or a User's customer arising from Load Shedding, where the Service Provider acts in accordance with the principles of this Access Arrangement in good faith.

1.6 Emergency Load Management Systems (ELMS)

- (a) ELMS are computer based systems used by the Service Provider as an aid in identifying, contacting and recontacting User's customer sites by the Service Provider in the event of a supply failure. Information held by the Service Provider relating to a User is available to the User upon request.
- (b) Site and Network information is maintained through ELMS, in consultation with Users, and is used as the basis of operational implementation of Load Shedding by the Service Provider.
- (c) Users must advise the Service Provider of the emergency contact details for User's customers at Demand Customer Delivery Points and delivery points at which Negotiated Services are provided and must ensure that such contact details are current at all times for the purposes of ELMS.
- (d) Users must advise the Service Provider of the emergency contact details for the User to enable communication between the Service Provider and the User during Load Shedding. User emergency contact personnel must be available to assist the Service Provider during Load Shedding if required.
- (e) If during a Load Shedding event, or simulation of a Load Shedding event, the Service Provider determines that site or User's customer details have changed or do not match the Service Provider's records, the Service Provider may update its records on the basis of advice from the site or the User's customer. The User may then confirm the contact information provided. This does not affect the Users' obligation to provide accurate and current information in any way.

2 Establishment of Receipt Points

- (a) Any person (including a User or Prospective User) seeking to interconnect with the Network for the purpose of enabling a User or Prospective User to deliver gas to the network for onward transportation may seek to establish a new Receipt Point.
- (b) A new Receipt Point may only be established on the Network if the Service Provider consents to the proposed location of the new Receipt Point. The Service Provider will only withhold its consent to a proposed location of a new Receipt Point on the basis of technical, operational or safety considerations.

- (c) The person seeking to establish a new Receipt Point must enter into an agreement with the Service Provider covering, without limitation, the following matters:

Receipt Point and Equipment Upstream

- (i) The new Receipt Point, and the pipe or system of pipes upstream of the new Receipt Point, must comply with the following requirements in order to ensure that the integrity, safety and operating ability of the Network is not compromised:
- (A) the new Receipt Point must have an associated Receipt Station (as described in the Service Agreement);
 - (B) to safeguard against the hazards of over pressurisation of the Network, the Receipt Station must be equipped with overpressure protection facilities in accordance with the Service Provider's usual standards and requirements, including Australian Standard 2885, at the expense of the person seeking to establish the new Receipt Point;
 - (C) a remotely controlled isolation valve operable by the Service Provider must be installed at the outlet of the Receipt Station upstream of the new Receipt Point, at the expense of the person seeking to establish the new Receipt Point;
 - (D) the new Receipt Point will be at the flange immediately upstream of the facilities described above, or as otherwise agreed by the Service Provider. All facilities upstream of the new Receipt Point will be the responsibility of the person seeking to establish the new Receipt Point;
 - (E) the operational mode of a Receipt Station for a new Receipt Point must be compatible with the operational mode of the Network;
 - (F) the hot tap connection to connect the facilities to the Network will be designed and constructed with the Service Provider's usual standards and requirements, including Australian Standard 2885, at the expense of the person seeking to establish the new Receipt Point;
- (ii) Modifications may be required to the Network and/or the Service Provider systems to integrate the new Receipt Point into the operation of the Network. Requirements will vary depending on the location of the new Receipt Point. The party seeking to establish the new Receipt Point will bear the reasonable costs of such modifications, whether identified before or after installation of the new Receipt Point unless the Service Provider can recover them from Users of the new Receipt Point.

Cathodic Protection of Facilities

- (iii) The person seeking to establish the new Receipt Point must design, install, and operate, any cathodic protection system necessary to protect its facilities at its own cost. Cathodic protection facilities must be installed in such a manner as to avoid any interference which may be detrimental to the Service Provider's facilities and must be electrically isolated from the Service Provider's facilities.

Installation and Operation

- (iv) In the interests of safety and ensuring the integrity of the Service Provider's pre-existing facilities, the person seeking to establish the new Receipt Point must cooperate with the Service Provider to establish, in a timely manner, appropriate arrangements and procedures for the safe installation and operation of the facilities described above, and for the management of emergency situations involving those facilities and the Network.

Schedule 8 Return on debt extrapolation

1 Extrapolation methodology

1.1 Extrapolation of the RBA data source using the AER extrapolation methodology

At each publication date, the RBA BBB yield at an effective tenor of 10 years is calculated as:

$$Yield_{10}^{RBA\ AER} = Yield_{10}^{RBA} + (10 - Tenor_{10}) * \frac{(Spread_{10} - Spread_7)}{(Tenor_{10} - Tenor_7)}$$

Where:

$Yield_{10}^{RBA\ AER}$ is the extrapolated RBA BBB yield at the effective 10 year tenor using the AER methodology;

$Yield_{10}^{RBA}$ is the RBA BBB yield estimate at the target 10 year tenor;

$Spread_{10}$ is the RBA's estimated spread to swap at the target 10 year tenor;

$Spread_7$ is the RBA's estimated spread to swap at the target 7 year tenor;

$Tenor_{10}$ is the effective tenor associated with the RBA's estimated spread to swap at the target 10 year tenor; and

$Tenor_7$ is the effective tenor associated with the RBA's estimated spread to swap at the target 7 year tenor.

1.2 Extrapolation of the BVAL data source using the AER extrapolation methodology

(a) Calculation of the BVAL 10 year yield extrapolated yield

The BVAL 10 year yield extrapolated yield using the AER methodology is given by:

$$Yield_{10}^{BVAL\ AER} = Yield_T^{BVAL} + (Yield_{10}^{RBA\ AER} - Yield_T^{RBA\ AER})$$

Where:

$Yield_{10}^{BVAL\ AER}$ is the extrapolated BVAL yield at the effective 10 year tenor using the AER methodology;

T is the longest available tenor of 10 years or less at which the Bloomberg BVAL curve reports fair value yields.

$Yield_T^{BVAL}$ is the Bloomberg BVAL fair value yield for tenor T ;

$Yield_{10}^{RBA\ AER}$ is the extrapolated RBA BBB yield at the effective 10 year tenor, extrapolated using the AER methodology in accordance with 1.1 above; and

$Yield_T^{RBA\ AER}$ is the RBA BBB yield estimate at effective tenor T , calculated in accordance with paragraph (b) below.

(b) Calculation of the RBA yield at effective tenor T

The RBA BBB yield at effective tenor T is calculated as:

$$Yield_T^{RBA\ AER} = Yield_T^{RBA} + (T - Tenor_T) * \frac{(Spread_{T_{high}} - Spread_{T_{low}})}{(Tenor_{T_{high}} - Tenor_{T_{low}})}$$

Where:

T	is the longest available tenor of 10 years or less at which the Bloomberg BVAL curve reports fair value yields;
T_{low}	is the target tenor associated with the highest effective tenor available from RBA data that is lower than T . If no effective tenor is lower than T then T_{low} is the lowest target tenor from RBA data. Notwithstanding this, if T is greater than all RBA effective tenors then T_{low} is equal to the second highest effective tenor available from RBA data;
T_{high}	is the target tenor associated with the lowest effective tenor available for RBA data that is higher than T . If no effective tenor is higher than T then T_{high} is equal to the highest target tenor from RBA data. Notwithstanding this, if T is less than all RBA effective tenors then T_{high} is equal to the second lowest effective tenor available from RBA data;
$Yield_T^{RBA}$	is the RBA BBB yield for target tenor T ;
$Tenor_T$	is the effective tenor associated with target tenor T ;
$Spread_{T_{high}}$	is the RBA's estimated spread to swap at target tenor T_{high} ;
$Spread_{T_{low}}$	is the RBA's estimated spread to swap at target tenor T_{low} ;
$Tenor_{T_{high}}$	is the effective tenor associated with target tenor T_{high} ; and
$Tenor_{T_{low}}$	is the effective tenor associated with target tenor T_{low} .

Schedule 9 Receipt Point Pressures

The Service Provider will notify Users of changes to the requirements set out in this schedule, and publish the updated schedule on its website. The Service Provider may also add minimum or maximum flow requirements for flow controlled Receipt Points.

1 Country Network Sections of NSW Distribution System and Central West Distribution System

Upstream pipeline (Allows receipt of Gas from this asset, which does not form part of the Network)	Location of Receipt Point	Max. Receipt Pressure at Receipt Point (kPa)	Min. Receipt Pressure at Receipt Point (kPa)	Areas of Network downstream of Receipt Point
Country Network Sections				

Upstream pipeline (Allows receipt of Gas from this asset, which does not form part of the Network)	Location of Receipt Point	Max. Receipt Pressure at Receipt Point (kPa)	Min. Receipt Pressure at Receipt Point (kPa)	Areas of Network downstream of Receipt Point
MSPS- Moomba to Young	West Wyalong	6895	1750	West Wyalong
MSPS - Young to Lithgow	Cowra	10 000	1750	Cowra
	Blayney	10 000	1750	Blayney
	Orange	10 000	1750	Orange
	Millthorpe	10 000	1750	Millthorpe
	Bathurst	10 000	1750	Bathurst, Kelso, Raglan
	Oberon	10 000	1750	Oberon
	Lithgow	10 000	1750	Lithgow
	Wallerawang	10 000	1750	Wallerawang
MSPS - Young to Wagga	Young	10 000	1750	Young
	Cootamundra	10 000	1750	Cootamundra
MSPS - Burnt Creek to Griffith	Junee	10 000	1750	Junee
	Coolamon	6895 ⁺	1750	Coolamon
	Ganmain	6895 ⁺	1750	Ganmain
	Narrandera	6895 ⁺	1750	Narrandera
	Rockdale	6895 ⁺	1750	Rockdale
	Leeton	6895 ⁺	1750	Leeton, Yanko
	Murrami	6895 ⁺	1750	Murrami
	Yoogali (Griffith)	6895 ⁺	1750	Griffith
MSPS - Young to Wilton	Boorowa	6895	1750	Boorowa
	Yass	6895	1750	Yass
	Goulburn	6895	1750	Goulburn
	Marulan	6895	1750	Marulan

Upstream pipeline (Allows receipt of Gas from this asset, which does not form part of the Network)	Location of Receipt Point	Max. Receipt Pressure at Receipt Point (kPa)	Min. Receipt Pressure at Receipt Point (kPa)	Areas of Network downstream of Receipt Point
	Sally's Corner	6895	1750	Exeter, Bundanoon
	Moss Vale	6895	1750	MossVale, Berrima
	Bowral	6895	1750	Bowral, Mittagong
	Bargo	6895	1750	Bargo, Picton, Tahmoor
Central West Pipeline – Marsden to Dubbo	Dubbo ^{cw}	10,000	1750	Dubbo, Wellington
	Dubbo West ^{cw}	10,000	1750	Dubbo West
	Forbes ^{cw}	10,000	1750	Forbes
	Parkes ^{cw}	10,000	1750	Parkes
	Narromine ^{cw}	10,000	1750	Narromine

* Upgrades to the Service Provider's facilities are required to accommodate 10 000 kPa.
“cw” Network Section forms part of the Central West Distribution Network

2 Coastal Network Sections of the NSW Distribution System and the Wilton-Newcastle Pipeline and the Wilton Wollongong Pipeline

Upstream pipeline (Allows receipt of Gas from this asset, which does not form part of the Network)	Location of Receipt Point	Max. Receipt Pressure at Receipt Point (kPa)	Min. Receipt Pressure at Receipt Point (kPa)	Areas of Network downstream of Receipt Point
<i>Wilton - Newcastle Network Section</i>				
Eastern Gas Pipeline (EGP)	Horsley Park CTS	4500 ^{^^}	3600+	Sydney Blue Mountains Central Coast Newcastle Lower Hunter
Moomba Sydney Pipeline System (MSP)	Wilton CTS	6895	3800+	
Camden Coal Seam Methane	Rosalind Park CTS	4500 ^{^^}	3800+	
Tomago Hexham Pipeline (proposed)	Hexham CTS ¹ (proposed)	5,000 ^{**}	2,200+	
<i>Wilton - Wollongong Network Section</i>				
Eastern Gas Pipeline (EGP)	Port Kembla CTS	3,500	2,600+	Wollongong Shellharbour
Eastern Gas Pipeline	Albion Park CTS	14,895	3,000+	Kiama

Upstream pipeline (Allows receipt of Gas from this asset, which does not form part of the Network)	Location of Receipt Point	Max. Receipt Pressure at Receipt Point (kPa)	Min. Receipt Pressure at Receipt Point (kPa)	Areas of Network downstream of Receipt Point
(EGP)				
Moomba Sydney Pipeline (MSP)	Wilton CTS	6895	3800+	

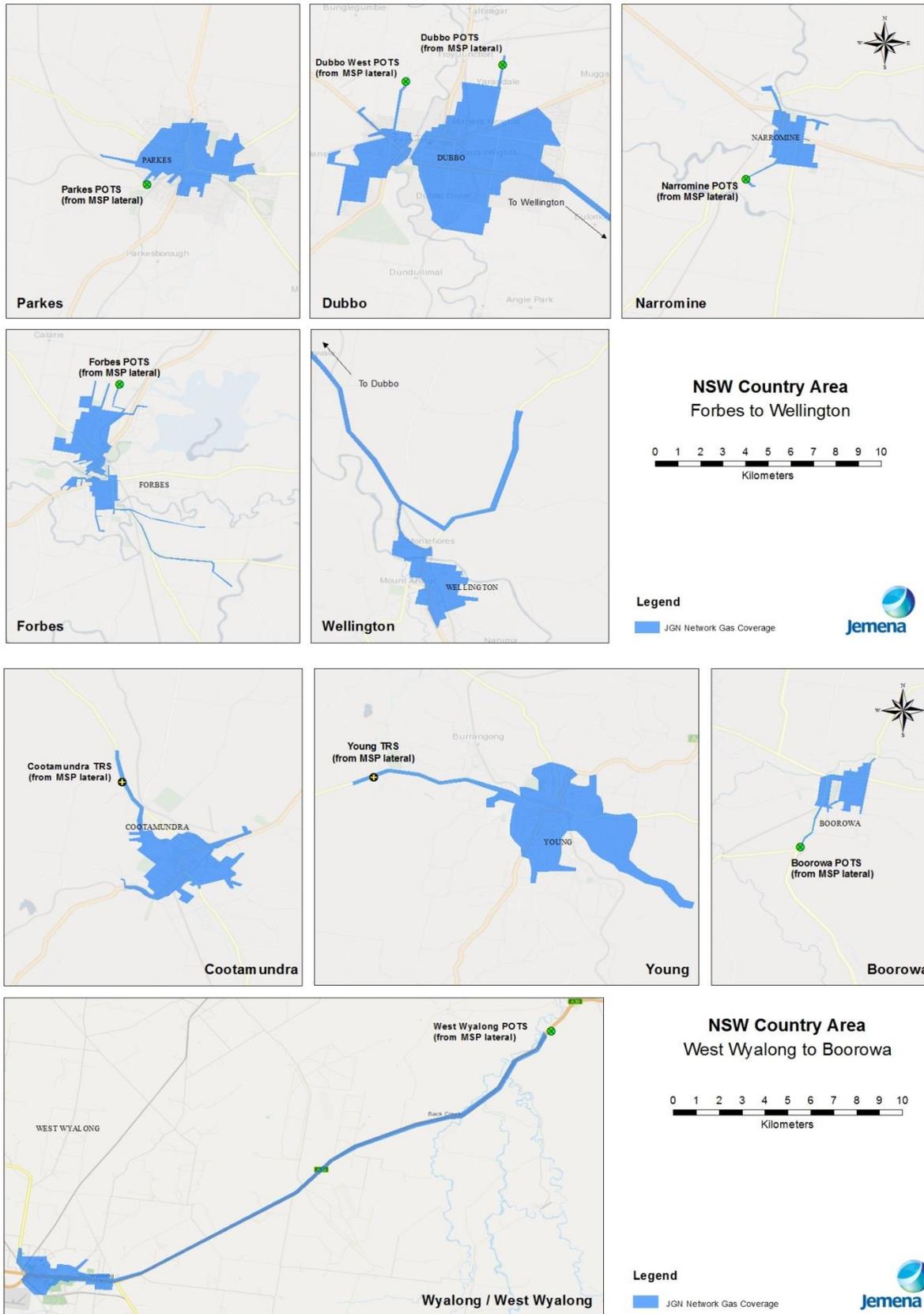
If marked "+" then the Minimum Receipt Pressure may be subject to future increase to the Maximum Receipt Pressure

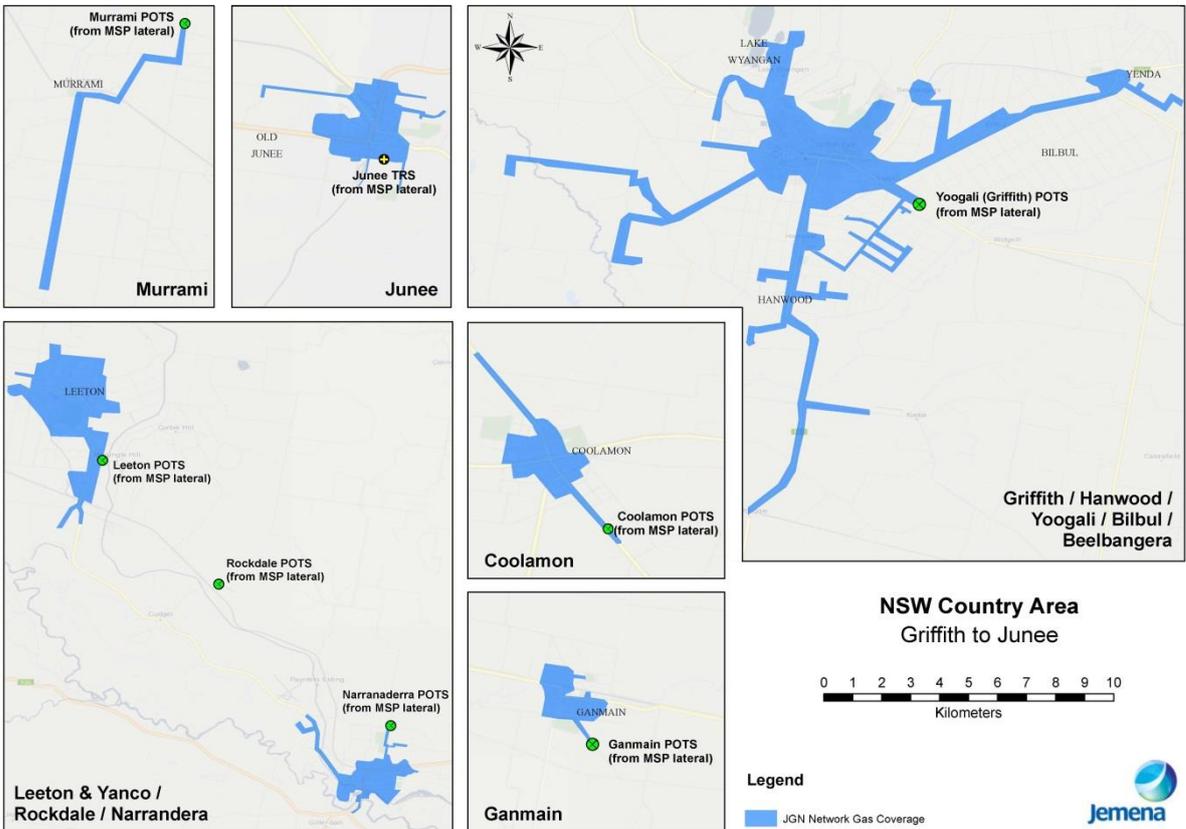
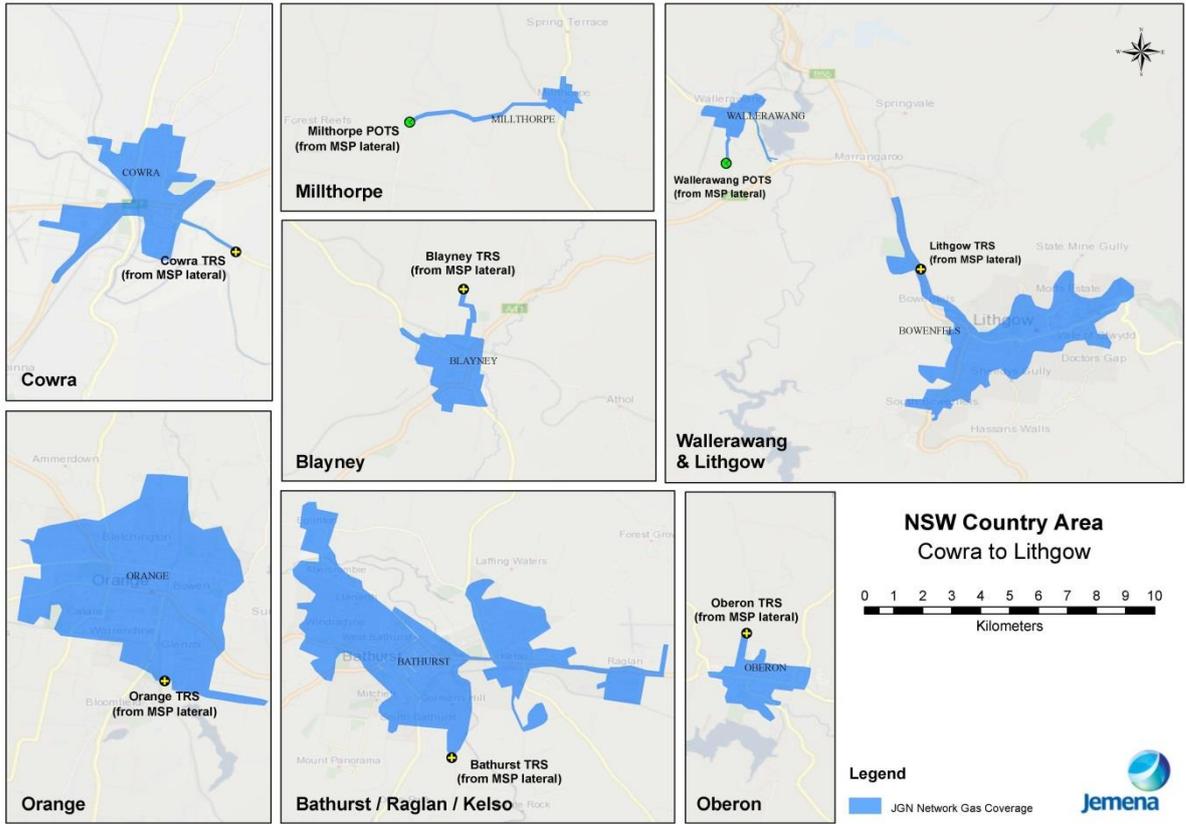
^^ 4500 kPa maximum Receipt Pressure limitation is in place to satisfy technical code & licence requirements due to third party activity. Maximum Receipt Pressures will be reinstated to 6895 kPa when code and licence requirements allow.

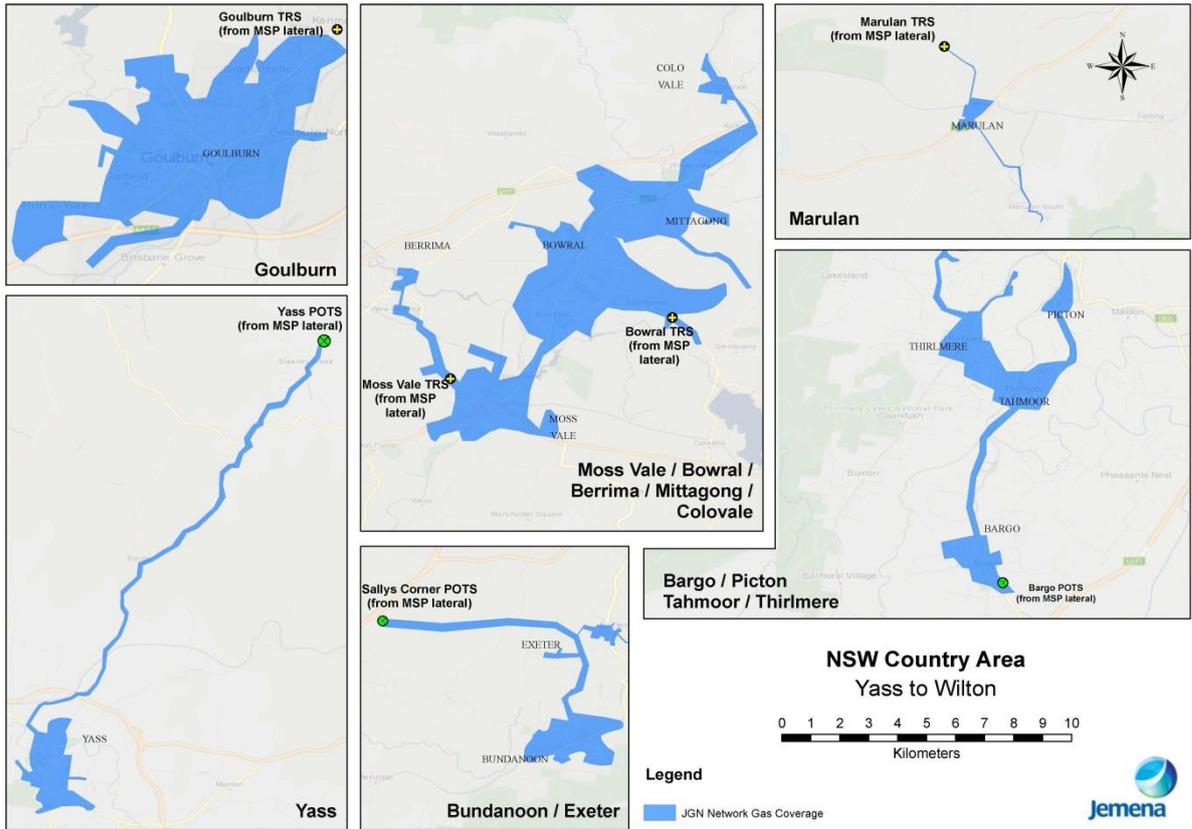
** Upgrades to the Service Provider's facilities are required to accommodate 6,895 kPa.

¹ Hexham CTS is expected to be established prior to 1 July 2015.

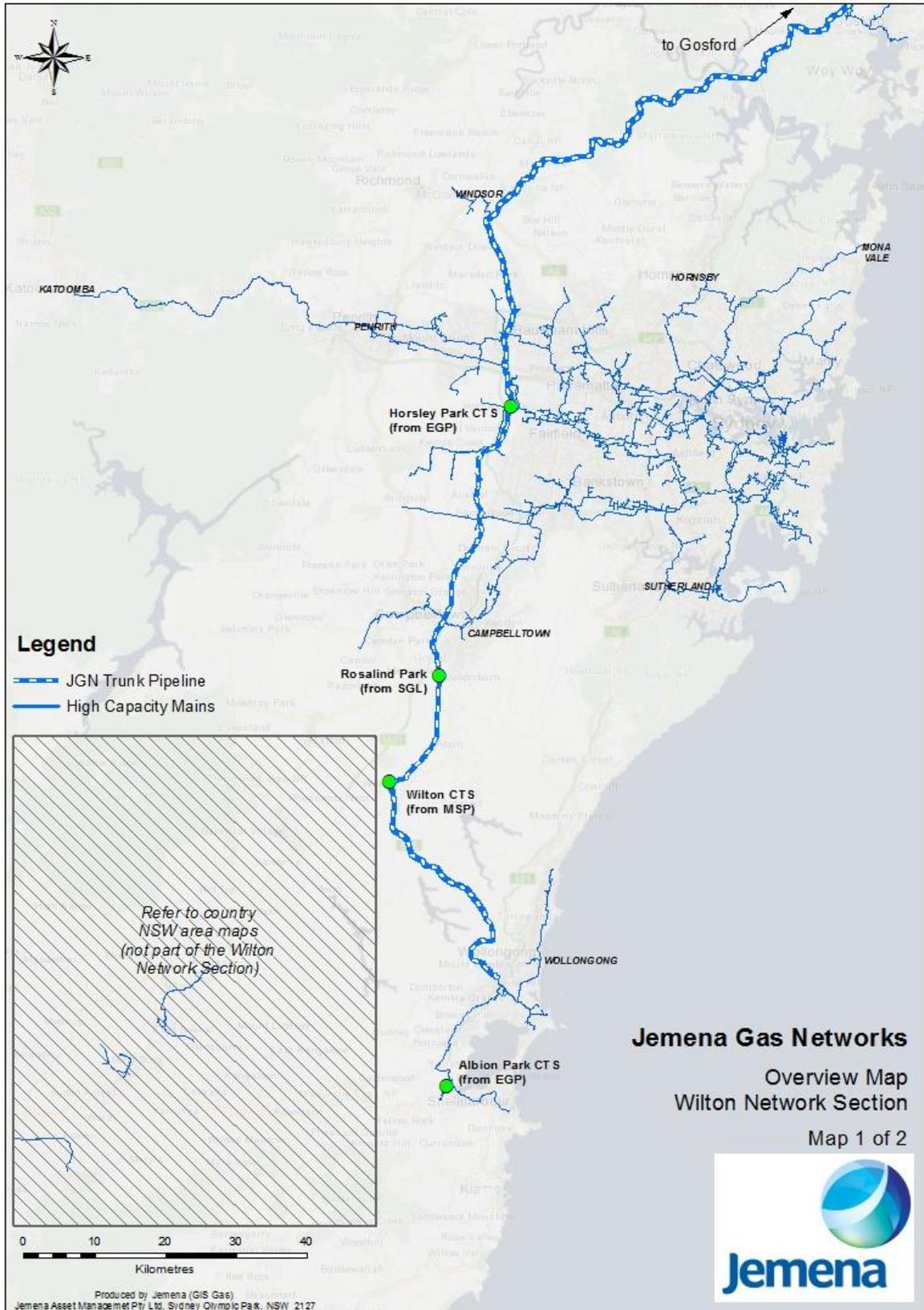
Schedule 10 Maps of the Network

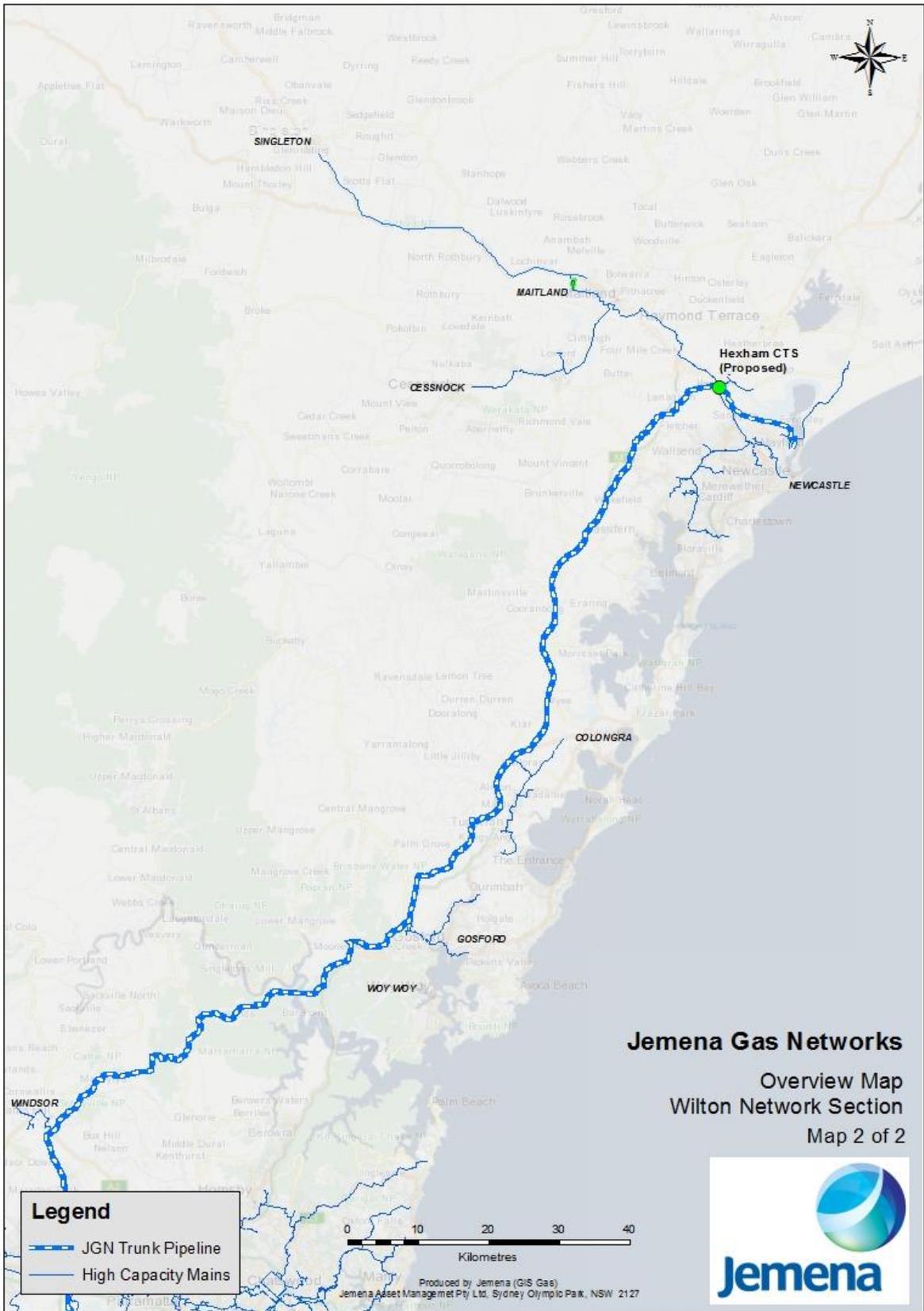






Maps of high capacity mains (Wilton Network Section)





Reference Service Agreement

JGN's NSW gas distribution networks

1 July 2015 – 30 June 2020

(Incorporating revisions required by AER Final
Decision 3 June 2015)

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Agreement dated

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Parties **Jemena Gas Networks (NSW) Ltd** ACN 003 004 322 of 321 Ferntree Gully Road, Mt Waverley, Victoria 3149 (**Service Provider**); and

 [insert name] ACN [insert ACN] of [insert address] (**User**).

Background

The Service Provider has agreed to provide and the User has agreed to receive the Haulage Reference Service on the terms and conditions set out in this Agreement.

1. Definitions and Interpretation

1.1 Definitions

In this Agreement, unless otherwise indicated:

Access Arrangement means the current access arrangement in relation to the Network approved by the Regulator, for the purposes of and in accordance with the National Gas Law;

ACDC means the Australian Commercial Dispute Centre;

AEMC means the Australian Energy Market Commission;

Agreement means this Agreement, the Annexures, and any document, or part of a document, incorporated into this Agreement by reference, including (without limitation):

- (a) the Relevant Customer List;
- (b) clauses 2.1 (as it applies to the Haulage Reference Service), 2.2, 2.3, 3 and 4 of the Access Arrangement;
- (c) the Reference Tariff Schedule; and
- (d) the Operational Schedules,

each as amended or replaced from time to time;

Ancillary Charge means an ancillary charge specified in the Reference Tariff Schedule;

Annexure means an annexure to this Agreement;

Assignment Date means the date determined in accordance with:

- (a) clause 11.2(d)(i); or

- (b) the date on which a Delivery Point was most recently assigned to its current Tariff Class by the Service Provider, as set out in the Relevant Customer List;

Australian Energy Market Operator or **AEMO** means Australian Energy Market Operator Limited (ACN 072 010 327);

Australian Standard AS ISO 1000-1998 means *'The International System of Units (SI) and its Application'*, the Commonwealth *'Weights Measures (National Standards) Act 1960 - 1965'* and Regulations thereunder, and AS/NZ1376:1996 Conversion Factors;

Authorised Overrun has the meaning given to that term in clause 5.3;

Authorised Overrun Quantity has the meaning given to that term in clause 5.7;

Basic Metering Equipment means the meter set at the Delivery Station comprising of Gas meter, filter, pipework and isolation valves and may further include, where required by the Service Provider, pressure regulators, safety valves, pressure and temperature measurement instruments and flow calculation equipment;

Billing Period means the period between the dates on which a meter is read for a Non-Daily Metered Delivery Point, or one Calendar Month for a Daily Metered Delivery Point;

Business Day means any day which is not a Saturday, Sunday, or gazetted public holiday in Sydney, New South Wales;

Calendar Month means the period beginning at 06:30h on the first Day of a calendar month and ending at 06:30h on the first Day of the next succeeding calendar month;

Calendar Year means the period commencing at 06:30h on 1 January and terminating at 06:30h on 1 January of the following year;

Capacity Entitlement means:

- (a) in respect of a Demand Customer Delivery Point, on a Day, the MDQ specified in Demand Customer List for that Delivery Point, as varied from time to time pursuant to clauses 4.2(h), 4.3 and 4.4;
- (b) in respect of a Demand Customer Delivery Point, in an Hour, the MHQ specified in Demand Customer List in respect of that Delivery Point, as varied from time to time pursuant to clauses 4.2(h), 4.3 and 4.4;
- (c) if there is an MHQ specified in the Volume Customer List in respect of a Volume Customer Delivery Point, in an Hour, the MHQ specified in the Volume Customer List in respect of that Delivery Point, as varied from time to time pursuant to clause 4.3; or
- (d) if there is no MHQ specified in the Volume Customer List in respect of a Volume Customer Delivery Point, the Quantity of Gas withdrawn by the User from the Delivery Point in an Hour, up to a maximum Quantity of 6m³/Hour;

Change in Law means:

- (a) the introduction of a new Law; or
- (b) an amendment to, or repeal of, an existing Law; or
- (c) a new or changed interpretation (which is binding on the Service Provider) of an existing Law resulting from a decision of:
 - (i) a court;
 - (ii) a tribunal;
 - (iii) an arbitrator;
 - (iv) a Government or regulatory department, body, instrumentality, minister, commissioner, officer, agency or other authority; or
 - (v) a person or body which is the successor to the administrative responsibilities of any person or body described in paragraph (c)(iv) above;

Chargeable Demand means, for a Demand Customer Delivery Point, the Quantity of Gas determined in accordance with this Agreement which is used to determine the Demand Charge under the Reference Tariff Schedule;

Charges means the charges payable by the User to the Service Provider under clause 19.1 of this Agreement;

Commencement Date means:

- (a) the commencement date specified in a Relevant Customer List, in respect of a Delivery Point listed in a Relevant Customer List immediately prior to the most recent amendment to this Agreement under clause 1.2; or
- (b) the date on which a change of user transaction under the Retail Market Procedures takes effect such that the User becomes the current user (as that term is used in the Retail Market Procedures) for the Delivery Point, in respect of a Delivery Point which is added to a Relevant Customer List pursuant to clause 11.2; or
- (c) the date specified by the Service Provider in respect of a Delivery Point added to the Relevant Customer List pursuant to clause 11.1;

Communications Facilities means equipment used to communicate electronically Daily metering data from Daily Meter Reading Facilities at a Delivery Station to the Service Provider;

Confidential Information means all information which either Party discloses to the other under or in connection with the performance of any obligations under this Agreement, whether that disclosure is made orally, in writing, electronically or by any other means;

Consequential Damage means any of the following, however caused or arising whether under common law, equity, contract, any fiduciary duty, tort (including negligence) or delict as a consequence of breach of any duty (statutory or otherwise) or under any other legal doctrine or principle whatsoever, irrespective of whether recoverable in law or equity:

- (a) loss of revenue, reputation or profit;
- (b) cost, loss, liability, penalty, expense or damage associated with business interruption (including overheads incurred during business interruption);
- (c) punitive or exemplary damages;
- (d) cost, loss, liability, penalty, expense or damage incurred, or liquidated or pre-estimated damages or penalties of any kind whatsoever, borne or payable under any contract for the sale, exchange, transportation, processing, storage or other disposal of Gas (other than this Agreement);
- (e) cost, loss, liability, penalty, expense or damage arising in connection with a Third Party Claim;
- (f) loss of bargain, contract, expectation or opportunity; and
- (g) any indirect or consequential loss or damage,

but excluding, for the avoidance of doubt, loss or damage arising directly as a result of any breach of this Agreement, negligent act or omission or breach of duty (statutory or otherwise) such as loss or damage to property or personal injury;

Country Distance means, in respect of a Delivery Point in a Country Network Section, the straight line distance (in kilometres) from the Relevant Receipt Point, rounded up to the nearest 0.5 km as determined reasonably by the Service Provider and as shown in the Relevant Customer List;

Country Network Section means a Network Section other than the Wilton Network Section;

Curtailed Plan means a written procedure, which is reasonably acceptable to the Service Provider, that describes the timing and steps to be taken by a Customer to reduce and maintain Hourly Gas withdrawals at the Delivery Point to pre-quantified levels which correspond to the Load Shedding Priorities set out in the ELMS Data for the Delivery Point;

Customer has the meaning given to that term in the Access Arrangement;

Customer Connection Contract in force at a Delivery Point means a customer connection contract, as defined in the NERL, which has taken effect as between the Service Provider and a Customer in respect of supply of Gas at that Delivery Point, in accordance with the NERL;

Customer's Personal Information means Personal Information in respect of a Customer;

Daily Meter Reading Facilities means equipment at a Delivery Station necessary to enable a Customer's Daily consumption of Gas to be recorded and measured;

Daily Metered Delivery Point means a Delivery Point where Gas consumption is recorded on a Daily basis;

Damage includes any costs (including legal costs on a full indemnity basis), liabilities, losses, penalties, expenses or damage of whatsoever nature or description suffered or incurred by a person including Consequential Damage and Direct Damage;

Day means a period of 24 consecutive Hours beginning at 06:30h and **Daily** has a corresponding meaning;

Declared Heating Value of Gas for a Day means the Heating Value of Gas applicable to the Delivery Point for the Day as determined by the Service Provider;

Delivery Point means a point at which Gas is withdrawn from the Network listed from time to time in the Relevant Customer List;

Delivery Station means facilities (including Measuring Equipment) installed at a Delivery Point to enable the delivery of Gas from the Network and which regulate the delivery, and measure the Quantity, of Gas withdrawn at that Delivery Point;

Demand Charge means the annual charge calculated by multiplying the Demand Capacity Rate (or other charge component set out in the Reference Tariff Schedule that is expressed in units of \$/(GJ of Chargeable Demand) per annum) by the Chargeable Demand;

Demand Customer Delivery Point means a Delivery Point which has been assigned to a Demand Tariff or a Volume Tariff which includes a Demand Charge and as set out in the Demand Customer List;

Demand Customer List means a list in electronic form which sets out the following items for each Demand Customer Delivery Point:

- (a) the Delivery Point station ID;
- (b) the Receipt Point (where the Delivery Point is in the Wilton Network Section then the Receipt Point shall be taken to refer individually or collectively to any Receipt Point in the Wilton Network Section);
- (c) the assigned Tariff;
- (d) the Commencement Date;
- (e) the Chargeable Demand;
- (f) the Maximum Daily Quantity;
- (g) the Maximum Hourly Quantity;

- (h) if the Delivery Point is located within a Country Network Section, the Country Distance;
- (i) the Assignment Date;
- (j) the Demand Reset Date; and
- (k) the ELMS Data.

Demand Reset Date means, for a Delivery Point, the date determined in accordance with clause 4.6(d), 4.6(e) or 4.7(f) (as applicable), and set out in the Demand Customer List, being the date on which the Chargeable Demand was last changed (or was deemed to have been last changed);

Demand Tariff means a Tariff Class designated as a Demand Tariff in the Reference Tariff Schedule;

Direct Damage means any Damage other than Consequential Damage;

Director General means the Director General referred to in the *Gas Supply (Safety and Network Management) Regulation 2013* (NSW);

Disclosing Party has the meaning given to that term in clause 29(b);

Dispute has the meaning given to that term in clause 30.2;

DPI means the numeric identifier assigned to a Delivery Point by the Service Provider;

Due Date has the meaning given to that term in clause 20.4(a);

EGP means the Eastern Gas Pipeline constructed from Victoria to New South Wales and delivering Gas to the Network;

ELMS Data means information held by the Service Provider (including such information as may be requested from time to time) for the purposes of facilitating emergency Load Shedding including, but not limited to, for each Delivery Point:

- (a) Load Type;
- (b) the corresponding Quantity of Load for each Load Type; and
- (c) 24-hour, seven day a week User and Customer contact details,

and includes any Curtailment Plan provided by a User in respect of a Delivery Point;

End Customer means any person who is supplied with and consumes Energy as a result of Gas being delivered under this Agreement to a Delivery Point;

Energy means energy (or an energy source) in any form and includes natural gas, electricity or thermal energy in any form (for example steam or hot water and whether used for heating, cooling or some other purpose);

Filtration and Liquid Separation System has the meaning given to that term in Annexure 4;

Financial Report has the meaning given to that term in the *Corporations Act 2001* (Cth);

Financially Responsible Retailer for premises means the retailer who is responsible for settling the account for Gas withdrawn from the delivery point (however described) associated with the premises under the Retail Market Procedures;

Flow and Pressure Control System has the meaning given to that term in Annexure 4;

Force Majeure Event has the meaning given to that term in clause 24.1;

Forecast Withdrawal has the meaning given to that term in clause 7.2(e);

Gas means natural gas;

Gas Balancing means operational Gas balancing carried out to ensure safe and reliable supply of Gas;

Gas Balancing Adjustments means adjustments to the Quantity of Gas transported for a User made pursuant to the relevant operational Gas requirements at the time (including in relation to Gas Balancing and the maintenance of linepack in the Network);

Gas Balancing Annexure means Annexure 3;

Gas Quality Measurement System has the meaning given to that term in Annexure 4;

Gas Quantity Measurement System has the meaning given to that term in Annexure 4;

Gas Supply Act means *Gas Supply Act 1996* (NSW);

GJ means one gigajoule and is equal to one thousand MJ;

GST means goods and services tax or similar value added tax levied or imposed in the Commonwealth of Australia pursuant to the GST law;

GST law has the meaning given to such term in *A New Tax System (Goods and Services Tax) Act 1999* (Cth) or a successor Act;

Haulage Reference Service has the meaning given to that term in the Access Arrangement;

Heating Value is the number of megajoules liberated when one cubic metre of Gas at Standard Conditions, is completely burnt in air, with all water formed by the combustion process condensed to the liquid state, and with all products of combustion at Standard Conditions;

Hour means any period of 60 consecutive minutes, the first Hour in a Day starting at 06:30h, and **Hourly** has a corresponding meaning;

Hourly Charge means the Ancillary Charge described as an hourly charge in the Reference Tariff Schedule;

Joule or **J** means a unit of energy as defined in Australian Standard AS ISO 1000-1998;

kPa means one kilopascal and is equal to one thousand pascals as defined in Australian Standards AS ISO 1000-1998, and unless otherwise specified, refers to a gauge pressure in excess of the prevailing atmospheric pressure;

Large Customer has the meaning given to that term in the National Energy Retail Law;

Law means any:

- (a) statute, regulation, order, rule, subordinate legislation; or
- (b) other document enforceable under any statute, regulation, rule or subordinate legislation, including but not limited to, the Access Arrangement, Retail Market Procedures, any procedures or rules made or enacted by the Australian Energy Market Operator, the Regulator or the AEMC, and/or the Network Code, applying to the Delivery Points the subject of this Agreement, any other codes, guidelines, orders in council, licences, proclamations, directions or standards, the reticulator's authorisation held by the Service Provider and, if it holds one, the Retailer Authorisation held by the User;

LG Period means a period of time over which an LG Quantity is calculated, being a period of not less than 12 Calendar Months;

LG Quantity means the Quantity of Gas that is calculated as follows:

- (a) the aggregate of the measured Quantities of Gas received into the Network at all Receipt Points; less
- (b) the aggregate of measured Quantities of Gas Delivered on behalf of all Network Users to Delivery Points; less
- (c) any increase (or plus any decrease) in linepack in the Network (as determined by the Service Provider, acting reasonably),

over an LG Period, as calculated at least 6 Calendar Months after the end of that LG Period;

Load means the taking or withdrawal of Gas from the Network by or on behalf of a User or a User's Customer;

Load Shedding means the process of reducing or ceasing the withdrawal or taking of Gas from the Network in accordance with clause 23.4;

Load Shedding Priority means a load shedding priority as set out and described in the Operational Schedules;

Load Type means, in respect of each Delivery Point, the uses to which Gas withdrawn or taken from the Network at that Delivery Point is put, as described in the Operational Schedules in respect of each Load Shedding Priority;

Local Area Retailer for premises means the retailer nominated as the local area retailer for the premises (or for the geographical area in which the premises is located) under the NERL;

Maximum Daily Quantity or **MDQ** means that maximum Quantity of Gas which the Service Provider is obliged to transport and delivery to a Delivery Point on behalf of the User on any Day as specified in the Relevant Customer List and, if applicable, as varied from time to time by clauses 4.2(h), 4.3, and 4.4;

Maximum Hourly Quantity or **MHQ** means the maximum Quantity of Gas which the Service Provider is obliged to transport and deliver to a Delivery Point on behalf of the User in any Hour as specified in the Relevant Customer List and, if applicable, as varied from time to time by clauses 4.2(h), 4.3, and 4.4;

Measuring Equipment means all the equipment and facilities (including Basic Metering Equipment, Communications Facilities and Daily Meter Reading Facilities) forming part of a Delivery Station or a Receipt Station required to measure the Quantity delivered to or at the Delivery Point or Receipt Point;

Minimum Charge means the minimum charge payable over a period of time for:

- (a) a Service or for a component of a Reference Tariff, as described by the Reference Tariff Schedule; or
- (b) a Delivery Point as agreed with the Service Provider;

MJ means one megajoule and is equal to one million Joules;

National Energy Retail Law or NERL means the *National Energy Retail Law* adopted under the *National Energy Retail Law (Adoption) Act 2012* (NSW);

National Energy Retail Rules or NERR means the *National Energy Retail Rules* adopted under the *National Energy Retail Law (Adoption) Act 2012* (NSW);

National Gas Law means the *National Gas Law* adopted under the *National Gas (New South Wales) Act 2008* (NSW);

National Gas Rules means the *National Gas Rules* adopted under the *National Gas (New South Wales) Act 2008* (NSW);

Network means the Service Provider's distribution system in New South Wales, consisting of a system of pipes and associated facilities including any Receipt Station components, Delivery Station components and Measuring Equipment owned by the Service Provider;

Network Code means the Jemena Gas Networks (NSW) Ltd Network Code for Full Retail Competition, as amended from time to time, which the Service Provider is required to adopt under the conditions of its authorisation under the Gas Supply Act;

Network Section means (as the case may be) the Wilton-Newcastle Network Section, the Wilton-Wollongong Network Section, or a country sub-network served by a particular Receipt Point;

Network Users means any parties that enter into a service agreement with the Service Provider for the use of the Network or a Network Section;

NGR Part 12A Connection Contract for a delivery point means a connection contract under Part 12A of the National Gas Rules between the Service Provider and a Customer or between the Service Provider and the User or another person on behalf of a Customer for the provision of a connection service to the premises serviced by the delivery point;

Non Daily Metered Delivery Point means a Delivery Point where Gas consumption is recorded at Reading Intervals;

Operational Schedules means the Operational Schedules set out in Schedule 7 of the Access Arrangement;

Out-of -Specification Gas has the meaning given to that term in clause 10.2;

Overrun means, in respect of a Haulage Reference Service, the withdrawal by or on behalf of the User at a Delivery Point of a Quantity of Gas exceeding the MHQ in any Hour or the MDQ on any Day for that Delivery Point;

Party means a party to this Agreement;

Personal Information has the meaning given in the applicable Privacy Laws;

Pipelines means the Moomba-Sydney Pipeline, the EGP, the Camden Gas Pipeline and any other Gas works connecting to the Network upstream of any Receipt Point;

PJ means one petajoule and is equal to one thousand TJ;

POTS means packaged off-take station;

Primary Measurement means the direct or inferential measurement of a mass or volumetric flow at Network conditions;

Privacy Laws means the *Privacy Act 1988* (Cth) and any other applicable laws, including codes or other instruments made, approved or issued under such laws governing the handling of Personal Information;

Provision of Basic Metering Equipment Charge means an annual charge specified in the Reference Tariff Schedule of the Access Arrangement;

Quantity or **Quantity of Gas** means, quantity of Gas, expressed in GJ, calculated as the product of the Declared Heating Value and the Volume of Gas, subject to clause 8.2 in respect of Gas delivered at a Delivery Station;

Queue means a queue of Network Users and prospective Network Users formed in accordance with the Queuing Policy;

Queuing Policy means the queuing policy set out in clause 7 of the Access Arrangement;

Reading Interval in respect of meter reading, means monthly, every two months or every three months;

Receipt Point means any point at which Gas is received into the Network;

Receipt Station means the facilities described in Annexure 4 at which Gas is received into the Network;

Reference Service Agreement means the agreement set out in Schedule 4 of the Access Arrangement;

Reference Tariff means a tariff which relates to the Haulage Reference Service;

Reference Tariff Schedule means the Reference Tariff Schedule currently in place, as approved by the Regulator and amended from time to time in accordance with the terms of the Access Arrangement;

Register has the meaning given to that term in clause 10.10(a);

Registered Participant means a person who is registered under the National Gas Law as a registered participant in their capacity as a user or a self-contracting user in accordance with rule 135AE of the National Gas Rules;

Regulator means the Australian Energy Regulator;

Related Body Corporate has the meaning given to that term in the *Corporations Act 2001* (Cth);

Relevant Customer List means:

- (a) in respect of a Demand Customer Delivery Point, the Demand Customer List; and
- (b) in respect of a Volume Customer Delivery Point, the Volume Customer List;

as amended from time to time by the Service Provider;

Relevant Receipt Point means, in relation to a Delivery Point, any Receipt Point connected (directly or indirectly) to the part of the Network in which that Delivery Point is located;

Request means a request for a Service using a request for service form set out in Schedule 6 to the Access Arrangement or such other request for service form as the Service Provider may determine and **Requesting** and **Requested** have a corresponding meaning;

Retail Market Procedures means the Retail Market Procedures (NSW and ACT) or such other procedures for the operation of the retail market for Gas in New South Wales as are approved by AEMO;

Retailer means a person who is the holder of a retailer authorisation issued under the National Energy Retail Law in respect of the sale of Gas;

Retailer Authorisation has the meaning given to that term in National Energy Retail Law;

Safety and Operating Plan means a safety and operating plan lodged by the Service Provider under the *Gas Supply (Safety and Network Management) Regulation 2013 (NSW)*, as amended from time to time;

SCADA System means the system of Supervisory Control and Data Acquisition operated by the Service Provider;

Secondary Measurement means any measurement of the quality of the Gas or of the flowing Network conditions (such as pressure or temperature) used to convert the Primary Measurement to Quantity;

Security means, at the User's option, one or a combination of the following:

- (a) a refundable deposit, or bank guarantee;
- (b) if the Service Provider agrees (in its discretion, acting reasonably), a parent company guarantee; or
- (c) such other form of security as agreed between the User and the Service Provider,

which must be in a form satisfactory to the Service Provider;

Service means the service(s) to be provided by the Service Provider to the User under this Agreement;

Service Provider means Jemena Gas Networks (NSW) Ltd, or its successors or assigns;

Short Term Trading Market or **STTM** has the meaning given to such term in the National Gas Law;

Small Customer has the meaning given to that term in the National Energy Retail Law;

Small Volume Customer Delivery Point means a Volume Customer Delivery Point at which the Customer consuming Gas at the premises serviced by the Delivery Point is a Small Customer;

Specification means the specifications described in clause 10.1(a);

Specified Period has the meaning given to that term in clause 5.4(b);

Standard Conditions means a temperature of 15°C and an absolute pressure of 101.325 kPa;

Tariff Class means the Tariff Class set out in the Reference Tariff Schedule to which a Delivery Point is assigned in accordance with the Access Arrangement;

Third Party Claims means a demand, claim, action or proceeding made or brought by or against a person by a third party, however arising and whether present, unascertained, immediate, future or contingent;

TJ means one terajoule and is equal to one thousand GJ;

Transportation Quantity has the meaning given to that term in clause 3.4(b)(iii);

TRS means trunk receiving station;

Unaccounted for Gas or **UAG** means Gas purchased by the Service Provider to make up for Gas unaccounted for in the Network;

Unauthorised Overrun has the meaning given to that term in clause 6.1;

Volume means volume of Gas measured in cubic metres (m³) at actual conditions converted to Standard Conditions using either a flow corrector forming part of the Measuring Equipment or an algorithm determined by the Service Provider, acting reasonably;

Volume Customer Delivery Point means a Delivery Point assigned to a Volume Tariff (except a Volume Tariff which includes a Demand Charge) and as set out in the Volume Customer List;

Volume Customer List means a list in electronic form (or such other form determined by the Service Provider) which sets out the following items for a Volume Customer Delivery Point:

- (a) the DPI and the address of the delivery point;
- (b) the Tariff Class and Assignment Date;
- (c) where the User requires and the MHQ is in excess of 6 m³/hour, its MHQ;
- (d) its Commencement Date; and
- (e) the Receipt Point to be used for balancing purposes;

Volume Tariff means a Tariff Class designated as a Volume Tariff in the Reference Tariff Schedule;

Wilton Network Section means the Wilton-Newcastle Network Section and the Wilton-Wollongong Network section;

Wilton-Newcastle Network Section means the Wilton-Newcastle Trunk Section and those parts of the Network supplied from the Wilton-Newcastle Trunk Section;

Wilton-Newcastle Trunk Section means the pipeline being that part of the Network being the pipe system which extends from Wilton to the TRS at Kooragang Island in Newcastle and supplying TRSs at Appin, Campbelltown, West Hoxton, Horsley Park, Eastern Creek, Plumpton, Windsor, Gosford, Wyong and Hexham, and POTS at Appin, Maroota, Warnervale, Wyee, Morisset and Minmi, and custody transfer station at Munmorah and such other TRSs and POTS and custody transfer stations as may be installed from time to time;

Wilton-Wollongong Network Section means the Wilton-Wollongong Trunk Section and that part of the Network supplied from the Wilton-Wollongong Trunk Section;

Wilton-Wollongong Trunk Section means the pipeline being that part of the Network being the pipe system which extends from Wilton to the TRS at Mount Keira and then to Cordeaux Heights in Wollongong;

2005 Access Arrangement means the AGL Gas Networks Ltd Access Arrangement approved by the Independent Pricing and Regulatory Tribunal on 29 April 2005, and designated as a '2005 Access Arrangement' under Schedule 3 of the National Gas Law; and

2010 Access Arrangement means the Jemena Gas Networks (NSW) Limited access arrangement that commenced on 1 July 2010, as approved by the Regulator under the National Gas Law and amended by order of the Australian Competition Tribunal on 30 June 2011, and further amended on 26 September 2011.

1.2 Amendments to this Agreement approved by relevant authority

Where:

- (a) the Regulator has approved amendments to the Reference Service Agreement in accordance with clause 2.3(b) of the Access Arrangement or in connection with the approval by the Regulator of a revised or new access arrangement; or
- (b) where amendments to the Reference Service Agreement are made pursuant to any orders made by any Court, or made or ordered by the Australian Competition Tribunal (**Tribunal**), in connection with any judgement by a Court, or determination by the Tribunal, in relation to a revised or new access arrangement,

then:

- (c) the Service Provider will provide notice to the User; and
- (d) the Parties each agree that such amendments will vary the terms of this Agreement, effective 10 Business Days from the date of the notice, unless the User can

demonstrate to the Service Provider's reasonable satisfaction that it is not able to comply with this timeframe in which case the Service Provider will grant a reasonable extension.

1.3 Amendments to this Agreement due to Change of Law

- (a) The Service Provider and the User may seek to amend the terms and conditions set out in this Agreement to accommodate a Change in Law.
- (b) The Party seeking to amend the terms and conditions set out in this Agreement to accommodate a Change in Law (in this clause 1.3, the **First Party**) will consult the other Party (in this clause 1.3, the **Second Party**) in respect of the amendments the First Party proposes to make to the terms and conditions set out in this Agreement and will take into account any reasonable comments made by the Second Party.
- (c) The First Party will provide notice to the Second Party of any such amendments, along with an explanation of why the amendments are required and an analysis of their impact on the Agreement.
- (d) The Second Party agrees (with such agreement not to be unreasonably withheld) that such amendments will vary the terms of this Agreement, effective 20 Business Days from the date of the notice or such later date as agreed between the Parties, unless the Second Party gives a notice of dispute under clause 30.2 before that date, in which case the provisions of clause 30 will apply.

1.4 Precedence

- (a) If there is any inconsistency between clauses 3 and 4 of the Access Arrangement or the Reference Tariff Schedule and any other provisions of this Agreement, then unless otherwise provided, clauses 3 and 4 of the Access Arrangement or the Reference Tariff Schedule (as applicable) takes precedence.
- (b) If there is any inconsistency between clauses 3 and 4 of the Access Arrangement and the Reference Tariff Schedule, unless otherwise provided, clauses 3 and 4 of the Access Arrangement takes precedence.

1.5 Construction

In the construction of this Agreement, unless the context otherwise requires:

- (a) a reference to a clause or an annexure is to a clause in, or an annexure to, this Agreement;
- (b) the singular includes the plural and vice versa;

- (c) references to any Laws shall be deemed to be references to the Laws as from time to time amended, consolidated, re-enacted or replaced including substituted provisions or instruments that substantially correspond to those referred to;
- (d) references to any agreement, deed, instrument, or publication shall be deemed to be references to the agreement, deed, instrument or publication as from time to time amended, supplemented, novated or replaced;
- (e) clause headings are inserted for convenience only and do not affect the interpretation of this Agreement;
- (f) expressions referring to writing will be construed as including references to words printed, type-written, telexed, lithographed, facsimiled or otherwise traced, copied or reproduced;
- (g) references to **dollars** and **\$** are references to Australian dollars;
- (h) a reference to a Party includes a reference to its successors in title and permitted assigns;
- (i) an agreement, representation or warranty on the part of two or more persons binds them jointly and severally or if given in favour of two or more persons may be enjoyed by them jointly or severally or jointly and severally;
- (j) where a term is not defined in this Agreement it shall, unless the contrary intention is expressed, bear that same meaning in clauses 3 and 4 of the Access Arrangement (Reference Tariffs and Reference Tariff variations) and the Reference Tariff Schedule;
- (k) references to time are Eastern Standard Time (EST) unless specified otherwise except references to time in clauses 5.4 and 5.5 are, where applicable, to Eastern Summer Time;
- (l) an expression importing a person includes any company, partnership, joint venture, association, corporation or other body corporate and any government agency as well as an individual;
- (m) when referring to a particular Day, the date of the Day shall be the date on which that Day begins; and
- (n) a reference to any firm, body corporate, partnership, unincorporated body or association or government agency (that is not a Party to this Agreement) shall, if it ceases to exist or is reconstituted, renamed or replaced or its powers or functions are transferred to any other firm, body corporate, partnership, unincorporated body or association or government agency, be deemed to refer respectively to the firm, body corporate, partnership, unincorporated body or association or government agency established or constituted in lieu thereof or as nearly as may be succeeding to the powers or function thereof.

1.6 References to User's Customer where User is the Customer

In this Agreement, where the User is a Customer at premises serviced by a Delivery Point, a reference in this Agreement to a "Customer", a "relevant Customer", the "User's Customer" and the "User's relevant Customer" in relation to that Delivery Point is to be interpreted as a reference to the User.

2. Commencement and Expiry of the Haulage Reference Service

The Haulage Reference Service for a Delivery Point:

- (a) commences on the Commencement Date for that Service; and
- (b) expires on the earlier of:
 - (i) the deletion of that Delivery Point from the Relevant Customer List; and
 - (ii) termination of this Agreement.

3. Haulage Reference Service

3.1 Requests for Service

If the User requests a Haulage Reference Service in respect of the Network, and relevant requirements of the Access Arrangement are met by the User and the Service Provider, the Service Provider must provide the Haulage Reference Service in accordance with this Agreement.

3.2 Addition and Deletion of Delivery Points

The Parties agree that delivery points may be added to the Relevant Customer List in accordance with clause 11 and Delivery Points may be deleted from the Relevant Customer List in accordance with clause 12.

3.3 Relevant Customer Lists

The Parties agree and acknowledge that a certificate signed by the Service Provider as to the information contained in the Relevant Customer List on a particular Day (including, without limitation, all information relating to the Delivery Points listed in that list) is conclusive evidence of the matters to which the information refers except in the case of manifest error or if the User provides evidence that the certificate is incorrect. The Service Provider must provide a certificate within a reasonable time of receiving a request to do so from the User.

3.4 Description of Haulage Reference Service

- (a) This clause 3.4 applies where the Service Provider must provide a Haulage Reference Service pursuant to clause 3.1 as at the date of this Agreement or as at a subsequent date.
- (b) Subject to:
 - (i) clause 3.4(c) and the other terms of this Agreement; and
 - (ii) the aggregate deliveries from the User and all Network Users on a Day to a Network Section being equal to the aggregate withdrawals by the User and all Network Users on that Day from that Network Section (unless any imbalance between the two would not affect the ability of a prudent service provider acting reasonably to provide the Service under the Haulage Reference Service),the Service Provider must, in respect of each Delivery Point:
 - (iii) receive a Quantity of Gas into the Network from or for the account of the User at each Receipt Point for delivery to the Delivery Point (**Transportation Quantity**); and
 - (iv) taking into account Gas Balancing Adjustments, deliver a Quantity of Gas thermally equivalent to the Transportation Quantity to or for the account of the User through the Network to that Delivery Point.
- (c) The Service Provider is not obliged to transport or deliver a Quantity of Gas through the Network to the User at a Delivery Point which is greater than the Capacity Entitlement plus Authorised Overruns.
- (d) Where any Gas delivered to a Delivery Point under a Haulage Reference Service under this Agreement is used in connection with the supply of Energy to, or the consumption of Energy by, the Customer as well as one or more End Customers, then the additional terms and conditions set out in Annexure 7 apply as between the Service Provider and the User.

4. MDQ, MHQ and Chargeable Demand

4.1 Application

This clause 4 applies where the Service Provider must provide a Haulage Reference Service pursuant to clause 3 as at the date of this Agreement or as at a subsequent date.

4.2 MDQ and MHQ

- (a) Each Demand Customer Delivery Point and its MHQ and MDQ for the Haulage Reference Service is set out in the Demand Customer List.
- (b) Each Volume Customer Delivery Point and its MHQ for the Haulage Reference Service is set out in the Volume Customer List. Where there is no MHQ in the Volume Customer List, the MHQ for the Haulage Reference Service for a Volume Customer Delivery Point will be the Quantity of Gas actually withdrawn at that Delivery Point in any Hour, up to a maximum of 6m³/hour.
- (c) In any Request in respect of a Delivery Point with Hourly demand greater than 6m³/Hour, the User must specify a MHQ that fairly and reasonably reflects the maximum Hourly requirements at that Delivery Point and is based on prior consumption data (where available and where applicable).
- (d) In any Request for a Demand Customer Delivery Point, the User must also specify a MDQ that fairly and reasonably reflects the maximum Daily requirements at that Delivery Point and is based on prior consumption data (where available and where applicable) or, where such data is not available or applicable, is an estimate made by the User and acceptable to the Service Provider (acting reasonably).
- (e) The MDQ and MHQ for a Delivery Point can only be changed as provided in clauses 4.2(h), 4.3 and 4.4.
- (f) The Service Provider's maximum obligation to deliver Gas to the User under the Haulage Reference Service is the MHQ in any Hour and the MDQ on any Day (if applicable) (plus Authorised Overruns).
- (g) The User must not, at any Delivery Point, take in any Hour more than the MHQ for that Delivery Point or take in any Day more than the MDQ (if applicable) (plus Authorised Overruns) for that Delivery Point.
- (h) The User must notify the Service Provider promptly upon becoming aware if the MHQ or MDQ requirement for a Demand Customer Delivery Point decreases, in which case the MHQ or MDQ for that Delivery Point may be reduced by the Service Provider to accord with those requirements.

4.3 Increase in MDQ or MHQ requirements

The User must follow the Request for service procedures set out in the Access Arrangement if the User requires an increase in the MDQ or MHQ for any Delivery Point.

4.4 Procedure for Requests to increase MHQ or MDQ requirements

The Service Provider must agree to an increase in the MDQ or MHQ for any Demand Customer Delivery Point, and include the new MDQ or MHQ (as the case may be) in the Demand Customer List if:

- (a) the User complies with the provisions of the Access Arrangement and National Gas Law relating to Requests, including payment of the costs of processing that Request as set out in the Access Arrangement;
- (b) the Service Provider is able to satisfy its obligations to observe any Queue established under the Access Arrangement and there is no Queue or the User's Request for Service is at the head of the Queue;
- (c) the Service Provider has sufficient capacity available in the Network to provide the Service to the proposed Delivery Point;
- (d) the User accepts the Service Provider's offer to change the MDQ or MHQ (as the case may be) at the Delivery Point; and
- (e) the User has updated and completed the ELMS Data for the Delivery Point in accordance with clause 23.6.

4.5 Chargeable Demand

- (a) This clause 4.5 applies where the Delivery Point is a Demand Customer Delivery Point.
- (b) The Service Provider will calculate the Demand Charge for a Delivery Point using the Chargeable Demand applicable to that Delivery Point as determined by the Service Provider and as varied from time to time in accordance with clauses 4.5(c), 4.5(d), 4.6, 4.7 or the Reference Tariff Schedule.
- (c) Subject to clause 4.5(d), the Chargeable Demand for a Delivery Point for any Day must be greater than the larger of:
 - (i) the MDQ for that Delivery Point; and
 - (ii) ten times the MHQ for that Delivery Point.
- (d) Where:
 - (i) a Delivery Point has had:
 - (A) a reference service, for a delivery point consuming more than 10TJ of Gas per annum, provided to it continuously from 1 July 2005 to 30 June 2010 under the 2005 Access Arrangement; and

- (B) a Haulage Reference Service for a Demand Customer Delivery Point provided to it continuously from 1 July 2010 to 30 June 2015 under the 2010 Access Arrangement; and
- (ii) there have been no changes to the MHQ for that Delivery Point since 1 July 2005,

the Chargeable Demand for that Delivery Point must be greater than the MDQ for that Delivery Point but may be less than ten times the MHQ for that Delivery Point.

4.6 Increases in Chargeable Demand

- (a) This clause 4.6 applies where the Delivery Point is a Demand Customer Delivery Point.
- (b) Where a Delivery Point is equipped with Daily Meter Reading Facilities, the Service Provider may increase the Chargeable Demand applicable to that Delivery Point to equal the ninth-highest actual Quantity of Gas withdrawn at that Delivery Point in any one Day over any 12 month period (or if data from the Daily Meter Reading Facilities is not available for a 12 month period, any lesser period of time for which such information is available).
- (c) Where a Delivery Point is not equipped with Daily Meter Reading Facilities, the Service Provider may increase the Chargeable Demand applicable to that Delivery Point to equal the average Quantity of Gas withdrawn at that Delivery Point in a Day, such average to be calculated by using the Quantity of Gas withdrawn from that Delivery Point over any Calendar Month.
- (d) Where the Service Provider increases the Chargeable Demand for a Delivery Point pursuant to clauses 4.6(b) or 4.6(c), the increase shall take effect from the first Day of the Calendar Month immediately following the Calendar Month in which the Daily or monthly consumption (as applicable) occurred that was used to calculate the increased Chargeable Demand. The first Day of the Calendar Month from which the increase applied will be the “**Demand Reset Date**” for that Delivery Point with respect to that Chargeable Demand.
- (e) The Service Provider may increase the Chargeable Demand for a Delivery Point where necessary (but only to the extent necessary) for the Chargeable Demand to meet the requirements of clause 4.5(c) or 4.5(d). The increase will take effect on the date reasonably determined by the Service Provider which must be on or after the date on which the MHQ or MDQ (as applicable to the increase in Chargeable Demand) first applied. The date so determined by the Service Provider will be the “**Demand Reset Date**” for that Delivery Point with respect to that Chargeable Demand.

4.7 Decreases in Chargeable Demand

- (a) This clause 4.7 applies where the Delivery Point is a Demand Customer Delivery Point.
- (b) Where a Customer has experienced a permanent and material reduction in its requirements for Gas supply, the User may make a written request to the Service Provider requesting a reduction in the Chargeable Demand for the relevant Delivery Point from which the Gas for that Customer is withdrawn (**Reduction Request**), provided that:
 - (i) the proposed reduction in Chargeable Demand is nominated in the Reduction Request;
 - (ii) the Reduction Request is received by the Service Provider no less than 12 months after the Demand Reset Date in respect of the current Chargeable Demand for the relevant Delivery Point;
 - (iii) no other requests to reduce the Chargeable Demand for the relevant Delivery Point have been rejected by the Service Provider in the 6 months immediately preceding the date of the Reduction Request;
 - (iv) the Service Provider has not accepted a request to reduce the Chargeable Demand for the relevant Delivery Point in the 13 month period immediately preceding the date of the Reduction Request;
 - (v) the requested Chargeable Demand is less than 90% of the existing Chargeable Demand for the relevant Delivery Point; and
 - (vi) the User provides a letter from the User's relevant Customer setting out the reasons for its reduction in Gas requirements and demonstrating why that reduction is a permanent one, to the Service Provider's reasonable satisfaction.
- (c) The Service Provider will provide its reasons in writing and advise whether or not it will consent to a Reduction Request within one month of the date on which it receives such Reduction Request from the User, such consent not to be unreasonably withheld.
- (d) In considering a Reduction Request, the Service Provider may take into account in addition to the information provided as part of the Reduction Request, any other factors the Service Provider considers relevant, including but not limited to:
 - (i) past patterns of actual Gas consumption at the Delivery Point and reasoned forecasts of expected future demand for Gas at the Delivery Point;
 - (ii) any previous requests to reduce the Chargeable Demand or increase or decrease the MHQ or MDQ at the Delivery Point; and

- (iii) whether, and if so the extent to which, the proposed reduction will compromise the Service Provider's ability to recover any capital expenditure the Service Provider has incurred in relation to the Delivery Point (including whether the Service Provider incurred such capital expenditure in reliance on an undertaking to maintain a certain level of MDQ or Chargeable Demand for a minimum period of time).
- (e) If the Service Provider consents to a Reduction Request, the Service Provider will reduce the Chargeable Demand for the relevant Delivery Point to either:
 - (i) the reduced Chargeable Demand nominated in the Reduction Request; or
 - (ii) the ninth-highest Quantity of Gas withdrawn at that Delivery Point in any one Day in the 12 month period immediately preceding receipt of the Reduction Request (if the Delivery Point is equipped with Daily Meter Reading Facilities),
 whichever is the greater, but subject to clause 4.5(c).
- (f) A reduction in Chargeable Demand pursuant to clause 4.7(e) will take effect from the first Day of the Calendar Month immediately following the date of receipt of the complete Reduction Request.
- (g) If:
 - (i) the Quantity of Gas calculated in clause 4.7(e)(ii) is greater than 90% of the current Chargeable Demand; or
 - (ii) the Service Provider increases the Chargeable Demand pursuant to clause 4.5 or 4.6 after the date of receipt of a Reduction Request,
 then notwithstanding the Service Provider's previous consent to the Reduction Request, the relevant Reduction Request will be deemed to have been rejected by the Service Provider.

5. Overruns

5.1 General

This clause 5 does not vary the MDQ and/or the MHQ for a Delivery Point.

5.2 Gas exceeding MHQ or MDQ

The Service Provider may in its discretion, acting reasonably, agree to transport and deliver an Overrun.

5.3 Authorised OVERRUNS

An Overrun agreed to by the Service Provider in accordance with this Agreement before it occurs is an authorised Overrun (**Authorised Overrun**).

5.4 Procedure for authorisation of OVERRUNS

If the User wishes the Service Provider to provide a Service to a Delivery Point for a Quantity of Gas in excess of the MDQ for any Day or the MHQ for any Hour, the User:

- (a) must notify the Service Provider of the expected Overrun and the Quantity required in excess of the MDQ or MHQ, as the case may be, by no later than 4:00pm on the Business Day which immediately precedes the Day on which the Overrun is required or expected to occur; or
- (b) must:
 - (i) notify the Service Provider of expected OVERRUNS and the Quantities required in excess of the MDQ or MHQ, as the case may be, by no later than 4:00pm on the Business Day which immediately precedes the Day on which the first of those OVERRUNS is required or expected to occur; and
 - (ii) request that the Service Provider approve those OVERRUNS where such approval will have effect over a specified period (**Specified Period**), so that the OVERRUNS may occur at any time within the Specified Period at the discretion of the User.

The Service Provider may charge the User for processing any notice or request made under this clause 5.4 at the Hourly Charge rate (based on a minimum of two Hours of work). That charge will be payable irrespective of whether the request is authorised or refused, or is authorised but later revoked.

5.5 Notification of acceptance of Overrun as authorised

- (a) The Service Provider must notify the User within 2 hours from receipt of the notice or request under clause 5.4 (if the notice is received on the Business Day preceding the expected Overrun) or within 24 hours from receipt (if the notice is received prior to that Business Day) whether:
 - (i) it agrees to provide the Service for the excess Quantity requested by the User; or
 - (ii) it agrees to provide the Service for a lesser Quantity than that requested by the User; or
 - (iii) it is unable to provide the Service,for that Day or during the Specified Period.

- (b) Where the Service Provider notifies the User under clause 5.5(a)(ii) that it agrees to provide the Service for a lesser Quantity than that requested by the User, the User must notify the Service Provider whether it accepts the lesser Quantity:
- (i) within 2 hours from receipt of such a notice from the Service Provider where the request for the authorisation of the Overrun relates to a specific Day; or
 - (ii) prior to the commencement of the relevant Specified Period where the request for the authorisation of the Overrun relates to a Specified Period,
- and if no such notification is made by the User in accordance with this clause 5.5(b), the Overrun will not be an Authorised Overrun and clause 6 will apply in respect of that Overrun.

5.6 Revocation of authorisation

- (a) Where the Service Provider has approved an Authorised Overrun for a Specified Period, the Service Provider may by notice to the User revoke such approval (in whole or in part) at any time and for any length of time if, in the Service Provider's reasonable opinion, the capacity in the Network is insufficient to allow the Service Provider to transport the Authorised Overrun Quantity. The Service Provider will use reasonable endeavours to provide the User with as much notice of such revocation as is possible in the circumstances.
- (b) The User acknowledges and agrees that it will take all necessary steps to inform the Customer at the Delivery Point that the Service Provider may at any time revoke an approved Authorised Overrun at short notice.
- (c) The Service Provider will not be liable for any and all Damages or claims in connection with or arising as a result of the revocation by the Service Provider of an approval (in whole or in part) of an Authorised Overrun pursuant to clause 5.6(a) unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim.

5.7 Service Provider's obligation on Authorised Overrun Day

- (a) Subject to clause 5.6, where a Quantity is agreed to by the Service Provider under clause 5.5(a)(i) or accepted by the User under clause 5.5(b) (**Authorised Overrun Quantity**), on each relevant Day, the Service Provider must provide the Service to the Delivery Point for a Quantity equal to the MDQ or MHQ, as the case may be, plus the Authorised Overrun Quantity for that Day or Hour.
- (b) Unless expressly agreed by the Service Provider in writing, an agreement by the Service Provider to transport and deliver Gas in excess of the MDQ is not an agreement to transport and deliver Gas in excess of the MHQ in any Hour.

5.8 Delivery Point with multiple services

If an Overrun occurs at a Delivery Point served by more than one service then, regardless of whether those services are provided under this Agreement or one or more other service agreement(s), an Overrun will be deemed to have occurred for each of those services.

6. Unauthorised Overruns

6.1 Unauthorised Overruns

- (a) An Overrun which is not agreed to by the Service Provider in accordance with this Agreement before it occurs is an unauthorised Overrun (**Unauthorised Overrun**).
- (b) If an Unauthorised Overrun occurs, the Service Provider has the right, at the User's cost, to install flow control mechanisms on the Measuring Equipment at the relevant Delivery Point, allowing the Service Provider to control the amount of Gas taken by the User at that Delivery Point so as to restrict the Quantity of Gas taken to a Quantity equal to the Capacity Entitlement for that Delivery Point for any Hour or Day and/or ensure operational security or safety.

6.2 Liability for Damages arising from Unauthorised Overruns

If an Unauthorised Overrun occurs, the Service Provider is not liable for, and the User will indemnify and hold the Service Provider harmless from and against, any and all Damages or claims in connection with or arising as a result of that Unauthorised Overrun unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim.

7. Nomination And Balancing

7.1 Gas Balancing under the STTM

If the STTM provides a mechanism for Gas Balancing of Network Sections, then while that mechanism remains operative and has legal effect:

- (a) the mechanism under the STTM will operate to govern the Gas Balancing of Network Sections;
- (b) the Gas Balancing Annexure will not apply;
- (c) the User must comply with the requirements of the mechanism under the STTM; and
- (d) the User and the Service Provider must comply with clauses 7.2, 7.3 and 7.4 below.

7.2 User to provide Service Provider with forecast of withdrawals

- (a) This clause 7.2 applies only if the STTM provides a mechanism for Gas Balancing of Network Sections and clauses 7.2(c) - 7.2(f) only apply insofar as the mechanism does not set out a timetable for the User to provide Forecast Withdrawals as required under this clause 7.2.
- (b) The Service Provider may notify the User and all Network Users that Forecast Withdrawals are not required for a Network Section for a designated period.
- (c) Subject to clause 7.2(a), unless notification has been provided under clause 7.2(b) and such notification has not been rescinded, then:
 - (i) on each Day that the User receives Services under this Agreement and any other agreement for the transportation of Gas between the Service Provider and the User; and
 - (ii) for each Receipt Point at which that Gas is received into the Network Section (where information by Receipt Point is available to the User and where not available, the aggregate of the Receipt Points within the Wilton Network Section),

the User must provide the Service Provider with its Forecast Withdrawals, for each Network Section for each of the next three Days.
- (d) Where requested by the Service Provider for operational purposes, the User must provide its Forecast Withdrawals for a Network Section for each of the next seven Days.
- (e) In this clause 7.2, a forecast withdrawal for a Day is a forecast of the aggregate Quantity of Gas which the User intends to withdraw from a Network Section on the relevant Day under all agreements between the Service Provider and the User for the transportation of Gas. A forecast withdrawal must be made on a reasonable basis, in good faith and itemise:
 - (i) the forecast Gas requirement for Non Daily Metered Delivery Points; and
 - (ii) when required in advance of the relevant Day by the Service Provider, the forecast withdrawal at designated Delivery Points, in such manner and in relation to such times as the User and the Service Provider agree,

(Forecast Withdrawal).
- (f) Following consultation with the User, the Service Provider will (acting reasonably) determine a timetable for the User to provide the Forecast Withdrawals required under this clause 7.2. The User must comply with this timetable.

7.3 Network Section Deliveries

- (a) For the avoidance of doubt, the User is responsible for ensuring that the aggregate Quantity of Gas delivered by or for the account of the User, through the Receipt Point(s) for a Network Section, is equal to:
 - (i) the aggregate quantity of Gas delivered to or for the account of the User to Delivery Points within that Network Section; plus
 - (ii) any change in linepack in the Network Section allocated to the User by the Service Provider or other share of aggregate needs for a Network Section to ensure safe and reliable supply.
- (b) When determining an allocation of the total change in linepack for a Network Section between the User and other Network Users, the Service Provider will seek to apply a methodology which reflects the linepack requirements of the Services which were provided to the User. If the Service Provider considers that a more direct method of allocation is not available, the Service Provider may pro rata total change in linepack based on each Network User's typical aggregate Capacity Entitlement for all Services.

7.4 Country Network Sections

In Country Networks, each User will be deemed to be in balance within the Network Section.

7.5 Gas Balancing after cessation of STTM Gas Balancing mechanism

- (a) If the mechanism for Gas Balancing of Network Sections provided for under the STTM ceases to operate or to have legal effect, the Service Provider may notify all Network Users that the Gas Balancing mechanism under the STTM will cease to apply for the purpose of this Agreement and the date on which that cessation will take effect.
- (b) If the Service Provider gives notice under clause 7.5(a), then on and from the date of cessation specified in that notice:
 - (i) the Gas Balancing of Network Sections will be governed by, and the User and the Service Provider must comply with, the Gas Balancing Annexure; and
 - (ii) the User warrants that each nomination made under this Agreement will be made in accordance with the Gas Balancing Annexure.

8. Determination Of Quantity Delivered At Delivery Points

8.1 Quantity of Gas delivered at a Delivery Point

The Parties agree that the Quantity of Gas delivered at a Delivery Point is the Quantity of Gas measured by each Delivery Station in accordance with clause 8.2 or estimated by the Service Provider under clauses 16.3(a) or 16.7.

8.2 Quantity of Gas delivered at a Delivery Station

Subject to clause 16.7, the Quantity of Gas delivered at a Delivery Station is:

- (a) if the Delivery Station is equipped with Daily Meter Reading Facilities and Communication Facilities and with on-site Heating Value measurement, for each Day the product of the Heating Value of Gas for that Day and the Volume of Gas (as measured at the Delivery Station on that Day);
- (b) if the Delivery Station is equipped with Daily Meter Reading Facilities and Communication Facilities but not with on-site Heating Value measurement, for each Day the product of the Declared Heating Value of Gas for that Day and the Volume of Gas (as measured at the Delivery Station on that Day); or
- (c) if the Delivery Station is not equipped with Daily Meter Reading Facilities and Communication Facilities, the product of the Volume of Gas (measured at the Delivery Station for the period between meter readings) and the average of the Declared Heating Values of Gas for all Days in the period between meter readings, or as otherwise agreed.

9. Commingling, custody, control, responsibility and warranty

9.1 Warranty

- (a) The User warrants that as at the date of this Agreement and at any time during the term of this Agreement, it has all necessary authorisations and the legal right and full power and capacity to participate in the retail Gas market and to:
 - (i) inject (or procure the injection of) Gas into the Network at the Receipt Points;
 - (ii) buy and sell Gas; and
 - (iii) grant to the Service Provider custody and control over any Quantity of Gas the subject of a Haulage Reference Service so as to allow the Service Provider to lawfully transport that Quantity of Gas through the

Network, commingle Gas and deliver that Quantity of Gas to the Delivery Points,

free and clear of liens, encumbrances and claims of any nature inconsistent with the Service Provider's operation of the Network and its rights and obligations under this Agreement.

- (b) The User warrants that on any Day (or any shorter period if Gas Balancing Adjustments occur in a shorter period than a Day) it has the legal right and full power and capacity to deliver in aggregate a Quantity of Gas to a Network Section equal to the aggregate withdrawals of Gas by the User (including any Gas Balancing Adjustments) on that Day (or shorter period, if applicable) from that Network Section.

9.2 Right to commingle

The Service Provider has the right to:

- (a) commingle the Gas delivered to any Receipt Point with other Gas in the Network; and
- (b) deliver Gas in a commingled state to a Delivery Point.

9.3 Custody and control of Gas

The custody and control of Gas:

- (a) delivered at a Receipt Point passes to the Service Provider at the Receipt Station at that Receipt Point; and
- (b) delivered by the Service Provider to or for the User at a Delivery Point passes from the Service Provider to the User or the User's nominee, agent or transferee at the Delivery Station at the Delivery Point.

9.4 Responsibility for Gas

- (a) The Service Provider is responsible for Gas in its custody and control between the Receipt Stations and the Delivery Station at each Delivery Point and must replace (by way of commercial purchase of UAG in accordance with clause 9.5(d) and 9.5(e)) any Gas lost whilst in the care and control of the Service Provider at a time and on the terms determined by the Service Provider in its discretion, acting reasonably.
- (b) The Service Provider will not be liable for, and the User will indemnify and hold the Service Provider harmless from and against, any and all Damages or claims in connection with anything which may arise with respect to Gas prior to the receipt of

Gas by the Service Provider at a Receipt Station or after its delivery at a Delivery Station at a Delivery Point.

9.5 Unaccounted for Gas

- (a) Notwithstanding any other provision of this Agreement, the Service Provider's obligation under this Agreement to purchase a Quantity of UAG is subject to and only applies to the extent that the Service Provider has timely access to verified and sufficiently accurate data at each Receipt Point to be able to calculate the LG Quantity.
- (b) The Service Provider will calculate an LG Quantity on the basis of the available data at the time.
- (c) The Service Provider may update the LG Quantity at any time to reflect updated data for an LG Period. However, the Service Provider is not obliged to recalculate the LG Quantity for a LG Period once 12 months have elapsed since the end of that LG Period.
- (d) The Service Provider will purchase UAG equal to:
 - (i) the Service Provider's forward estimate of the LG Quantity for an LG Period; less
 - (ii) the difference between the Quantities of UAG the Service Provider has previously purchased for any earlier LG Period and the LG Quantity for that LG Period.
- (e) The Service Provider will purchase UAG on a competitive commercial basis. This basis will be determined by the Service Provider, acting reasonably, and may include (without limitation) any one or a combination of the following:
 - (i) utilising a competitive open tender for the supply and/or haulage of Gas over any period, as reasonably determined by the Service Provider; and
 - (ii) sourcing Gas directly from the Short Term Trading Market.
- (f) The Service Provider will recover all costs of purchasing UAG through the Reference Tariffs in accordance with the provisions of the Access Arrangement.
- (g) The Service Provider may, by notice, terminate its obligations under clause 9.4(a) and this clause 9.5 with effect from the date that parties other than the Service Provider assume the responsibility to purchase UAG in relation to the Network. Such termination may be subject to conditions reasonably required by the Service Provider and will not prejudice the right of the Service Provider to recover the cost of UAG in accordance with the Access Arrangement.

10. Gas quality

10.1 Specification Gas

- (a) As between the Service Provider and the User, the User must ensure and procure that Gas delivered to each Relevant Receipt Point complies with the following requirements (**the Specification**):
- (i) the specification prescribed by any New South Wales law, including but not limited to any regulation made under the Gas Supply Act, applying during this Agreement that extends to any such Gas;
 - (ii) where the law referred to in clause 10.1(a)(i) does not prescribe anything for a parameter set out in Annexure 2, or for any period during this Agreement in which there is no such law, the initial specification set out in Annexure 2, as amended from time to time by the Service Provider in response to a change of circumstances where the change is of a type reasonably likely to impact on the Service Provider's ability to ensure the continued quality, safety, reliability and security of supply of Gas;
 - (iii) where the Director-General issues an exemption to the Service Provider in relation to the requirements of the *Gas Supply (Safety and Network Management) Regulation 2013 (NSW)* related to the specification of Gas, then the specification under clause 10.1(a)(i) or clause 10.1(a)(ii) (as the case may be) is modified (for the period during which the exemption applies) to the extent necessary to accord with the terms of that exemption; and
 - (iv) where the Service Provider reasonably believes that the conveyance of the Gas is necessary to ensure the safety of the public or the security of the Network and the Gas is conveyed in accordance with regulation 24(2)(a) of the *Gas Supply (Safety and Network Management) Regulation 2013 (NSW)*, then the specification of the Gas so conveyed in the Network or delivered to Delivery Points is deemed to be the Specification for the purpose of this Agreement to the extent the Gas is delivered in accordance with regulation 24(2).
- (b) The Service Provider is not obliged to provide a Service if the Gas delivered at a Receipt Point does not comply with the Specification.
- (c) The User acknowledges that Gas delivered to a Receipt Point will enter into the Network in close proximity to and will be available for use by a large number of persons, and that Gas delivered at any Receipt Point which does not meet the Specification may result in those persons suffering damage.

- (d) The Service Provider will not be liable for any and all Damages or claims in connection with or arising as a result of the delivery of Gas at any Receipt Point which does not meet the Specification unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim.
- (e) Subject to clause **Error! Reference source not found.**, the User will indemnify and hold the Service Provider harmless from and against, any and all Damages or claims in connection with or arising as a result of the delivery of Gas on behalf of the User at any Receipt Point which does not meet the Specification unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim.
- (f) For the purpose of clause 10.1(e), the quantity of Out-of-Specification Gas delivered to a Receipt Point on behalf of the User will be determined by the Service Provider as follows:
 - (i) where Out-of-Specification Gas is delivered to a Receipt Point on a Network Section and the User is the only Network User withdrawing Gas from that Network Section, then all Out-of-Specification Gas delivered to that Receipt Point will be taken to have been delivered on behalf of the User; or
 - (ii) where Out-of-Specification Gas is delivered to a Receipt Point on a Network Section and there is more than one Network User withdrawing Gas from that Network Section, then the proportion of that Out-Of-Specification Gas (the **User's Proportion**) delivered to the Receipt Point on behalf of the User will be determined as follows:
 - (A) if the Network Section is part of an STTM distribution system, then the User's Proportion of that Out-Of-Specification Gas will be the same as that proportion of the total Gas delivered at the hub for that Network Section (on the Days during which the Out-Of-Specification Gas was delivered) which is allocated to the User under the STTM distribution system allocations under the National Gas Rules; or
 - (B) if the Network Section is not part of an STTM distribution system, then the User's Proportion of that Out-Of-Specification Gas will be the same as that proportion of the total Gas withdrawn from that Network Section (on the Days during which the Out-Of-Specification Gas was delivered) which is withdrawn by the User,

provided that, if information is obtained by the Service Provider from, or provided to the Service Provider by, AEMO, the AER, the AEMC, a transmission pipeline service provider, the User, another Network User or some other source acceptable to the Service Provider, and the

Service Provider considers, acting reasonably, that the information so obtained or provided:

- (C) is accurate and reliable; and
- (D) enables the Service Provider to determine the User's Proportion of that Out-Of-Specification Gas more accurately than if the User's Proportion is determined under subclause (A) or (B) (as the case may be),

then the User's Proportion determined under subclause (A) or (B) (as the case may be) may be adjusted by the Service Provider to take into account that information.

- (g) In clause 10.1(f) above, STTM distribution system, STTM distribution system allocation and hub have the meanings given to those terms in rule 364 of the National Gas Rules.

10.2 Service Provider's rights in relation to Out-of-Specification Gas at Receipt Point

If the Service Provider reasonably believes that Gas which does not comply with the Specification (**Out-Of-Specification Gas**) is being or may be delivered to any Receipt Point, whether the Out-Of-Specification Gas is being delivered by or on behalf of the User or otherwise, then the Service Provider may:

- (a) direct the User or any other person to cease or cause the cessation of the delivery of Gas to the Receipt Point or to cease or cause the cessation of the delivery of Gas to any pipe or system of pipes through which Gas is delivered to the Receipt Point; and/or
- (b) without prior notice to the User, cease to accept all or any portion of Gas being delivered to that Receipt Point and notify the User as soon as reasonably practicable thereafter of its actions.

10.3 Consequences of the Service Provider exercising rights under clause 10.2

- (a) On receipt of a direction under clause 10.2(a), the User must immediately cease or cause the cessation of the delivery of Gas to the Receipt Point or the delivery of Gas to any pipe or system of pipes through which Gas is delivered by or on behalf of the User to the Receipt Point.
- (b) If the Service Provider issues a direction under clause 10.2(a) or ceases to accept Gas under clause 10.2(b), then:
 - (i) if Gas delivered to any Receipt Point was Out-Of-Specification Gas, the User will not be relieved of its obligation to pay any Charges under this Agreement; or

- (ii) if Gas delivered to all Relevant Receipt Points did meet the Specification, then to the extent that the Service Provider was unable to deliver a Quantity of Gas equal to the MDQ at a particular Demand Customer Delivery Point for any period in excess of one Day, the Demand Charge for that Delivery Point for that period will be calculated by reference to the actual amount withdrawn at the Delivery Point on each Day during that period, rather than by reference to the Chargeable Demand for that Delivery Point.
- (c) The Service Provider will not be liable for, and the User will indemnify and hold the Service Provider harmless against, any and all Damages or claims in connection with or arising as a result of the giving of direction or the cessation of Gas delivery under clause 10.2 or any failure of the User to comply with a direction issued under clause 10.2 unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim.

10.4 User to satisfy the Service Provider

The User must, if requested by the Service Provider:

- (a) provide evidence to the satisfaction of the Service Provider that facilities and management plans exist to enable satisfactory measurement of the quality of Gas at each Receipt Point or any point where Gas is introduced into a pipe or system of pipes through which Gas is delivered to a Receipt Point;
- (b) provide facilities to enable the Service Provider to monitor continuously the quality of Gas at the points referred to in clause 10.4(a);
- (c) provide evidence that Gas quality measurement equipment at the points described in clause 10.4(a) is maintained and calibrated in accordance with good industry practice and appropriate Australian and internationally recognised standards; and
- (d) provide access to maintenance records for any Gas quality measurement equipment at the points described in clause 10.4(a).

10.5 User's preventative measures

The User must have, and upon request by the Service Provider, must satisfy the Service Provider that the User has the contractual or other legal rights and management procedures in place to prevent Out-Of-Specification Gas being delivered to the Receipt Points.

10.6 Service Provider must deliver Gas to Specification

Provided that all Gas received by the Service Provider at all Receipt Points meets the Specification, the User complies with the provisions of this clause 10 and that any provisions to a similar or equivalent effect in the Service Providers' service agreements with other Network Users have been complied with by those Network Users (such that the Service Provider is

able, taking into account clause 9.2, to receive and deliver Gas that complies with the Specification), the Service Provider must ensure that Gas delivered by it at the Delivery Point meets the Specification.

10.7 Amendment of Specification

The Service Provider must use reasonable endeavours to notify the User prior to any change to the Specification by the Service Provider pursuant to clause 10.1(a)(ii).

10.8 Gas Source

- (a) The User must notify the Service Provider in writing or ensure that the Service Provider is properly notified of the contractual source and all the possible physical sources of the Gas prior to its entry into the Network, and must notify the Service Provider in writing prior to any change or anticipated change in the source or sources of the Gas.
- (b) Prior to a change in the contractual or physical source or sources of the Gas, the User must comply with its obligations to provide evidence and information to the Service Provider under clauses 10.4 and 10.5 with respect to the Gas from the new source or sources.

10.9 User responsible for Gas Testing

The User must:

- (a) test the Gas; or
- (b) cause the Gas to be tested,

in accordance with the Service Provider's Safety and Operating Plan.

10.10 Gas Testing by User

- (a) The User must keep a register or cause a register (**Register**) to be kept containing copies of all Gas test results including raw measurements used to determine derived values such as Wobbe index values.
- (b) The Register must be kept at the User's main office or at the main office of the person conducting the tests.
- (c) The User must ensure (or cause the person conducting the tests to ensure) that the Register is open for public inspection during all business hours and copies are to be made available:
 - (i) to the Director General on request and at no cost to the Director General; and

- (ii) to the Service Provider on request and at no cost to the Service Provider; and
 - (iii) to any other person upon request and on payment of a reasonable fee.
- (d) The User must maintain (or cause to be maintained) all testing equipment in accordance with the Service Provider's Safety and Operating Plan in respect of which the Service Provider will:
 - (i) make a copy available to the User upon request; and
 - (ii) provide reasonable notice to the User of relevant changes made by the Service Provider to the Safety and Operating Plan.
- (e) The User must make available (or cause to be made available) to the Service Provider all records relating to the maintenance of the testing equipment on the Service Provider's request.
- (f) The User must notify (or must cause the person conducting the tests to notify) the Director General and the Service Provider without delay by telephone, facsimile or email if it becomes aware of any test result that shows that the Gas to be delivered to a Receipt Point is Out-Of-Specification Gas.
- (g) Within 7 days of notifying the Director General and the Service Provider by telephone, facsimile or email pursuant to clause 10.10(f), the User must send notice (or cause such notice to be sent) to the Director General and the Service Provider.
- (h) Without limiting any of clauses 10.10(a)-(g), the User must make available or cause to be made available to the Service Provider any information relating to the testing of Gas, whether or not any Gas meets the Specification, test equipment, test results or notifications to any person in relation to whether or not Gas meets the Specification.

11. Addition of Delivery Points

11.1 Addition by Request

The User may at any time Request the Service Provider to add a new delivery point to the Relevant Customer List in accordance with clause 11.3.

11.2 Deemed Request

- (a) The Service Provider will deem the final notification by AEMO to the Service Provider that transfer of a delivery point from another Network User to the User has been completed in accordance with the Retail Market Procedures to be a Request

and the Service Provider must add the relevant delivery point to the Relevant Customer List, provided that, subject to clause 11.2(b):

- (i) the delivery point is already subject to a Haulage Reference Service provided by the Service Provider to the relevant Network User;
 - (ii) where the delivery point is to be added to the Volume Customer List, the MHQ required at that delivery point is less than or equal to $6\text{m}^3/\text{Hour}$;
 - (iii) where the delivery point is to be added to the Demand Customer List, the User has prior to initiating the transfer of the delivery point under the Retail Market Procedures:
 - (A) advised the Service Provider of the DPI of that delivery point and the date on which the proposed transfer will occur; and
 - (B) obtained the Service Provider's written confirmation that the delivery point is subject to a Haulage Reference Service provided by the Service Provider to the relevant Network User.
- (b) The Service Provider may choose to waive any one or more of the requirements set out in clause 11.2(a), in which case the Service Provider must add the relevant delivery point to the Relevant Customer List if those requirements which have not been waived have been met.
- (c) The Service Provider must use reasonable endeavours to provide the written confirmation required under clause 11.2(a)(iii)(B) within 2 Business Days of receipt of advice pursuant to clause 11.2(a)(iii)(A).
- (d) Where the Service Provider adds a Delivery Point pursuant to clause 11.2(a):
- (i) the assigned Tariff Class for the Delivery Point, and the Assignment Date will be the same as the assigned Tariff Class and Assignment Date for that Delivery Point under the Haulage Reference Service previously provided by the Service Provider to the transferring Network User;
 - (ii) if the Delivery Point is a Demand Customer Delivery Point, as at the date of the transfer of the Delivery Point, the MDQ, MHQ, Load Shedding Priority or Load Shedding Priorities, Chargeable Demand, Demand Reset Date and ELMS Data for that Delivery Point under this Agreement will be the same as applied to that Delivery Point under the Haulage Reference Service previously provided by the Service Provider to the transferring Network User; and
 - (iii) any subsequent changes to the MDQ, MHQ, Load Shedding Priority, Chargeable Demand, Demand Reset Date and ELMS Data for that Delivery Point will be made in accordance with the terms of this Agreement.

11.3 Procedure To Add a Delivery Point By Request

Where requested by the User, the Service Provider must agree to the addition of a new delivery point to, and include the new delivery point in, the Relevant Customer List if:

- (a) the User complies with the provisions of the Access Arrangement relating to Requests, including payment of the costs of processing that Request as set out in the Access Arrangement;
- (b) the Service Provider is able to satisfy its obligations to observe any Queue established under the Access Arrangement and there is no Queue or the User's Request for Service is at the head of the Queue;
- (c) if applicable to that Request, the Service Provider has sufficient capacity available in the Network to provide the Service to the delivery point;
- (d) the Service Provider, acting reasonably, is satisfied that it has sufficient information to assign the delivery point to a Tariff Class, and if necessary for a Tariff Class to be able to be assigned, the User and the Service Provider agree on the assigned Tariff Class;
- (e) the Service Provider is provided with evidence that the Customer at the delivery point has been notified that the Charges payable under this Agreement in respect of the delivery point are applicable to the delivery point regardless of the identity of the supplier;
- (f) the User accepts the Service Provider's offer to provide the Haulage Reference Service to the delivery point;
- (g) the User has provided to the Service Provider all of the details required to complete the Relevant Customer List and set out in clause 23.6 for the delivery point;
- (h) the delivery point is served by Network facilities having a maximum allowable operating pressure of:
 - (i) less than or equal to 1,050 kPa, where the delivery point is reasonably expected to consume more than or equal to 10TJ per annum; or
 - (ii) less than or equal to 500 kPa, where the delivery point is reasonably expected to consume less than 10 TJ per annum;
- (i) except where clause 11.3(j) applies, where the delivery point requires connection to those Network facilities:
 - (i) in the Service Provider's reasonable opinion, it is technically and economically feasible to connect the delivery point to those Network facilities (in which case, such connection will be subject to such charges and conditions as determined by the Service Provider, acting reasonably); and

- (ii) the Service Provider and the User agree on the requirements (if any) for the installation of a Delivery Station, the connection charges (or other capital contribution) and any other charges payable in respect of the delivery point, the MHQ and (where applicable) the MDQ; and
- (j) where the Service Provider has entered into an NGR Part 12A Connection Contract for the delivery point:
 - (i) a delivery station has been satisfactorily installed and the counterparty's obligations under that contract have been met to the Service Provider's reasonable satisfaction;
 - (ii) the User is either the Customer at the delivery point or a retailer who has a contract for the sale of gas at the delivery point with that Customer;
 - (iii) the Service Provider and the User agree on the MDQ and (where applicable) the MHQ, for the purposes of the Service to be provided under this Agreement; and
 - (iv) the delivery station installed for the delivery point is technically capable of servicing that agreed MHQ and (where applicable) MDQ to the Service Provider's reasonable satisfaction.

11.4 Energisation under National Energy Retail Law

- (a) If the User:
 - (i) is the Financially Responsible Retailer for a Small Customer; or
 - (ii) is the Local Area Retailer (and there is no Financially Responsible Retailer) for a Small Customer,

for premises with an existing connection to the Network at a delivery point:

 - (iii) from which Gas is being withdrawn; and
 - (iv) which is not already a Delivery Point under this Agreement or under a current service agreement with any other Network User,

then that delivery point will be taken as added to the Relevant Customer List under this Agreement upon and from the commencement of the withdrawal of Gas from that delivery point.
- (b) If the User is the Financially Responsible Retailer entitled under section 64 of the National Energy Retail Law to charge a Large Customer situated at premises of the kind referred to in clauses 11.4(a)(iii) and 11.4(a)(iv)), then the User must request that the Service Provider add the delivery point for those premises to a Relevant Customer List and the provisions of clause 11.3 will apply to that request.

- (c) Pending any addition of a delivery point referred to in clause 11.4(b) to a Relevant Customer List in accordance with clause 11.3, or if the Service Provider refuses to add the relevant delivery point to a Relevant Customer List in accordance with clause 11.3:
 - (i) the User will not be entitled to the provision of any Service under this Agreement in respect of that delivery point; and
 - (ii) for any Gas that is withdrawn at the delivery point the Service Provider may assign the delivery point to a Tariff Class that is reasonable having regard to the characteristics and capacity of the delivery station and Network facilities servicing the delivery point and the quantity of Gas being withdrawn and charge the User for the withdrawal of that gas in accordance with that Tariff Class.

11.5 Charges Payable for Additional Delivery Points

Where the User wishes to add a delivery point to the Relevant Customer List under this clause 11, the Service Provider may, in addition to any other Charges payable under this Agreement, require the payment of a surcharge in accordance with rule 83 of the National Gas Rules.

12. Deletion of Delivery Points

- (a) Where the supply of gas to a Small Volume Customer Delivery Point is disconnected under this Agreement or under the terms of a Customer Connection Contract in force at the Delivery Point, it will be deleted from the Relevant Customer List from the date agreed between the Service Provider and the User (both acting reasonably), subject to the following:
 - (i) the Service Provider's obligations to provide relevant Services for that Delivery Point and the User's obligation to pay Charges in respect of those Services will cease with effect from the date it is deleted from the Relevant Customer List (but without extinguishing or otherwise affecting any rights or obligations in respect of Services provided prior to the date of deletion or the Charges payable for those Services); and
 - (ii) subject to the requirements of the Retail Market Procedures, the Service Provider will be entitled to take all steps necessary to facilitate the User remaining registered as the user for that Delivery Point under the Retail Market Procedures and the User must provide all assistance and co-operation reasonably required by the Service Provider, until such time as:
 - (A) another Network User enters into a service agreement with the Service Provider for that Delivery Point; or

- (B) the Delivery Point is transferred to another Network User in accordance with the Retail Market Procedures;
 - (iii) the User will still be entitled to ask for decommissioning under clause 15.9 despite the removal of the Delivery Point from the Volume Customer List; and
 - (iv) notwithstanding the removal of the Delivery Point from the Volume Customer List, the Parties will co-operate and the User will continue to provide reasonable assistance so that the Service Provider may obtain access to each delivery station and to the Measuring Equipment.
- (b) Subject to the User complying with any relevant Law, the User may at any time give to the Service Provider:
 - (i) at least 3 Business Days' notice to delete a Volume Customer Delivery Point classified by the Service Provider as a Large Customer; and
 - (ii) at least 30 Business Days' notice to delete a Demand Customer Delivery Point,and the Service Provider must disconnect the Delivery Point in accordance with such notice and clause 15.9 and delete that Delivery Point from the Relevant Customer List from the date of disconnection.
- (c) If the Service Provider receives notification from AEMO that a Delivery Point has been transferred to another Network User in accordance with the Retail Market Procedures, the Service Provider must delete that Delivery Point from the Relevant Customer List on the date on which the Delivery Point is added to the other Network User's service agreement.
- (d) From the time a Delivery Point is deleted from a Relevant Customer List in accordance with this clause 12:
 - (i) the User's entitlement to information concerning that Delivery Point will cease; and
 - (ii) the Service Provider will have no further obligations in respect of that Delivery Point under this Agreement.

13. Change of Receipt Point or Delivery Point

- (a) This clause 13 does not apply to any Delivery Point in a Network Section which has more than one Receipt Point where all of those Receipt Points are recognised as the same Short Term Trading Market hub.

- (b) The User may not change a Receipt Point or Delivery Point without the Service Provider's prior written consent, which shall only be withheld on reasonable commercial or technical grounds, and which may be given subject to reasonable commercial and technical conditions. An example of a reasonable ground for withholding consent is where the Service Provider would not receive at least the same amount of revenue relative to the amount it would have received before the change.
- (c) The Service Provider must reply to a request from the User to change a Receipt Point or a Delivery Point within 14 Business Days of receiving the User's request accompanied by all information reasonably necessary to enable the Service Provider to consider the request. If at the time the request is made, the User informs the Service Provider in writing that due to hardship, the User requires an urgent reply to its request, the Service Provider will use reasonable endeavours to respond to the request within 2 Business Days of receiving the request.

14. Receipt Points and Receipt Stations

14.1 Application

- (a) Clauses 14.5, 14.6, 14.7, 14.8 and 14.9 of this clause 14 apply to all Receipt Points.
- (b) Clauses 14.2, 14.3 and 14.4 of this clause 14 only apply to Receipt Points established after the date of this Agreement.

14.2 New Receipt Points

- (a) The User must ensure that, prior to establishing, taking Gas at or using any Relevant Receipt Point, there is a Receipt Station at each Relevant Receipt Point that:
 - (i) is in physical operation at the Receipt Point; and
 - (ii) is immediately upstream of any connection to the Network; and
 - (iii) meets the requirements of this clause 14.
- (b) The User must ensure that a Receipt Station referred to in clause 14.2(a):
 - (i) complies with specifications approved by the Service Provider from time to time; and
 - (ii) conforms with the technical requirements for such facilities set out in Annexure 4 or as published from time to time by the Service Provider, which requirements will be in accordance with good industry practice for

this type of facility and conform to appropriate Australian and internationally recognised standards and codes (including AS2885).

14.3 Approval of Receipt Station Specifications for new Receipt Points

- (a) The User must, at least 20 Business Days prior to installation of a Receipt Station, submit Receipt Station specifications comprising design, operation and maintenance principles to the Service Provider.
- (b) The User must not install a Receipt Station unless and until the Service Provider gives written approval (which must not be unreasonably withheld or delayed) to the specifications submitted to it by the User pursuant to clause 14.3(a).

14.4 Additional Costs of new Receipt Points

The Service Provider may require each User of a new Receipt Point, to pay a proportion of the reasonable costs incurred by the Service Provider, as reasonably determined by the Service Provider, in:

- (a) modifying any part of its Network; and/or
- (b) installing any systems required to enable the new Receipt Point to be established and integrated into the operation of the Network,

which the Service Provider has not recovered from the person who established the Receipt Point or from Network Users. Where reasonably practicable, the Service Provider must use reasonable endeavours to provide the User with an estimate of the User's proportion of costs.

14.5 Ownership of Receipt Station Components at Receipt Point

The Parties acknowledge that the ownership of the Receipt Station components will vary as between Receipt Points and such components may be owned by the Service Provider, the User or a third party.

14.6 Equipment at a Receipt Station

Except to the extent to which the Service Provider has agreed to provide them under this Agreement, the Service Provider may require the User to provide any or all of the following systems at a Receipt Station:

- (a) a Filtration and Liquid Separation System;
- (b) a Gas Quantity Measurement System;
- (c) a Flow and Pressure Control System; and
- (d) if the Service Provider reasonably requires, a Gas Quality Measurement System.

14.7 Service Provider may operate the Flow and Pressure Control System

Notwithstanding anything in this Agreement, the User must procure that the Service Provider may on giving reasonable notice to the User:

- (a) operate at the cost (such costs to be reasonable) of the User the Flow and Pressure Control System of any Receipt Station which is not owned by the Service Provider; and/or
- (b) modify the extent of the flow and pressure control requirements listed in paragraph 4 of Annexure 4 applicable to any existing and proposed Receipt Stations and require the User to undertake such work as, in the reasonable opinion of the Service Provider, is necessary to ensure that all Receipt Stations comply with such modified requirements.

14.8 Alterations and Additional Equipment

- (a) The Service Provider may (acting reasonably) require alterations to equipment, movement of equipment or the installation of additional equipment at a Receipt Station including alterations to equipment or installation of additional equipment to achieve upgraded measurement performance, or to accommodate changes in Gas demand characteristics.
- (b) Where the Service Provider owns any Receipt Station components which are to be replaced or altered under clause 14.8(a), the Service Provider must undertake the work itself at the Service Provider's expense.
- (c) Where the Service Provider does not own the components, the Service Provider must notify the User of the alterations required under clause 14.8(a) and the User must promptly carry out such works or the User must procure the owner of the components to carry out such works and, if the User (or, if applicable, the owner of the components) does not complete the works within a reasonable period specified by the Service Provider, the Service Provider may carry out such alterations or install such equipment at the reasonable cost of the User.

14.9 Pressure at Receipt Point

- (a) The Service Provider is not obliged to provide a Service if the pressure at which Gas is received at the Relevant Receipt Point is not within the range of the minimum and maximum pressure specifications for that Receipt Point, as notified from time to time by the Service Provider and set out in Annexure 5 and this is such as to negatively affect the ability of a prudent service provider acting reasonably to provide a Service. The Service Provider shall only amend Annexure 5 in response to a change of circumstances where the changes are of a type reasonably likely to impact on the Service Provider's ability to ensure the continued quality, safety, reliability and security of supply of Gas.

- (b) The Service Provider is not liable for, and the User will indemnify and hold the Service Provider harmless from and against, any and all Damages or claims in connection with or arising as a result of Gas being delivered to or through any Relevant Receipt Point which is not within the range of the minimum and maximum pressure specifications in accordance with this clause 14 unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim.

15. Delivery Points and Delivery Stations

15.1 Network connections under Part 12A National Gas Rules

Where the Service Provider has entered into an NGR Part 12A Connection Contract for a delivery point to the Network, then this clause 15:

- (a) will apply subject to the terms of that contract; and
- (b) will otherwise apply in full.

15.2 Requirements for a Delivery Station

- (a) The Parties acknowledge and agree that, prior to the Commencement Date for the Haulage Reference Service, there must be a Delivery Station that has been commissioned and is in physical operation at each Delivery Point.
- (b) Except to the extent to which the Service Provider has responsibility for Delivery Station components under this Agreement, the User must ensure that the requirements of this clause 15 are met for each Delivery Station.
- (c) Each Delivery Station must be located as close to the Network as practicable, and designed, maintained, tested and calibrated in accordance with good engineering practice and industry standards, and in accordance with specifications approved by the Service Provider prior to installation.

Delivery Stations which were in physical operation prior to the date of this Agreement must comply with the Service Provider's specifications for Delivery Stations, as applicable at the time the relevant Delivery Station was commissioned.

- (d) The User must not take or permit any person to take Gas through a Delivery Station which was not in physical operation as at the date of this Agreement until the Delivery Station has been purged and commissioned by or to the satisfaction of the Service Provider.

15.3 Responsibility for Delivery Station Components

The Service Provider and the User are responsible for Delivery Station components (and must comply with their respective obligations in relation to the design, ownership, operation and maintenance of them) as set out in Annexure 6, except to the extent they expressly agree otherwise in writing.

15.4 Provision of Basic Metering Equipment

The Service Provider must provide Basic Metering Equipment at the first Delivery Station at each Delivery Point.

15.5 Alterations and Additional Equipment at existing Delivery Station

- (a) In respect of Delivery Station components that the User has responsibility for under this Agreement, the User must (at its own expense) alter equipment, move equipment or install additional equipment at that Delivery Station, where reasonably requested in writing by the Service Provider for reasons that may include, but are not limited to, alterations to equipment or installation of additional equipment to achieve upgraded measurement performance.
- (b) The User must carry out the alterations or installations referred to in clause 15.5(a) within such reasonable period of time specified by the Service Provider.
- (c) If the User does not finish the alterations or installations within the period of time specified by the Service Provider pursuant to clause 15.5(b), the Service Provider or its authorised contractors may carry out the alterations or installations at the cost of the User, provided such cost is reasonable.
- (d) In respect of Delivery Station components that the Service Provider owns or otherwise has responsibility for, if:
 - (i) the Service Provider, acting reasonably, considers that it is necessary to alter equipment, move equipment or install additional equipment; or
 - (ii) the User requires alterations or additions to be made to a Delivery Station and the Service Provider agrees to make such alterations or additions (such agreement not to be unreasonably withheld if the alteration or addition is necessary and reasonable for the continued safe operation of the Network),the Service Provider must or must cause its authorised contractors to alter, move or install these components.
- (e) The Service Provider will bear the cost of any works required under clause 15.5(d)(i), except where:

- (i) the Delivery Station components are to be altered, moved or installed for safety or operational reasons resulting from the acts or omissions of the User or the User's Customer(s), in which case the User must bear the cost); or
 - (ii) the works fall within clauses 15.6 or 15.7, and the User is required to bear the cost under the applicable clause.
- (f) Any works required under clause 15.5(d)(ii) will be carried out at the cost of the User.

15.6 Basic Metering Equipment Upgrade at existing Delivery Station

- (a) The Service Provider must, or must cause its authorised contractors to, upgrade Basic Metering Equipment at a Delivery Station if it requires upgrading in order to accept the MDQ and/or the MHQ (as the case may be) for that Delivery Point.
- (b) If required by the Service Provider, reasonable costs incurred by the Service Provider for upgrading the Basic Metering Equipment must be borne by the User.

15.7 Basic Metering Equipment Downgrade at existing Delivery Station

- (a) The Service Provider may downgrade Basic Metering Equipment at its own discretion subject to the requirement that it must consult with the User to determine whether the User's Customer intends to increase load and/or change the User's Customer's pattern of usage such that a downgrade is no longer required.
- (b) Where the Service Provider downgrades Basic Metering Equipment as a result of a change in load or pattern of usage by the User's Customer, if the Service Provider requires the User to pay the reasonable costs of such a downgrade, it must advise the User in writing of such costs prior to the downgrade and the User must pay the full costs of such a downgrade.

15.8 Additional Delivery Stations at Delivery Points

- (a) Subject to clause 15.8(c), a Delivery Point will contain only one Delivery Station unless the Service Provider agrees to install an additional Delivery Station in accordance with clause 15.8(b).
- (b) The Service Provider may at the request of the User agree to install an additional Delivery Station at a Demand Customer Delivery Point and if required by the Service Provider, the User must pay the Service Provider's reasonable charges (as notified by the Service Provider).
- (c) If a Demand Customer Delivery Point contained more than one delivery station prior to the Commencement Date, then the Service Provider must continue to transport Gas to them.

15.9 Disconnection, Decommissioning and Meter Removal

- (a) The Service Provider must, at the request of the User:
- (i) disconnect supply of Gas to a Delivery Point (by such means as the Service Provider in its discretion, acting reasonably, determines); or
 - (ii) decommission a Delivery Point by removal of meters, regulators and filters from a Delivery Station,
- unless the Service Provider reasonably considers that obligations under relevant Laws or under the relevant Customer Connection Contract relating to the disconnection of premises served by a Delivery Point or the decommissioning of the Delivery Point have not been met.
- (b) The User must:
- (i) prior to making a request under clause 15.9(a) above, have complied with all obligations placed on the User under relevant Laws relating to arranging for the disconnection of the premises served by a Delivery Point or the decommissioning of a Delivery Point (as applicable);
 - (ii) provide the Service Provider with sufficient information to enable the Service Provider to determine the appropriate method of disconnection or decommissioning, including the reasons for disconnection; and
 - (iii) pay the applicable Ancillary Charge.
- (c) Where the Service Provider's costs exceed the applicable Ancillary Charge for the disconnection or decommissioning of a Demand Customer Delivery Point, the Service Provider may recover from the User its additional costs reasonably incurred in disconnecting or decommissioning the Delivery Point.

15.10 Ownership of Network

- (a) The User does not acquire any right to, title to, or interest in the Network or any part thereof.
- (b) The Service Provider does not dedicate any particular portion of facilities forming part of the Network to the Services provided to the User.

15.11 Maintenance of Basic Metering Equipment

Where the Service Provider is responsible for maintenance of the Basic Metering Equipment and provided that the User procures the co-operation of the User's Customer, the Service Provider must or must cause its authorised contractors to carry out necessary repairs of the Basic Metering Equipment within a reasonable time of:

- (a) becoming aware of the need to do so; and
- (b) securing access to the Delivery Station.

15.12 No liability for disconnection

The Service Provider is not liable for any and all Damages or claims in connection with or arising as a result of:

- (a) the decommissioning of a Delivery Station or the disconnection of supply pursuant to clause 15.9; or
- (b) the resulting cessation of delivery of Gas at a Delivery Station,

unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim.

16. Measuring Equipment – access, safety and estimation

16.1 Safe Access to Measuring Equipment

- (a) The User must provide reasonable assistance so that the Service Provider may obtain clear and safe access to each Delivery Station and to the Measuring Equipment at each Delivery Point.
- (b) The User must use reasonable endeavours to ensure that:
 - (i) any area surrounding the Measuring Equipment (including any enclosure or building surrounding the Measuring Equipment) is safe (including for access to the Measuring Equipment); and
 - (ii) no activities occur involving, or in the vicinity of, the Measuring Equipment that cause such equipment to become non-compliant with applicable Laws, standards (including the Service Provider's standards, policies and procedures and Australian standards) and applicable gas-fitting rules.
- (c) If any area surrounding the Measuring Equipment (including any enclosure or building surrounding the Measuring Equipment) becomes unsuitable for the safe and continuous operation (including access to the Measuring Equipment) of the Network, then the Service Provider, acting reasonably, may alter Measuring Equipment, move Measuring Equipment or install additional Measuring Equipment for the purposes of the safe and continuous operation of the Network, at the User's cost. An area will be considered unsuitable if it cannot be accessed without risk of personal injury or the state of the area is such that it is reasonably foreseeable that Measuring Equipment will sustain damage.

- (d) Except where immediate access is required for safety reasons or in an emergency, where the Service Provider considers that clause 16.1(c) applies, it will provide the User with notice stating the reasons why it considers clause 16.1(c) applies and provide the User with a reasonable period of time within which to remedy the matters before taking action under clause 16.1(c).

16.2 Service Provider's power of entry

The Service Provider and the User must cooperate, and the User must give all reasonable assistance to procure, that the Service Provider and the Service Provider's authorised contractors may, at all reasonable times, and without giving prior notice to the User or the User's Customer, enter and have access to any Delivery Point:

- (a) to obtain access to any Measuring Equipment;
- (b) for any purpose associated with this Agreement; or
- (c) for the purpose of exercising any right or obligation conferred on the Service Provider by Law,

free of any charge or hindrance from any person or other obstruction.

16.3 Consequences of no access

If the Service Provider is unable to safely access a Delivery Point for any of the purposes of clause 16.2, then the Service Provider may at its option do any or all of the following:

- (a) estimate the Quantity of Gas delivered to that Delivery Point, by having regard to Gas consumption patterns for that Delivery Point, and render an invoice based on such estimate; and/or
- (b) without limiting the Service Provider's rights to curtailment, reduction or interruption of the Services in accordance with clauses 22 or 23, after providing the User with 6 Business Days' notice, cease providing the Service in respect of such Delivery Point; and/or
- (c) after giving the User 1 Business Day's notice where access is required for safety issues, and 5 Business Days' notice for all other issues, replicate at a location accessible to the Service Provider, and at the User's reasonable cost, the Measuring Equipment at the Delivery Point.

16.4 Presence at tests

Subject to clause 16.2, each Party may have a representative present during the erection or alteration of Receipt Stations or Delivery Stations, and at any reading, inspection, testing, calibration, repairing or maintenance of Measuring Equipment and if the User is not the person

who consumes Gas at the Delivery Point, a representative of that person may also be present during the testing or measurement of the Measuring Equipment at that Delivery Point.

16.5 No tampering with Measuring Equipment

- (a) The User must not tamper with, adjust, disconnect, by-pass, interfere with or otherwise damage or render inoperable or inaccurate the Measuring Equipment or take or attempt to take Gas from any part of the Network before it passes the Measuring Equipment at the Delivery Point.
- (b) The User must use its best endeavours to ensure that no other person (except for the Service Provider or the Service Provider's authorised contractors) does or attempts to do anything described in clause 16.5(a).
- (c) Clause 16.5(a) does not prevent the User from performing:
 - (i) alterations or additions in accordance with clause 15.5(a); or
 - (ii) maintenance of equipment in accordance with Annexure 6,provided that such actions do not otherwise damage or render inoperable or inaccurate any other part of the Measuring Equipment.

16.6 User to notify Service Provider of tampering or inaccuracy

The User must notify the Service Provider promptly upon becoming aware of any circumstances which might reasonably be expected to affect the accuracy or security of the Measuring Equipment. If the User has not already notified the Service Provider, upon becoming aware of any such circumstances, the Service Provider will promptly notify the User.

16.7 Quantity of Gas if Measuring Equipment fails

- (a) If the Measuring Equipment at a Delivery Point or Receipt Point fails to operate or register accurately for any period of time, then the Quantity of Gas delivered to that Delivery Point or Receipt Point for that period will be the amount estimated by the Service Provider in accordance with clause 16.7(b), unless otherwise agreed between the Parties.
- (b) When estimating a Quantity of Gas for the purposes of clause 16.7(a), the amount will be determined by the Service Provider:
 - (i) by using the registration of any installed check meter which is accurately registering or, if that is not possible, then;
 - (ii) if the percentage of error can be determined by calibration, tests or mathematical calculation, by varying the Quantity recorded during the

period since the Measuring Equipment was previously tested by one half of the error; or

- (iii) if neither of the options in clauses 16.7(b)(i) or 16.7(b)(ii) are possible, then by having regard to Gas consumption patterns for that Delivery Point.

16.8 Right to alter Measuring Equipment

The Service Provider has the right at its discretion, acting reasonably, and at the User's cost:

- (a) to install flow control mechanisms on the Measuring Equipment at any Delivery Point, allowing the Service Provider to control the amount of Gas withdrawn by the User at that Delivery Point; and
- (b) alter or make additions to the Measuring Equipment installed at any Delivery Point,

where this is required by the Service Provider for the safe and reliable operation of the Network, for the protection of the Network or to ensure the User's compliance with the provisions of this Agreement. Where the safe and reliable operation or the protection of the Network does not necessitate immediate action, the Service Provider will notify the User of any issue coming within the scope of this clause 16.8 and outline its concern and, where the issue relates to the User's compliance with the provisions of this Agreement, state a reasonable period of time within which the User may rectify the issue before the Service Provider will take action at the User's cost.

17. Meter reading and data

17.1 Meter reading and data

- (a) The Service Provider must:
 - (i) read or where permitted under this Agreement or applicable Law, estimate the meter reading at the relevant Delivery Points; and
 - (ii) provide on-site data and communication equipment where economically and technically feasible, at the Delivery Point.
- (b) Where the Service Provider provides Daily Meter Reading Facilities but does not provide Communications Facilities, then the Quantities passing through that Measuring Equipment must be recorded by the Service Provider Daily.
- (c) Where the Service Provider provides Daily Meter Reading Facilities and Communications Facilities, then the Quantities passing through that Measuring Equipment must be recorded and telemetered by the Service Provider Daily.

- (d) Subject to clause 17.1(e), where the Service Provider does not provide Daily Meter Reading Facilities, the Service Provider must read the Measuring Equipment monthly in accordance with the meter reading cycle adopted by the Service Provider for the locality and class of the Delivery Station.
- (e) Where the Quantity of Gas delivered to the Delivery Point is expected to be less than 1 TJ in any 12 month period, the Service Provider must read the Measuring Equipment every 91 Days (plus or minus 4 Days).
- (f) On payment of the relevant Ancillary Charge by the User, the User may request a special meter read of the Measuring Equipment outside the monthly meter reading cycle adopted by the Service Provider for the locality and class of the Delivery Station pursuant to clause 17.1(d), or the date of a reading of a meter pursuant to clause 17.1(e).
- (g) The Service Provider must:
 - (i) advise the User of the Quantity of Gas taken at each Delivery Point where there are no Daily Meter Reading Facilities or Communications Facilities available within 2 Business Days of validated monthly meter data being available to the Service Provider, the date of a reading of a meter pursuant to clause 17.1(e), or the date of a special meter read pursuant to clause 17.1(f) (or such further period as provided for under Law); and
 - (ii) for each Day advise the User of the Quantity of Gas taken at each Delivery Point that has Daily Meter Reading Facilities and Communication Facilities available within 1 Business Day of the meter data being available to the Service Provider,in such format as the Service Provider from time to time nominates after giving reasonable notice of any change in format. The Service Provider will take into consideration all reasonable concerns raised by a User regarding changes to the format, if these are received by the Service Provider within two business days following the User's receipt of a notice advising of a change of format.
- (h) If the User requests more immediate or real time access to meter data at a Delivery Point than the Daily access provided under clause 17.1(f), the User may obtain that access:
 - (i) with the consent of the Service Provider;
 - (ii) directly from the Measuring Equipment by connection established at the cost of the User;
 - (iii) using equipment, established by and at the cost of the User, to electronically communicate data on a more immediate basis or real time basis; and

- (iv) if the connections and equipment referred to in clauses 17.1(h)(ii) and 17.1(h)(iii) respectively:
 - (A) are made in accordance with the manufacturer's specification for the Measuring Equipment and all applicable laws, regulations and standards; and
 - (B) do not interfere with or disrupt the operation of the Measuring Equipment owned and operated by the Service Provider or corrupt any meter data.

17.2 Notice

In the event that the User reasonably forms the view that meter data information or a meter reading is incorrect, it shall notify the Service Provider of this in writing as soon as reasonably practicable, stating the reasons for the User's belief. The Service Provider undertakes to investigate the matter and advise the User of its findings without delay. Except for circumstances beyond its control, the Service Provider remains liable for the accuracy of the information provided by it.

18. Allocation

- (a) At any time, Gas may be transported and delivered to a Volume Customer Delivery Point on behalf of one Network User only.
- (b) Where Gas is delivered to a Demand Customer Delivery Point for more than one Network User, the User and the other relevant Network Users must, prior to the Commencement Date for the Service to that Delivery Point, establish allocation methodologies and notification processes reasonably acceptable to the Service Provider.
- (c) If no such methodologies or processes are established in accordance with clause 18(b) the Service Provider may, at its option, commence the Service and adopt a reasonable methodology such as pro-rating based on the MDQ.

19. Charges

19.1 Applicable Charges

During the term of this Agreement, the User must pay the following Charges in connection with the provision of the Services to each Delivery Point (and in relation to delivery of Gas withdrawn from a delivery point referred to in clause 11.4):

- (a) the applicable Reference Tariffs set out in the Reference Tariff Schedule (including as may be subject to a Minimum Charge);

- (b) any applicable Ancillary Charge;
- (c) any other amounts payable by the User under the terms of this Agreement; and
- (d) any charges payable from time to time under any NGR Part 12A Connection Contract or connection application for a Delivery Point or under any Customer Connection Contract in force at a Delivery Point, such payment to be made for and on behalf of any Customer who is a party to any such agreement (unless paid directly to the Service Provider by a Customer in accordance with rule 119O of the National Gas Rules).

19.2 Charges based on Access Arrangement

The User acknowledges that:

- (a) the Charges payable under clause 19.1(a) to 19.1(c) have been calculated in accordance with and on the basis of the Access Arrangement as amended from time to time; and
- (b) the Charges payable under clause 19.1(d) are payable in accordance with the NERL and Part 12A of the National Gas Rules.

19.3 Provision of Basic Metering Equipment Charge

Where a Delivery Point is or becomes served under more than one service agreement, the Provision of Basic Metering Equipment Charge will be allocated by the Service Provider among those service agreements in proportion to the MDQs or MHQs specified in each service agreement.

19.4 Calculation of invoiced instalments of periodic charges

Instalments of any Charges for a Delivery Point which are expressed with respect to time (e.g. monthly or annual charges) to be specified in an invoice issued in accordance with clause 20 must be calculated for the relevant Billing Period on a Daily pro rata basis based on the number of days in the period of time over which the Charges for the Delivery Point relate.

19.5 Theft Of Gas

- (a) If, due to theft of Gas, the Service Provider has invoiced a User with incorrect Charges in respect of a Delivery Point, the Service Provider may:
 - (i) reasonably determine what should have been the correct Charges in respect of that Delivery Point;
 - (ii) upon request by the User, provide the User with a copy of the Service Provider's calculation of the amount specified in clause 19.5(a)(i); and

- (iii) invoice that User for the difference between what was invoiced for that Delivery Point and the amount specified clause 19.5(a)(i).
- (b) The User must pay the amount of any difference referred to in clause 19.5(a)(iii) in accordance with clause 20.

20. Invoicing and payments

20.1 Invoicing and Payment under Part 21 NGR where the User is a Retailer

Where the User is the Retailer for a Customer or Customers at one or more Delivery Points:

- (a) all Charges for each of those Delivery Points will be invoiced and paid in accordance with:
 - (i) the provisions set out in Divisions 2 and 3 of Part 21 of the National Gas Rules, which will be deemed to be incorporated into this Agreement; and
 - (ii) clauses 20.5, 20.9 - 20.14, to the extent that they are not inconsistent with Divisions 2 and 3 of Part 21 of the National Gas Rules; and
- (b) the rest of this clause 20 will not apply in respect of any such Delivery Points.

20.2 Invoicing and Payment for all other Users under this clause 20

Where the User is not a retailer for a Customer or Customers at one or more Delivery Points, then this clause 20 (other than clause 20.1) will apply in respect of all Charges for each of those Delivery Points.

20.3 Service Provider to issue invoice

- (a) The Service Provider will render invoices at regular intervals but not less frequently than monthly.
- (b) Each invoice will specify the amounts due for all Charges payable under this Agreement in the most recently completed Billing Period. Where relevant, such amounts will be calculated using the meter data or estimated meter data from all relevant Delivery Points.
- (c) Any adjustments or outstanding amounts in respect of any previous Billing Period must be included in the invoice.
- (d) If the User requests, the Service Provider may send a copy of the invoice to the User by electronic mail or facsimile on the date the invoice is generated.

20.4 Due Date for payment

- (a) The User must pay the aggregate amount stated in each invoice within 10 Business Days of the date of the invoice (**Due Date**).
- (b) The User must nominate in writing the recipient of invoices if different to the party specified in Annexure 1.

20.5 Method of Payment

- (a) Unless otherwise agreed by the Service Provider, payment of invoices must be made by unendorsed bank cheque, telegraphic transfer or electronic funds transfer to an account nominated by the Service Provider.
- (b) If payment is made by telegraphic transfer or electronic funds transfer, the funds must be immediately available and payment will be deemed to be made only when the funds are credited to the Service Provider's account.

20.6 Interest on overdue payments

- (a) If the User fails to pay an invoice by the Due Date, the User must, if required by the Service Provider, pay the Service Provider interest on any amount outstanding.
- (b) Interest will be calculated from the Due Date to the actual date of payment (both inclusive) at an annual percentage rate equal to the aggregate of:
 - (i) the corporate overdraft reference rate (monthly charging cycle) applied by the Commonwealth Bank of Australia (Bank) as at the Due Date (or if the Bank ceases to quote such a rate, then the rate which in the opinion of the Bank is equivalent to such rate in respect of similar overdraft accommodation) expressed as a percentage; plus
 - (ii) 2 per cent per annum.

20.7 Disputed payments

If the User disputes part or all of an invoice given by the Service Provider to the User under clause 20.3:

- (a) the User must, within 10 days after receipt of the invoice, notify the Service Provider in writing specifying the amount in dispute and the reasons for the dispute;
- (b) the Parties must comply with the dispute resolution process set out in clause 30; and
- (c) the User must pay the full aggregate amount of the invoice (except any amount which is manifestly wrong) in accordance with clause 20.5 and if the User fails to do so, the Service Provider may require the User to pay interest on the amount

outstanding (excluding any amount which is manifestly wrong) in accordance with clause 20.6.

20.8 Payment on resolution of dispute

If as a result of resolution of a dispute referred to in clause 20.7 the Service Provider is obliged to pay an amount to the User, then the Service Provider must credit the amount payable by it in the next invoice. If the User so requires, the Service Provider must pay interest on the amount payable from the date of payment by the User to the date of payment by the Service Provider (both inclusive), calculated in accordance with clause 20.6.

20.9 Overcharging and undercharging

- (a) Where the Service Provider has:
 - (i) undercharged or not charged a User, the User is not obliged to pay the correct amount pursuant to clause 20.9(b) to the extent the User is precluded by law from recovering those charges from its customers provided that the User has complied with the requirements of all applicable Laws and any relevant contracts and has used reasonable endeavours to recover the relevant charges in accordance with its rights at Law or under a relevant contract;
 - (ii) overcharged a User, the User may seek to recover the correct amount to the extent permitted by law and pass those charges through to its customers.
- (b) If the User has been overcharged or undercharged under this Agreement and the User has paid an invoice containing the overcharge or the undercharge, then the Parties must agree on the correct amount payable and either:
 - (i) the Service Provider will credit or debit that difference to the User in the next invoice as appropriate; or
 - (ii) within 5 Business Days of the Parties agreeing on the correct amount payable, the Service Provider will refund the User or the User must pay the difference as appropriate.
- (c) If the Party to whom the amount is owed so requires, the amount will include interest in accordance with clause 20.6 from the date of payment by the User or the date of invoice by the Service Provider (whichever is applicable), to the date of payment or refund under this clause 20.9 (whichever is applicable) (both inclusive).
- (d) A Party may not claim from the other Party any amount overcharged or undercharged if more than 2 Calendar Years have elapsed since the date of the relevant invoice.

20.10 User to provide information

If information necessary for billing purposes is in the control of the User, the User must on request from the Service Provider furnish that information to the Service Provider within 3 Business Days after the end of the relevant Billing Period. If the User fails to furnish the information, the Service Provider is entitled to render an invoice based on the Service Provider's reasonable estimate.

20.11 Justification of calculations

Each Party is entitled to require the other Party to provide sufficient evidence to establish the accuracy of any statement, charge or computation made by the other Party under this Agreement.

20.12 Set-off

Either Party is entitled, without prejudice to any other rights or remedies it may have, to withhold and set-off payment of any moneys not under dispute that are due or owing under this Agreement to the other Party against any amounts not under dispute that are due or owing under this Agreement by the other Party.

20.13 Calculation of Charges for broken periods

If a Charge is calculated on a monthly basis, and the first or last month is not a full Calendar Month, the charge will be calculated on a pro-rata Daily basis. The amount will be calculated by dividing the number of Days during which the Service has been provided by the total number of Days in that Calendar Month.

20.14 Payment free of deduction or withholding

The User must pay amounts payable under this Agreement free and clear of any deductions or withholding except if required by law to deduct or withhold.

21. Goods and Services Tax

21.1 Definitions

For the purposes of this clause 21, terms defined in the GST law have the same meaning when used in this clause 21.

21.2 GST exclusive consideration

Unless otherwise stated, all amounts payable or the value of other consideration provided in respect of supplies made in relation to this Agreement are exclusive of GST (if any). If GST is levied or imposed on any supply made (or deemed to have been made) under or in

accordance with this Agreement, the amounts payable or the value of the consideration provided for that supply (or deemed supply) (**Payment**) shall be increased by such amount as is necessary to ensure that the amount of the Payment net of GST is the same as it would have been prior to the imposition of GST.

21.3 Reimbursements

Where any amount is payable to a Party as a reimbursement, indemnification or similar payment calculated by reference to a loss, cost, expense or other amount incurred by that Party, then such amount will be reduced by the amount of any input tax credit available to that Party and, if a taxable supply, will be increased by an amount equal to the GST payable in relation to that supply.

21.4 Payment of amount of GST

Subject to the issue of a tax invoice in accordance with clause 21.5, any additional amount payable pursuant to clauses 21.2 or 21.3 must be paid at the time any payment to which it relates is payable. Where an additional amount payable is not referable to an actual payment, then it will be payable within 10 days of a tax invoice being issued by the Party making the supply.

21.5 Tax Invoice

Where in relation to this Agreement a Party makes a taxable supply, that Party will provide a tax invoice in respect of that supply before the additional amount payable in respect of that supply becomes due.

21.6 Adjustments

If the GST payable in relation to a supply made under or in accordance with this Agreement varies from the additional amount paid by the Party acquiring that supply (**Recipient**) under clause 21.2, then the Party making that supply (**Supplier**) will provide a corresponding refund or credit to, or will be entitled to receive the amount of that variation from, the Recipient. Any payment, credit or refund under this clause 21.6 is deemed to be a payment, credit or refund of the additional amount payable under clause 21.2. Where there is an adjustment event, the Supplier must issue an adjustment note to the Recipient as soon as the Supplier becomes aware of the adjustment event.

21.7 ABN and GST Warranty

Each Party warrants that it is GST registered and has a valid Australian Business Number.

22. Suspension of Service

22.1 Suspension at User's Request – Temporary Disconnection

- (a) The User may request the Service Provider to stop or suspend the delivery of Gas to one or more Delivery Points (other than to a Small Volume Customer Delivery Point) on payment of the relevant Ancillary Charge by the User and subject to the User having first complied with all obligations placed on the User under relevant Laws relating to arranging for the suspension of Gas to each of those Delivery Points.
- (b) The Service Provider must at the later of:
 - (i) the earliest reasonably practical date after receipt of notice from the User; and
 - (ii) the date requested by the User,stop or suspend the delivery of Gas to each Delivery Point nominated in a notice duly issued under clause 22.1(a), unless the Service Provider considers relevant Laws relating to the disconnection of premises served by a Delivery Point have not been met. Any such stoppage or suspension will not relieve the User from its obligations under this Agreement to pay for the relevant Service if the Service Provider is able to provide it to that Delivery Point.
- (c) If requested by the Service Provider, a representative of the User must be present when the Service Provider stops or suspends the delivery of Gas to the Delivery Point.
- (d) The Service Provider is entitled to charge the User the applicable Ancillary Charge for costs reasonably incurred by the Service Provider for stopping or suspending the delivery of Gas at the User's request.

22.2 Suspension by Service Provider

- (a) The Service Provider may suspend the delivery of Gas to any Delivery Point and is not obliged to provide the Service where:
 - (i) the Service Provider considers that a Delivery Point or the Network poses an immediate threat of injury or material damage to any person, property or the Network, including where the Service Provider has not received sufficient Gas at a Relevant Receipt Point to meet Gas withdrawals from the part of the Network servicing that Delivery Point;
 - (ii) AEMO has instructed the Service Provider to suspend the delivery of Gas to the Delivery Point; or

- (iii) the User is not a Registered Participant.
- (b) The Service Provider is entitled to charge the User for costs reasonably incurred by the Service Provider for stopping or suspending the delivery of Gas in the circumstances set out in clause 22.2(a)(ii) and 22.2(a)(iii).

22.3 No Liability

- (a) The Service Provider is not liable for any and all Damages or claims in connection with or arising as a result of the suspension of the delivery of Gas unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim. The User will indemnify and hold the Service Provider harmless from and against any such Damages or claims where delivery of Gas is suspended at the request of the User under clause 22.1, unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused the Damage or claim.
- (b) The User acknowledges that suspension of delivery of Gas under this clause 22 does not reduce the User's obligation to pay Charges under this Agreement.

23. Interruptions and curtailments

23.1 Application

This clause 23 applies to the User irrespective of any Receipt Point where Gas is received by the Service Provider or the User's contractual obligations or physical arrangements at or upstream of any Receipt Point.

23.2 Scheduled Interruptions

- (a) The Service Provider may, without being in breach of this Agreement, effect any repairs, testing, maintenance, replacement, upgrading or any other works related to the Network which are reasonably required.
- (b) The Service Provider may interrupt or reduce the Services during the work referred to in clause 23.2(a) to the extent necessary to enable that work to proceed.
- (c) If the Service Provider intends to interrupt or reduce the Services in accordance with clause 23.2(b), the Service Provider will:
 - (i) notify the User and the relevant Customer as early as reasonably practicable (and provide not less than 4 Business Days' notice) prior to the interruption or reduction of Services of its intention to interrupt or reduce the Services;

- (ii) use reasonable endeavours to agree with the User the timing of the intended interruption or reduction; and
 - (iii) use best endeavours to minimise the period during which the Services are interrupted or reduced.
- (d) If the Service Provider notifies the User that it intends to interrupt or reduce the Services in accordance with clause 23.2(b), the User will use best endeavours to ensure that there is a cessation or reduction of:
 - (i) the delivery of Gas to any Receipt Points nominated by the Service Provider; or
 - (ii) the taking of Gas at any Delivery Points or class of Delivery Points nominated by the Service Provider,in accordance with the directions of the Service Provider.

23.3 Emergency Interruptions

- (a) The Service Provider may, without being in breach of this Agreement, interrupt or reduce the Services (including by suspending or interrupting supply to any Delivery Points, ceasing to accept Gas at any Receipt Point, or any other measure) in cases of emergency or risk of injury or damage to any person or property (including the Network) for such period as the Service Provider reasonably believes is necessary.
- (b) The Service Provider must, as soon as reasonably practicable, make information about an emergency interruption or reduction of Services, (including the nature of the emergency interruption or reduction of Services and of the likely duration of such interruption or reduction) available to the User on a 24 hour telephone information service.

23.4 Load Shedding

- (a) If at any time for any reason there is, or the Service Provider reasonably believes or anticipates that there may be, a failure of supply or shortfall in supply in or to any part of the Network, the Service Provider is entitled to curtail or interrupt the receipt, transportation or delivery of Gas and is entitled to implement Load Shedding.
- (b) The User acknowledges that the Service Provider will determine whether to request a reduction or cessation of Load in accordance with the Load Shedding principles set out in the Operational Schedules.
- (c) If the Service Provider notifies (including, for the purposes of this clause 23.4, notice given verbally) the User that:
 - (i) there has been a failure of sufficient supply in or to any part of the Network; or

- (ii) that it has reasonable grounds to believe or anticipate that there may be a failure of sufficient supply in or to any part of the Network,

the User will use best endeavours to ensure that there is a cessation or reduction of Load at the User's Delivery Points in the affected Network Section in accordance with the directions of the Service Provider.

- (d) At the same time as or following notification to the User under clause 23.4(c), the Service Provider will determine the Load Shedding Priority up to which Load must be reduced or cease and notify the User as soon as practicable of the Load Shedding Priority and Load Types that must be reduced or cease (at the direction of the Service Provider).
- (e) The Service Provider may at any time change the Load Shedding Priority up to which Load must be reduced or cease and notify the User as soon as practicable of any such change.
- (f) The User acknowledges and agrees that immediately after notifying the User of the applicable Load Shedding Priority in accordance with clauses 23.4(d) or 23.4(e), the Service Provider is entitled to contact the User's Customers at Delivery Points with relevant Load Types and direct those Customers to cease or reduce their consumption of Gas in accordance with the directions of the Service Provider.
- (g) The Service Provider may instruct those Customers whose ELMS Data shows Load Types at Load Shedding Priorities up to and including the Load Shedding Priority nominated by the Service Provider under clause 23.4(d) or 23.4(e) to cease withdrawing, taking or using Gas for each of those Load Types or reduce Loads to a lesser Quantity of Gas specified by the Service Provider.
- (h) The User must use best endeavours to ensure that each of its Customers complies with any direction given to it by the User or the Service Provider to cease or reduce Load under this clause 23.4.
- (i) Unless otherwise directed by the Service Provider, the User must comply with, and must use best endeavours to ensure that the Customer complies with, any Curtailment Plan provided to the Service Provider.
- (j) If a Customer fails to comply with any instruction it receives from the Service Provider or User under this clause 23.4 and 23.5(b) the Service Provider may physically curtail, suspend, reduce or interrupt Gas supply to that Customer using whatever means at its disposal.

23.5 Load Shedding Priority

- (a) All Load at each Volume Customer Delivery Point will have a Load Shedding Priority of 10.

- (b) The Parties agree that for each Demand Customer Delivery Point for which no ELMS Data has been provided the Service Provider, acting reasonably, is entitled to curtail delivery of Gas to that Delivery Point or request that a User or Customer cease withdrawing, taking or using Gas at that Delivery Point at any level or to any Quantity it deems appropriate in its discretion and without taking into account the Load available to be reduced or cease at any Load Shedding Priority at any other Delivery Point.

23.6 Provision of ELMS Data

- (a) The User must provide ELMS Data for each Demand Customer Delivery Point.
- (b) If the User is required to provide ELMS Data for a Delivery Point and has not done so, the Service Provider may (acting reasonably) determine a Load Type or Load Types for that Delivery Point or any Quantity of Gas at that Delivery Point.
- (c) The User may request a copy of its ELMS Data for the Delivery Points under this Agreement at any time. Any such request must be in writing.
- (d) Subject to the Service Provider's obligations to keep ELMS Data confidential, the Service Provider must provide the User with a copy of ELMS Data it has in respect of the User's Delivery Points (or if it does not have ELMS Data for those Delivery Points, notify the User accordingly) within a reasonable time of receiving the User's request pursuant to clause 23.6(c). If ELMS Data is confidential to a third party (including another Network User) and the Service Provider is not able to confirm that it has written consent to disclose that ELMS Data, the Service Provider is not obliged to disclose that ELMS Data to the User, but must notify the User that it is unable to disclose that information.
- (e) The User may ask the Service Provider to update the ELMS Data for Delivery Points under this Agreement at any time. The Service Provider is obliged to make such a change only if the User provides evidence to the Service Provider's reasonable satisfaction justifying any changes requested.
- (f) The Service Provider may ask the User to:
 - (i) confirm and/or update the ELMS Data for that User's Delivery Points at any time; and
 - (ii) provide evidence to the Service Provider's reasonable satisfaction justifying the ELMS Data provided.
- (g) The User must comply with a request from the Service Provider pursuant to clause 23.6(f) within 20 Business Days of receiving that request.
- (h) The User warrants that all ELMS Data it provides to the Service Provider is accurate and complete. The User must advise the Service Provider as soon as

practicable after becoming aware that any ELMS Data it has provided to the Service Provider is no longer accurate or complete.

- (i) If, in the course of implementing Load Shedding, or a simulation of Load Shedding, the Service Provider determines that contact information contained in the ELMS Data for a Delivery Point is inaccurate, the Service Provider may update the ELMS Data for that Delivery Point in accordance with information provided by a Customer. The Service Provider may (but is not obliged to) request the User to confirm that ELMS Data in accordance with clause 23.6(f).
- (j) The User acknowledges that where the Tariff Class for a Delivery Point has in part been determined according to its Load Type. If the User:
 - (i) fails to comply with its obligations under clause 23.6(g); or
 - (ii) the Service Provider reasonably believes that ELMS Data provided by the User is incomplete or inaccurate,

the Service Provider may alter the Tariff Class assigned to a Delivery Point, in accordance with the Access Arrangement.

23.7 Service Provider not liable

- (a) If the Service Provider:
 - (i) interrupts, curtails or reduces Services;
 - (ii) implements Load Shedding; or
 - (iii) requires a reduction or cessation of Load from any User or Customer,

in accordance with this clause 23, the Service Provider will not be liable for any and all Damage or claims in connection with or arising as a result of that Load Shedding, interruption, curtailment, reduction, cessation or requirement (including any reduction in supply to Customers as a result) unless and to the extent that the negligent act or omission or wilful misconduct of the Service Provider caused that Damage or claim. The User will indemnify and hold the Service Provider harmless against any such Damages or claims to the extent that the User's negligent act or omission, wilful misconduct or breach of this clause 23 has caused the Damage or claim.

- (b) The Service Provider may not rely on clause 23.7(a) to the extent that the Damage was caused by:
 - (i) an interruption, curtailment or reduction in Services which occurred solely as a result of a scheduled interruption under clause 23.2; and

- (ii) the Service Provider has failed to notify the User at least 4 Business Days prior to the interruption, curtailment, cessation or reduction of Services.
- (c) Without limiting clause 23.7(a), the Service Provider is not liable for, and the User will indemnify and hold the Service Provider harmless from and against, any and all Damages or claims in connection with or arising as a result of:
 - (i) the User's failure to comply with clause 23; or
 - (ii) a failure by a User's Customer to act in accordance with the instructions or requests received from the Service Provider or the User under clause 23.4.

23.8 Reduction of Demand Charge

If the Service Provider is unable to deliver the MDQ to a Demand Customer Delivery Point for any period in excess of one Day as the result of:

- (a) an event occurring wholly within the Network (and not due to any event, action or circumstance upstream of a Receipt Point); and
- (b) either:
 - (i) the Service Provider carrying out work pursuant to clauses 23.2 or 23.3; or
 - (ii) curtailment or interruption of supply under clause 23.4 arising from circumstances solely within the Service Provider's control,

the Demand Charge for that Delivery Point will be reduced during the period of reduced service so that the Demand Charge in that period is calculated by reference to the actual amount withdrawn at the Delivery Point each Day during that period, rather than by reference to the Chargeable Demand specified in Relevant Customer List.

24. Force Majeure

24.1 Definition

- (a) In this clause 24, and subject to clause 24.1(b), **Force Majeure Event** means any event, circumstance or cause not within the control of a Party and which by the exercise of due diligence that Party is not reasonably able to prevent or overcome, including (without limitation):
 - (i) acts of God including, without limitation, earthquakes, floods, washouts, landslides, lightning and storms;

- (ii) strikes, lockouts, bans, slowdowns or other industrial disturbances;
 - (iii) acts of enemy, wars, invasions, blockades or insurrections, riots and civil disturbances, arrest and restraint of rulers and peoples;
 - (iv) fire or explosion;
 - (v) epidemic or quarantine;
 - (vi) order of any court or tribunal or the order, act, or omission or failure to act of any government or governmental authority having jurisdiction, or failure to obtain any necessary governmental consent or approval;
 - (vii) equipment breakdown, breakages or accident to machinery, the Network or Pipelines, the necessity for making repairs and/or alterations in machinery, the Network or Pipelines (other than routine maintenance for which notice has not been given), freezing of wells or failure of reserves; or
 - (viii) native title claims.
- (b) It is acknowledged by the Parties that:
- (i) lack of funds by any Party;
 - (ii) changes in market conditions for transportation and/or the purchase and sale of Gas (except where these affect the operation of the Network);
 - (iii) the inability of any Party to obtain a supply of Gas; or
 - (iv) if the User is not the person consuming Gas at the Delivery Point, the inability of that person to take Gas due to any event or circumstance within the control of that person,
- will under no circumstances constitute or cause a Force Majeure Event.
- (c) The User is responsible for establishing that a person's inability to take Gas as mentioned in clause 24.1(b)(iv) arises from an event or circumstance which is not within that person's control.

24.2 Consequences of Force Majeure

Subject to clauses 24.4, 24.5 and 24.6, if by reason of a Force Majeure Event a Party (**Affected Party**) is affected in the performance of any obligation or clause under this Agreement:

- (a) that Party will be excused during the time, and to the extent that, such performance is so affected; and

- (b) that Party will not, to that extent, be liable to the other Party for any Damage of any kind arising out of, or in any way connected with, that non-performance.

24.3 Notification and Diligence

Upon the occurrence of a Force Majeure Event, the Affected Party must:

- (a) as soon as possible notify the other Party in writing, giving:
 - (i) full particulars of the Force Majeure Event;
 - (ii) the date of commencement of the Force Majeure Event and an estimate of the period of time required to enable it to resume full performance of its obligations; and
 - (iii) where possible, the means proposed to be adopted to remedy or abate the Force Majeure Event and the effects of the Force Majeure Event;
- (b) use all reasonable diligence and employ all reasonable means to remedy or abate the Force Majeure Event and the effects of the Force Majeure Event as expeditiously as possible. However, nothing in this clause 24 will require a Party to settle a strike, lockout, ban, slowdown or other industrial disturbance, civil disobedience or native title claim against its judgment, and it is acknowledged that settlement of any such disturbance is entirely within the discretion of the Party affected;
- (c) resume performance as expeditiously as possible after termination of the Force Majeure Event or after the Force Majeure Event has abated to an extent which permits resumption of performance;
- (d) notify the other Party in writing when the Force Majeure Event has terminated or abated to an extent which permits resumption of performance to occur; and
- (e) notify the other Party in writing when resumption of performance has occurred.

24.4 Liability Not Relieved

A Force Majeure Event which affects a Party's performance under this Agreement will not relieve that Party of liability in the event, and to the extent, that its negligence caused or contributed to its failure to perform under this Agreement. A Party will not be relieved from a breach of an obligation or liability to the extent that it arises from the failure of that Party to comply with clause 24.3.

24.5 Demand Charge for delivery of less than MDQ

If a Force Majeure Event affecting the Service Provider occurs and prevents the Service Provider from performing its obligations to the User in respect of a Demand Customer Delivery

Point, the Demand Charge for any Delivery Point to which the Service Provider was unable to deliver Gas to the MDQ for that Delivery Point will, for any period during which the Service Provider is unable to deliver Gas to the MDQ, be calculated by reference to the actual amount withdrawn each Day at that Delivery Point.

24.6 Force Majeure does not affect obligations to pay

Subject to clause 24.5 and clause 24.7, the occurrence of a Force Majeure Event does not relieve the User from any obligation to pay any amounts owing by the User to the Service Provider pursuant to this Agreement.

24.7 Prolonged Force Majeure

The Service Provider and the User must consult in good faith to decide what action should be taken to carry out the intentions of this Agreement if, as a result of a Force Majeure Event, a Party is affected in the performance of any obligation or clause under this Agreement for a period of 12 Calendar Months. If after a further 1 Calendar Month the Parties are unable to agree upon a means to resolve or otherwise overcome the relevant impact of the Force Majeure Event, then:

- (a) if the Force Majeure Event wholly prevents the performance of this Agreement, either Party may terminate this Agreement by giving to the other Party not less than 30 Days' prior notice to that effect; or
- (b) if the Force Majeure Event prevents delivery of Gas to some but not all of the Delivery Points, either Party may elect to have those Delivery Points deleted from the Relevant Customer List by giving to the other Party not less than 3 Business Days' notice, and the Service Provider must delete those Delivery Points accordingly,

and thereafter neither Party will be under any further obligation to the other in respect of this Agreement or the deleted Delivery Points as the case may be, but each Party will remain responsible for the performance of obligations under this Agreement arising prior to the date of termination, and after that date for the performance of obligations in respect of any Delivery Points which are not deleted.

25. Termination or cessation

25.1 Grounds for termination or cessation of Services

Without limiting clause 25.2, 25.3 or 24.7, if a Party (the **First Party**):

- (a) materially defaults in the performance of any of the material covenants or obligations imposed upon it by this Agreement (other than the User's obligation to pay) and, where the default is capable of remedy, fails to remedy the default within

20 Business Days from the receipt of notice from the other Party requiring it to remedy the default;

- (b) suffers a resolution passed or an order is made by the Court for its winding up except for the purposes of a solvent reconstruction or amalgamation;
- (c) is placed in liquidation or is placed under external administration; or
- (d) makes or enters into or endeavours to make or enter into any composition, assignment or other arrangement with or for the benefit of its creditors,

then the other Party may by notice in writing, either:

- (e) terminate this Agreement; or
- (f) if the First Party is the User:
 - (i) cease to provide the Services; or
 - (ii) cease to provide the Services to the User to those Delivery Points the subject of the relevant default,

such termination or cessation to take effect 48 Hours after delivery of the notice or after such longer period as specified in the notice.

25.2 Right of Service Provider to terminate

- (a) Subject to clause 25.2(b), the Service Provider may terminate this Agreement by 30 Days' notice if, as a result of a Change in Law after the date of this Agreement:
 - (i) the Haulage Reference Service provided under this Agreement is no longer available to the User under the Access Arrangement as a reference service; or
 - (ii) in the opinion of the Service Provider (acting reasonably), the commercial position of the Service Provider under this Agreement is materially adversely affected.
- (b) The Service Provider may only exercise its right to terminate under clause 25.2(a)(ii) if the Service Provider and the User, negotiating in good faith, have been unable to agree to amend this Agreement in accordance with clause 1.3 to deal with the impact of the relevant Change in Law.

25.3 Failure to pay

If the User defaults in payment of any moneys payable under this Agreement, excluding payments disputed under clause 20.7, for a period of 5 Business Days after notification of the default then the Service Provider may, at the Service Provider's sole discretion, call on the

Security and/or either terminate this Agreement or cease to provide Services to the User under this Agreement in respect of any one or more Delivery Points by notice in writing, such termination or cessation to take effect 48 Hours after delivery of the notice or after such longer period as specified in the notice.

25.4 Preservation of rights after termination

Termination of this Agreement for any reason will not extinguish or otherwise affect any rights of either Party against the other which:

- (a) accrued prior to the time of the termination including, without limitation, the Service Provider's right to payment by the User in respect of amounts owing prior to termination or amounts payable for Services for which no invoice has been rendered at the date of termination or the Service Provider's right to call on the Security; or
- (b) otherwise relate to or may arise at any future time from any breach or non-observance of obligations under this Agreement which arose prior to the time of the termination,

but subject to the Parties' respective rights and obligations under the Agreement as in force prior to its termination.

25.5 Preservation of rights after cessation of Services

- (a) Cessation of Services by the Service Provider for any reason will not extinguish or otherwise affect any rights of either Party against the other which:
 - (i) accrued prior to the time of the cessation including, without limitation, the Service Provider's right to payment by the User in respect of amounts owing prior to the cessation of Services or amounts payable for Services for which no invoice has been rendered at the date of cessation or the Service Provider's right to call on the Security;
 - (ii) continue to accrue after the time of the cessation including, without limitation, the Service Provider's right to payment by the User of any Minimum Charge; or
 - (iii) otherwise relate to or may arise at any future time from any breach or non-observance of obligations under this Agreement which arose prior to the time of the cessation.
- (b) Nothing in this Agreement requires the Service Provider to recommence provision of Services once the Service Provider ceases to provide services to any delivery point deleted from the Relevant Customer List under clause 24.7, 25.1 or 25.3.

25.6 Survival

Clauses 26.1, 27, 28, 29, 30, 31, 32, this clause 25.6 and so much of clause 1 as is necessary to give effect to any of those clauses survive the termination of this Agreement.

26. Liability

26.1 Indemnity

(a) Except where the User is required under any other express provision in this Agreement to indemnify the Service Provider in relation to any Damage or claim, and subject to this clause 26, the User must indemnify and hold the Service Provider and its directors, officers, employees, agents and contractors harmless from and against any and all Damage suffered or incurred by the Service Provider or any of its directors, officers, employees, agents or contractors, in connection with or arising as a result of:

- (i) any personal injury or death caused by the negligent acts or omissions or wilful misconduct of the User or the User's directors, officers, employees, agents or contractors
- (ii) any damage to the property of the Service Provider caused by the negligent acts or omissions or wilful misconduct of the User, or the User's directors, officers, employees, agents or contractors; or
- (iii) any breach of the provisions of this Agreement (including any warranty given by the User under this Agreement),

and the persons referred to in this clause 26.1(a) are entitled to the benefit of this clause 26.1(a) and it is enforceable at the suit of any of these persons. In addition, the Service Provider is entitled to enforce this clause on behalf of any of those persons. However, the consent of those persons is not required to any variation, amendment or discharge of this clause 26.1(a).

(b) Except where the Service Provider is required under any other express provisions in this Agreement to indemnify the User in relation to any Damages or claim, and subject to this clause 26, the Service Provider must indemnify and hold the User and its directors, officers, employees, agents and contractors harmless from and against any and all Damage suffered or incurred by the User or any of its directors, officers, employees, agents or contractors in connection with or arising as a result of:

- (i) any personal injury or death caused by the negligent acts or omissions or wilful misconduct of the Service Provider, or the Service Provider's directors, officers, employees, agents or contractors;

- (ii) any damage to the property of the User caused by the negligent acts or omissions or wilful misconduct of the Service Provider, or the Service Provider's directors, officers, employees, agents or contractors; or
- (iii) any breach of the provisions of this Agreement (including any warranty given by the Service Provider under this Agreement),

and the persons referred to in this clause 26.1(b) are entitled to the benefit of this clause 26.1(a) and it is enforceable at the suit of any of these persons. In addition, the User is entitled to enforce this clause on behalf of any of those persons. However, the consent of those persons is not required to any variation, amendment or discharge of this clause 26.1(b).

- (c) Each indemnity in this Agreement is a continuing obligation, separate and independent from the other obligations of the Parties, and survives termination, completion or expiration of this Agreement.
- (d) It is not necessary for a Party to incur expense or make any payment before enforcing a right of indemnity conferred by this Agreement.
- (e) Each Party must take reasonable steps to mitigate any Damage the subject of an indemnity :
 - (i) referred to in clauses 26.1(a) and 26.1(b); and
 - (ii) under an express provision in this Agreement where the User is required to indemnify the Service Provider.

26.2 Exclusion of warranties

All express or implied warranties, representations or covenants which are not contained in this Agreement are excluded to the maximum extent permitted by law. If a statutory guarantee imposed under the *Competition and Consumer Act 2010* (Cth) or any equivalent State or Territory legislation applies in respect of the Service, then the Service Provider's liability to the User under such guarantee is limited, so far as the law permits, (at the Service Provider's option) to:

- (a) the re-supply of the relevant service under this Agreement; or
- (b) an amount equivalent to the payment to have the relevant service re-supplied.

26.3 Scope of Liability

- (a) Subject to clauses 26.3(b), 26.4(a) and 26.4(a), the liability of a Party (in this clause 26, the **First Party**) to the other Party (in this clause 26, the **Second Party**) (whether under this Agreement (including under an indemnity) or, to the extent permitted by law, otherwise) is limited to Direct Damage arising from:
- (i) personal injury or death caused by the negligent acts or omissions or wilful misconduct of the First Party or the First Party's directors, officers, employees, agents or contractors;
 - (ii) any damage to the property of the Second Party or to property for which the Second Party is responsible under this Agreement which is caused by the negligent acts or omissions or wilful misconduct of the First Party or of the First Party's directors, officers, employees, agents or contractors; or
 - (iii) any breach of the provisions of this Agreement (including any warranty) by the First Party, including where caused by or arising out of the First Party's negligence.
- (b) The aggregate liability of the Service Provider to the User, its directors, officers, employees, agents and contractors, whether under contract (including by way of indemnity), by statute (to the extent that it is possible to limit or exclude such liability), in tort (for negligence or otherwise) or on any other basis at law or in equity is limited to the sum of:
- (i) the amount which, but for this clause 26, is recoverable and which, in fact, is recovered under the Service Provider's policies of insurance; and
 - (ii) any uninsured retentions (such as deductibles or excesses).

26.4 Exclusion of Consequential Damage

- (a) Subject to clauses 26.4(b) and 26.5, the First Party is not liable for, and does not indemnify the Second Party in respect of, any Consequential Damage howsoever caused (including by the negligence of the First Party), suffered by the Second Party in connection with this Agreement.
- (a) Clause 26.4(a) does not limit a Party's liability in respect of liability for Consequential Damage, to the extent that, ignoring the application of those clauses, the Party is indemnified for that liability under a policy of insurance.

26.5 Circumstances in which limitations and exclusions do not apply

- (a) The limitations of liability referred to in clauses 26.3(a) and 26.4 do not apply in respect of the User's liability for the Service Provider's loss of revenue or the Service Provider's Damage relating to the interruption of Services (including

Damage associated with cessation of Services, purging relevant parts of the Network and re-commencing Services) arising as a result of delivery of Gas by or on behalf of the User:

- (i) into the Network which does not meet the Specification; or
 - (ii) to a Receipt Point at a pressure which is not within the minimum and maximum pressure specifications for that Receipt Point set out in Annexure 5.
- (b) The limitations of liability referred to in clauses 26.3(a) and 26.4 do not apply in respect of the Service Provider's liability for any loss of revenue by the User caused by the delivery to a Delivery Point of Gas which does not meet the Specification, to the extent that the delivery was caused by the negligence or wilful default of the Service Provider.

26.6 Contribution to loss or damage

The liability of a Party for Damage, howsoever caused (including, but not limited to, by the negligence of that Party), suffered by the other Party in connection with this Agreement is reduced to the extent that the negligent act or omission or wilful misconduct of the other Party caused that Damage.

26.7 Civil Liability Act

- (a) To the extent permitted by law, Part 4 of the *Civil Liability Act 2002* (NSW) (and any other equivalent statutory provisions in any other state or territory) is excluded from applying to any right, obligation or liability of either Party under this Agreement whether such a right, obligation or liability is sought to be enforced as a breach of contract, a claim in tort or otherwise in an action for damages.
- (b) All other rights, obligations and liabilities (including those relating to proportionate liability) of each Party are preserved and are as specified in or by this Agreement whether in contract, tort or otherwise in an action for damages.

26.8 User's supply arrangements

The User must include in all its supply arrangements with Customers who are not Small Customers, a provision that limits or excludes the User's liability to those persons, to the extent reasonably practicable, and in particular in relation to transportation of Gas, arising from or in connection with the operation of the Network and any Services provided by the Service Provider (whether under this Agreement or otherwise).

27. Transfer

27.1 Service Provider may transfer

The Service Provider may assign, transfer or novate this Agreement or transfer any or all of its rights under this Agreement without the User's prior written consent. The Service Provider must notify the User in writing of any such assignment, transfer or novation.

27.2 No assignment without consent

The User may not assign, transfer or novate this Agreement without the Service Provider's prior written consent. The User must request any assignment in writing.

27.3 Transfers where the Retail Market Procedures do not apply

- (a) Where there are no relevant Retail Market Procedures governing transfer of capacity, the User may, without the Service Provider's consent, transfer, by way of subcontract, all or any of the User's contracted capacity to another person (the **third party**) with the following consequences:
- (i) the User's rights against, and obligations to, the Service Provider under this Agreement are (subject to clause 27.3(a)(ii)) unaffected by the transfer; but
 - (ii) the User must immediately give notice to the Service Provider of:
 - (A) the subcontract and its likely duration;
 - (B) the identity of the third party; and
 - (C) the amount of the contracted capacity transferred.
- (b) The User may, with the Service Provider's consent, transfer all or any of the User's contracted capacity to another party (the **third party**) as outlined in rule 105(3) of the National Gas Rules. The Service Provider must not withhold its consent unless it has reasonable grounds, based on technical or commercial considerations, for doing so and where the third party executes a deed of covenant in favour of the Service Provider as set out in clause (d) below. An example of a reasonable ground would be, if the Service Provider would not receive at least the same amount of revenue after the transfer than it would have received before the transfer was requested.
- (c) The Service Provider must reply to a request from the User for the Service Provider's consent to a transfer or assignment under clause 27.3(b) within 14 Business Days of receiving the request accompanied by all information reasonably necessary to enable the Service Provider to consider the request. If at the time the

request is made, the User informs the Service Provider in writing that due to hardship, the User requires an urgent reply to its request, the Service Provider will use reasonable endeavours to respond to the request within 2 Business Days of receiving the request.

- (d) If the Service Provider receives a request from the User for the Service Provider's consent to a transfer or assignment under clause 27.3(b), the Service Provider may require the User to provide to the Service Provider a Deed of Covenant executed by each of the User and the third party (in a form reasonably required by the Service Provider) in favour of the Service Provider and of each other, under which:
- (i) the User assigns all of its rights under this Agreement to the third party and the third party accepts that assignment;
 - (ii) the third party agrees to assume all of the User's rights and obligations under this Agreement and to accordingly comply with all of the User's obligations and assume all of the User's liabilities under the Agreement; and
 - (iii) the User agrees to the assumption of those rights and obligations by the third party.
 - (iv) the User consents to the Service Provider providing the third party with the details (including all details contained in the Relevant Customer List such as the MDQ and Demand Charge) regarding any Delivery Point.
- (e) Unless otherwise agreed, any transfer made under clause 27.3(b) by the User will be effective only on the first Day of the Calendar Month following execution of any deed of covenant under clause 27.3(d)(iv).

28. Security and Financial Standing

- (a) Where the User is the Retailer for a Customer or Customers at one or more Delivery Points:
- (i) the User must provide security for Charges payable or which may become payable under this Agreement for those Delivery Points in accordance with the requirements set out in Division 4 of Part 21 of the National Gas Rules, which will be deemed to be incorporated into this Agreement; and
 - (ii) the rest of this clause 28, with the exception of clauses 28(e), 28(f) and 28(g) below, will not apply to the User.

In all other cases, the User must comply with clauses 28(b) to 28(j) below.

- (b) If requested by the Service Provider where reasonably necessary, the User must provide Security to the Service Provider for an amount reasonably determined by the Service Provider to be:
- (i) the sum of the previous two invoices from the Service Provider to the User, at the time the Security is requested; or
 - (ii) the average total Charges payable by the User to the Service Provider under this Agreement over two consecutive Billing Periods for each Delivery Point,
- whichever is greater.
- (c) The Service Provider may review the amount of the Security where reasonably necessary and may require the User to increase (or decrease, as the case may be) the amount of Security where, in the Service Provider's reasonable opinion, the amount of the Security is less (or more) than the greater of:
- (i) the sum of the User's previous two invoices at the time the Security is requested; and
 - (ii) the average total Charges payable by the User to the Service Provider under this Agreement over two consecutive Billing Periods for each Delivery Point.
- (d) Any interest earned on the Security may be retained by the Service Provider and form part of the Security. Nothing in this Agreement is to be taken as imposing any obligation on the Service Provider to maximise or obtain any return on amounts deposited.
- (e) If requested by the Service Provider where reasonably necessary, the User must, in a timely manner:
- (i) demonstrate its ability to meet all financial obligations under this Agreement; and
 - (ii) provide all information reasonably required by the Service Provider for the purpose of assessing the User's credit worthiness.
- (f) The information requested by the Service Provider under clause 28(e) may include the User's most recent Financial Report or, where the User is not required under the *Corporations Act 2001* (Cth) to produce a financial report, the User must create a report equivalent to a Financial Report in accordance with the reasonable requirements of the Service Provider and provide it to the Service Provider within 30 days of the request.

- (g) The User represents and warrants that:
 - (i) any Financial Report provided by it under clause 28(f) was prepared in accordance with the *Corporations Act 2001* (Cth) requirements for Financial Reports for a financial year or (where no such report is required under the *Corporations Act 2001* (Cth)) that any equivalent report provided under that clause gives a true and fair view of the financial position and performance of the User; and
 - (ii) there has been no change in the state of its affairs since the end of the financial year to which the most recent Financial Report (or equivalent report) provided to the Service Provider in accordance with clause 28(f) relates which might have a material adverse effect upon the User's ability to perform any of its obligations under this Agreement or upon the business or operations of the User.
- (h) The User repeats the representation and warranties in clause 28(g) on the Commencement Date for the Haulage Reference Service provided to each Delivery Point.
- (i) The Service Provider may release the Security at any time.
- (j) The Service Provider must release the Security within 10 Business Days of the date which is the later of the termination of this Agreement and the date on which all amounts which are owing or payable or remaining unpaid, whether present, unascertained, immediate, future or contingent, by the User to the Service Provider have been paid in full.

29. Confidentiality

- (a) Unless otherwise provided in this clause 29, the Service Provider must not disclose any Confidential Information under this Agreement except where permitted by the National Gas Law.
- (b) Neither Party may disclose Confidential Information under this Agreement without the prior written consent of the other Party except to the extent that the disclosure:
 - (i) is required by applicable laws or by requirements of any government or government agency having jurisdiction over the disclosing Party (**Disclosing Party**);
 - (ii) is required by any securities commission having jurisdiction over the Disclosing Party or a Related Body Corporate of the Disclosing Party, or by the rules of any stock exchange on which are listed the shares in the capital of the Disclosing Party or a Related Body Corporate of the Disclosing Party;

- (iii) is to the Disclosing Party's employees, directors, consultants, contractors, advisers or agents, or those of a Related Body Corporate of the Disclosing Party;
- (iv) relates to information that is at the time of disclosure lawfully generally available to the public, other than as a result of a breach of this Agreement;
- (v) is to a bona fide purchaser of substantially all of the Disclosing Party's assets or, in the case of the Service Provider, of any or all of its Network;
- (vi) is required by an order of a court of competent jurisdiction;
- (vii) is to a bank or other financial institution in connection with the Disclosing Party's financial affairs; or
- (viii) is required to enable the Disclosing Party to comply with its obligations under any law including, but not limited to:
 - (A) the Retail Market Procedures;
 - (B) laws and rules governing the Short Term Trading Market; and
 - (C) the Disclosing Party's Gas reticulator's or Retailer Authorisation.

(c) The User consents to the disclosure by the Service Provider to third parties of:

- (i) information relating to Quantities of Gas historically delivered to (or estimated to have been delivered to) a Delivery Point;
- (ii) Load profile and information relating to Load Types and appliances installed at the premises supplied by the Delivery Point;
- (iii) current Charges applicable to the Service(s) provided to a Delivery Point; and
- (iv) any other information regarding that Delivery Point, including but not limited to, the MDQ, MHQ, Chargeable Demand And Tariff Class for a Delivery Point,

where the Customer at the relevant Delivery Point has provided its written consent to the Service Provider (or the User provides any other form of evidence that the Customer consents to such disclosure reasonably acceptable to the Service Provider).

- (d) The User consents to the disclosure by the Service Provider to another Network User of:
- (i) information relating to Quantities of Gas historically delivered to a Delivery Point;
 - (ii) Load profile and information relating to Load Types and appliances installed at the premises supplied by the Delivery Point;
 - (iii) current Charges applicable to the Service(s) provided to a Delivery Point; and
 - (iv) any other information regarding that Delivery Point, including but not limited to, the MDQ, MHQ, Chargeable Demand and Tariff Class for a Delivery Point,

where the relevant Delivery Point has been or has been requested to be transferred to the other Network User.

- (e) Where the Service Provider offers to add a new Delivery Point or increase the MHQ or MDQ of a Demand Customer Delivery Point in response to a Request from the User, the User consents to the Service Provider disclosing the existence and terms of the offer to any Customer at that Delivery Point or other third party which has a direct financial interest in the terms of the offer.
- (f) The User acknowledges and agrees that the aggregated consumption data of a group of Customers (such that the individual consumption of each Customer is not reasonably ascertainable) or a Network Section is not Confidential Information and that the Service Provider may disclose such data to the market at its discretion.

30. Dispute resolution

30.1 Application

- (a) The Parties acknowledge and agree that this clause 30 does not, and is not intended to, limit or exclude in any way the provisions in the National Gas Law in relation to dispute resolution.
- (b) The Parties agree that where a Party refers any matter in connection with this Agreement or its performance to be dealt with in accordance with the dispute resolution provisions set out in the National Gas Law:
- (i) if an access determination is made by the dispute resolution body in respect of the access dispute, the Parties must comply with that access determination;

- (ii) neither Party can subsequently utilise this clause 30 in respect of the same dispute.

30.2 Notification of Dispute

If a Party claims that there exists:

- (a) any dispute or difference of opinion between the Parties; or
- (b) the absence of agreement by the Parties,

about a matter which arises out of or relates to this Agreement, or the breach, termination, validity or subject matter thereof, or as to any related claim in restitution or at law, in equity or pursuant to any statute (**Dispute**), then that Party must notify the other Party of the Dispute.

30.3 Nomination of Representative

As soon as practicable after a notice is given under clause 30.2, each Party must nominate in writing a representative authorised to settle the Dispute on its behalf.

30.4 Good Faith Discussions

Each Party must enter into discussions in good faith, to resolve the Dispute or to agree on a process to resolve all or part of the Dispute. Unless the Parties otherwise agree, discussions between the Parties' representatives under this clause 30.4 must continue for 7 Business Days after notice of the Dispute was given under clause 30.2.

30.5 Mediation

- (a) In the event that discussions under clause 30.4 fail to resolve the Dispute, each Party expressly agrees to endeavour to settle the Dispute by mediation administered by the Australian Commercial Disputes Centre (**ACDC**) before having recourse to arbitration or litigation.
- (b) The mediation shall be conducted in accordance with the ACDC Guidelines for Commercial Mediation (**Guidelines**) which are operating at the time the matter is referred to ACDC.
- (c) The Guidelines set out the procedures to be adopted, the process of selection of the mediator and the costs involved.
- (d) The terms of the Guidelines are hereby deemed incorporated into this Agreement.
- (e) Clause 30 shall survive termination of this Agreement.

30.6 Urgent relief

Nothing in this clause 30 will prevent a Party from seeking urgent declaratory or injunctive relief.

30.7 Information confidential

Any information or documents disclosed by a representative during the course of the discussions or any mediation in relation to the Dispute under this clause 30:

- (a) must be kept confidential; and
- (b) may not be used except to attempt to settle the Dispute.

30.8 Without Prejudice Discussions

Any discussions which take place as contemplated by this clause 30 will be without prejudice to the respective rights and obligations of the Parties in relation to the subject matter of the Dispute.

30.9 Continue to perform Agreement

Notwithstanding the existence of a Dispute, or the undertaking of any Dispute resolution in accordance with this clause 30, each Party must continue to perform its obligations under this Agreement.

31. Notices

31.1 Notice in Writing

A Party giving notice or notifying under this Agreement must do so in writing and direct it to the recipient's address specified in Annexure 1, as varied by any notice provided by one Party to the other.

31.2 Receipt of Notice

A notice given in accordance with clause 31.1 is regarded as being given by the sender and received by the addressee:

- (a) if hand delivered, on delivery;
- (b) if sent by prepaid post, 3 Business Days from and including the date of postage;
- (c) if sent by facsimile transmission, when the sender's facsimile system generates a message confirming successful transmission of the total number of pages of the

notice unless, within 1 Business Day after that transmission, the recipient informs the sender that it has not received the entire notice; or

- (d) if sent by email, when the sender receives an email message from its addressee acknowledging its receipt.

32. General

32.1 Privacy

- (a) The User must comply at all times with all applicable Privacy Laws in relation to Customer's Personal Information that it:

- (i) receives from the Service Provider; or
- (ii) supplies to the Service Provider,

including, in respect of Customer's Personal Information that the User supplies to the Service Provider, taking all reasonable steps to provide required notification statements and obtain required consents in respect of any disclosure or use of Customer's Personal Information.

- (b) The Service Provider must comply at all times with all applicable Privacy Laws in relation to Customer's Personal Information that it:

- (i) receives from the User; or
- (ii) supplies to the User.

including, in respect of Customer's Personal Information that the Service Provider supplies to the User, taking all reasonable steps to provide required notification statements and obtain required consents in respect of any disclosure or use of Customer's Personal Information.

- (c) The Parties must take reasonable steps and co-operate with each other (to the extent reasonably required by each other) to enable each of them to comply with Privacy Laws.

- (d) Where a Party so requests, the other Party must use reasonable endeavours to provide the original Party with:

- (i) information about the policies and procedures it has in place to ensure compliance with applicable Privacy Laws in relation to Customer's Personal Information; and
- (ii) details of any notifications or consents provided to or obtained from a particular Customer in respect of that Customer's Personal Information.

- (e) A Party must comply with any reasonable request made by the other Party for the purpose of complying with this clause.

32.2 Entire agreement

This Agreement:

- (a) constitutes the entire agreement between the Parties as to its subject matter; and
- (b) in relation to that subject matter, supersedes any prior understanding or agreement between the Parties and any prior clause, warranty, indemnity or representation imposed, given or made by a Party.

32.3 Severability

- (a) The Parties agree that a construction of this Agreement that results in all provisions being enforceable is to be preferred to a construction that does not so result.
- (b) If, despite the application of clause 32.3(a), a provision of this Agreement is illegal or unenforceable:
 - (i) if the provision would not be illegal or unenforceable if a word or words were omitted without changing the primary intent of the provision, that word or those words are severed; and
 - (ii) in any other case, the whole provision is severed,and the remainder of this Agreement continues in force.

32.4 Waiver

A waiver of any provision of or right under this Agreement:

- (a) must be in writing signed by the Party entitled to the benefit of that provision or right; and
- (b) is effective only to the extent set out in any written waiver.

32.5 Relationship between Parties

This Agreement does not create a relationship of employment, agency or partnership between the Parties.

32.6 Enforceability

Each Party warrants that it has all necessary power and authority and holds all authorisations required by any Law to enter into and perform its obligations under this Agreement and that this Agreement is binding on that Party and enforceable against it in accordance with its terms.

32.7 Further assurances

Each Party must sign all such documents and do all such things as shall be necessary or desirable to give full effect to this Agreement.

32.8 Inurement

This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.

32.9 Counterparts

This Agreement may be executed in counterparts and the counterparts taken together constitute one and the same instrument.

32.10 Governing law and jurisdiction

This Agreement is governed by the law applicable in New South Wales. Each Party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts of New South Wales.

Executed as an agreement.

Executed by **Jemena Gas Networks (NSW) Ltd**
ACN 003 004 322 by its duly authorised
representative, in the presence of:

Signature of Witness

Signature of Authorised Signatory

Name of Witness

Name of Authorised Signatory

Executed by **[insert] ACN [insert]** by its duly
authorised representative, in the presence of:

Signature of Witness

Signature of Authorised Signatory

Name of Witness

Name of Authorised Signatory

Annexure 1 — Addresses of Parties for Notices

Service Provider	
Address	Level 15, 99 Walker Street, North Sydney, NSW, 2060 PO Box 1220, North Sydney, 2059
Attention	Contracts Manager
Phone	+61 2 9455 1520
Fax	+61 2 9455 1673
Email	[]
User	
Address	
Attention	
Phone	
Fax	
Email	

Annexure 2 — Gas Specification

Parameter		Specification Limit	
1	Wobbe Index ¹	Min.	46.0 MJ/m ³
		Max	52.0 MJ/m ³
2	Oxygen ¹	Max.	0.2 mol%
3	Hydrogen Sulphide ¹	Max.	5.7 mg/m ³
4	Total Sulphur ^{1,2}	Max.	50 mg/m ³
5	Water Content ¹	Max. Dew Point 0°C at maximum transmission pressure upstream of receipt point, but in any case no more than 112.0 mg/m ³	
6	Hydrocarbon Dewpoint ¹	Max.	2° at 3,500 kPaG
7	Total Inert Gases ¹	Max.	7.0 mol %
8	Solid Matter and Liquids	Nil Permitted	
9	Temperature at Receipt Point	-5°C to 50°C	
10	Odorant	Odorant to be of a type approved by the Service Provider. Level of odorant to be 12 milligrams per cubic metre or such other level as the Service Provider may require.	

¹ The standard testing clauses for all Gas properties are

Temperature 15°C

Absolute Pressure 101.325 kPa

With the natural gas dry (that is, completely free of water vapour)

² Including odorant, or an allowance for odorant in cases where odorant is injected downstream of test points.

Annexure 3 — Gas Balancing Where STTM Ceases To Apply

1. General Qualifications

- (a) This Annexure will govern the Gas Balancing of Network Sections at times as specified by clause 7 of the Agreement.

For example, following the commencement of the Short Term Trading Market, if at any time the Short Term Trading Market ceases to operate, this Annexure will take effect.

- (b) In Country Networks, each User will be deemed to be in balance within the Network Section; that is, the User's Input will be deemed to be equal to the Withdrawal Quantity of that User on a Day.

- (c) Should any of the following circumstances cease to apply, the Service Provider will notify the User of the actions that it reasonably considers necessary to take account of the changed circumstances and to ensure the continued quality, safety, reliability and security of supply of Gas and the Service Provider and User will comply with such notice:

- (i) each Network Section has only one pressure controlled Receipt Point, all other Receipt Points will be flow controlled;
- (ii) the operator of a pipeline for flow controlled Receipt Points will aim to input a Quantity of Gas each Day at each Receipt Point equal to the Confirmed Nominations of Network Users served by it through that Receipt Point;
- (iii) the Receipt Point at Wilton from the Moomba Sydney Pipeline is pressure controlled; and
- (iv) UAG is supplied by the Service Provider.

2. Definitions

In this Annexure 3:

- (a) **Forecast Withdrawal** has the meaning given to that term in paragraph 3(b);
- (b) **Input** means the User's input determined under paragraph 4;
- (c) **Proposed Nomination** has the meaning given to that term in paragraph 3(d);

- (d) **User's Confirmed Nomination** means the Quantity determined under paragraph 3(f);
- (e) **User's Daily Imbalance** for a Receipt Point means the Quantity of Gas calculated by subtracting the User's Withdrawal Quantity for a Receipt Point from that User's Input Quantity for that Receipt Point; and
- (f) **Withdrawal Quantity** of a User at a Receipt Point on a Day means the total of:
 - (i) Demand Customer Delivery Point Withdrawals, being the total Quantity of Gas withdrawn on the Day at all of the User's Demand Customer Delivery Points, as determined by measurement or as otherwise agreed under the Agreement; and
 - (ii) Volume Customer Delivery Point Withdrawals, being:
 - (A) the total Quantity of Gas withdrawn on the Day at all of the User's Volume Customer Delivery Points which are Non Daily Metered Delivery Points, calculated, and allocated to the User, in accordance with the Network Code, the Retail Market Procedures or the National Gas Law (whichever is applicable). Where there are no applicable regulatory requirements, the Quantity withdrawn will be the Quantity calculated and allocated by the Service Provider for each Network Section in proportion to the Quantities nominated by all Users of that Network Section under paragraph 3(b)(i) and allocated to the Receipt Point used by the User in supplying Volume Customer Delivery Points in proportion to the User's Forecast Withdrawal requirement for Non-Daily Metered Delivery Points (which are Volume Customer Delivery Points) for that Receipt Point under paragraph 3(b)(i)(B); plus
 - (B) the total Quantity of Gas withdrawn on the Day at all of the User's Volume Customer Delivery Points which are Daily Metered Delivery Points.

3. Daily Forecasts and Nominations

- (a) Each Day, and for each Receipt Point at which the User receives Gas under this Agreement and any other agreement for the transportation of Gas between the Service Provider and the User, the User must provide the Service Provider with its forecast of withdrawals from the relevant Network Section for each of the following three Days (or seven Days when requested for operational reasons).
- (b) Each Day, and for each Receipt Point at which the User receives Gas under this Agreement and any other agreement for the transportation of gas between the

Service Provider and the user, the User must inform the Service Provider of its Gas requirements for the Day under all such transportation agreements as follows:

- (i) forecast of Gas to be withdrawn from the Network in total (**Forecast Withdrawals**) calculated in accordance with paragraph 3(d) and itemising the following amounts:
 - (A) forecast Gas requirement for non-daily metered Volume Delivery Points; and
 - (B) when required in advance of any Day by the Service Provider, the forecast withdrawal at designated Delivery Points, in such manner and in relation to such times as the User and the Service Provider agree

(Forecast Withdrawal).

- (c) The User must satisfy the requirements of paragraph 3(b) for all Delivery Points other than a Delivery Point at which an automatic feedback control system is used to establish a direct relationship between input at a flow controlled Receipt Point and the quantity actually withdrawn at the Delivery Point.
- (d) The User must make nominations of its Forecast Withdrawals in good faith so that the Forecast Withdrawals under paragraph 3(b) for all Receipt Points serving the Network Section is the aggregate amount which the User intends to withdraw from the Network Section on the Day under all transportation agreements.
- (e) For each Day, the Service Provider must advise the User of the Quantity of Gas which the User should plan to deliver or have delivered into the Network Section at each Receipt Point on that Day in order to enable the Service Provider to satisfy the User's Forecast Withdrawals and any other aggregate needs for the relevant Network Section (including adjustment for the User's change in share of linepack) to ensure safe and reliable supply (**Proposed Nomination**).
- (f) For each Day, the User must advise the Service Provider of the Quantity of Gas which the User intends to deliver or have delivered into the Network Section or otherwise intends to receive at each Receipt Point on that Day (**User's Confirmed Nomination**) and which Quantity must equal the Quantity advised by the Service Provider under paragraph 3(d).
- (g) If the User fails to provide the Service Provider with valid Forecast Withdrawals and/or valid User's Confirmed Nomination, the Service Provider must determine the User's Confirmed Nomination on the basis of the Quantity which was the User's Forecast Withdrawals for the same Day in the prior week (or where such Day is a public holiday, based on the same Day in the week two weeks prior).

- (h) The User and the Service Provider must complete each of their obligations set out in paragraphs 3(a) to 3(g) in accordance with a timetable determined through consultation between the Service Provider and User.

4. User's Input

- (a) The Service Provider carries out Gas Balancing between the Receipt Point or Receipt Points for the Wilton Network Section at which Gas intended for a Delivery Point first enters the Network Section, and that Delivery Point.
- (b) In this Annexure 3, the Service Provider must determine the User's Input as follows:
- (i) where there is only one Network User at the Receipt Point the User's Input will be the metered Quantity at the Receipt Point net of UAG purchased by the Service Provider.
 - (ii) where two or more Network Users receive Gas at the EGP Horsley Park Receipt Point, or at the EGP Port Kembla Receipt Point, the User's Input will be:
 - (A) subject to paragraph 4(b)(ii)(B), the metered Quantity at the Receipt Point net of UAG purchased by the Service Provider allocated to the User and Network Users in proportion to their Users' Confirmed Nominations for the Day; and
 - (B) in respect of a User at a Delivery Point at which an automatic feedback flow control system is used to establish a direct relationship between input at an EGP Receipt Point and the Quantity actually withdrawn at the Delivery Point, the difference between the metered Quantity at the Receipt Point net of UAG purchased by the Service Provider, and the total of the Users' Confirmed Nominations for all Network Users plus the User's Confirmed Nomination for its other Delivery Points;
 - (iii) where two or more Network Users receive Gas at the Wilton Receipt Point, then the total Quantity metered at that Receipt Point on the Day net of UAG purchased by the Service Provider will be allocated among those Network Users in proportion to their Network Users' Confirmed Nominations for the Day and that allocation will be the User's Input; and
 - (iv) where two or more Network Users receive Gas at a Receipt Point in the Wilton Network Section that is not referred to in paragraphs (i) or (ii) above, the Service Provider will (acting reasonably and taking into account the technical and commercial arrangements at that Receipt Point) advise the Network Users receiving Gas at that Receipt Point of the method by which their Input will be calculated.

- (c) The Service Provider has the discretion, acting reasonably, to adjust the User's Input for a Network Section, as determined in accordance with paragraphs 4(b)(i) to 4(b)(iii), for the User or for any Network User in order to take account of:
 - (i) any Quantity of Gas that the User receives in that Network Section from any Network User as agreed to by the Service Provider (at the Service Provider's discretion, acting reasonably); or
 - (ii) any Quantity of Gas that the User transfers to any Network User in that Network Section as agreed to by the Service Provider (at the Service Provider's discretion, acting reasonably).
-

5. Gas Balancing

- (a) For the avoidance of doubt, the User is responsible for ensuring that the aggregate Quantity of Gas delivered by or for the account of the User, through the Receipt Point(s) for a Network Section, is equal to:
 - (i) the aggregate quantity of gas delivered to or for the account of the User to Delivery Points within that Network Section; plus
 - (ii) any change in linepack in the Network Section allocated to the User by the Service Provider or other share of aggregate needs for a Network Section to ensure safe and reliable supply.
- (b) When determining an allocation of the total change in linepack for a Network Section between the User and other Network Users, the Service Provider will seek to apply a methodology which reflects the linepack requirements of the services which were provided to the User. If the Service Provider considers that a more direct method of allocation is not available, the Service Provider may pro rata total change in linepack based on each Network Users' typical aggregate capacity entitlement for all network services.
- (c) The Service Provider shall be entitled to publish (and disclose to the public) the User's Daily Imbalance by Receipt Point at the Service Provider's discretion, acting reasonably.
- (d) The Service Provider and the User must comply with the provisions dealing with participant balancing or incentive mechanisms for participants:
 - (i) in the Network Code, or
 - (ii) where they replace the relevant provisions in the Network Code, in the National Gas Law and Retail Market Procedures.

Annexure 4 —Receipt Stations

1. Filtration and Liquid Separation System

The Receipt Station shall include a filtration and liquid separation system (**Filtration and Liquid Separation System**) which meets the following requirements:

- (a) the filter and separator shall not be fitted with a bypass;
- (b) a minimum of 2 parallel filter and separator runs are to be installed, each capable of treating the MHQ of the Receipt Station at the lowest inlet pressure;
- (c) the Gas filter shall be capable of removing all solid particles greater than 1 micrometre in diameter;
- (d) the liquid separator shall remove all liquids travelling in the Gas stream; and
- (e) the filter differential pressures and the liquid level of the separator holding vessel shall be continuously measured and the signals telemetered to the SCADA System.

2. Gas Quality Measurement System

2.1 Requirements of Gas Quality Measurement System

The Receipt Station shall include a Gas quality measurement system (**Gas Quality Measurement System**) which enables the following measures of quality to be determined continuously and telemetered in real time to the SCADA System:

- (a) Gas Outlet Temperature;
- (b) Gas Relative Density;
- (c) Gas Heating Value;
- (d) Gas Water Dew Point;
- (e) Gas Carbon Dioxide Content;
- (f) Gas Hydrocarbon Dew Point;
- (g) Gas Oxygen Content;
- (h) Gas Total Sulphur Content;
- (i) Gas Hydrogen Sulphide Content; and

- (j) Gas Odorant Content.

2.2 Measurement other than at a Receipt Station

- (a) If the Service Provider consents, qualities other than the Gas Outlet Temperature may be measured at a location other than the Receipt Point. The Service Provider shall be entitled to withhold its consent if it reasonably believes that measurement at such other location will not give a true indication of the quality of Gas being delivered at the Receipt Point.
- (b) If the Service Provider has consented to any quality being measured at a location other than the Receipt Point, the Service Provider may at any later time withdraw that consent and require the quality to be measured at the Receipt Point if it believes that measurement at such other location is not giving a true indication of the quality of Gas being delivered at the Receipt Point.
- (c) If measured other than at a Receipt Station, all equipment used for measuring the qualities of Gas shall be designed, maintained and calibrated in accordance with good engineering practice and industry standards as agreed by the Service Provider.

2.3 Calibration and testing of equipment

- (a) The Service Provider may at any time require the User to test or calibrate the Gas Quality Measurement System.
- (b) The Service Provider is entitled to be present at a test or calibration of equipment and to receive copies of all test results.
- (c) The Service Provider shall bear the costs of a test or calibration if the test or calibration results show that the Gas Quality Measurement System was accurate within the tolerances agreed between the Service Provider and the User.
- (d) If the Gas Quality Measurement System is being tested or calibrated other than under paragraph 2.3(a):
 - (i) the User shall notify the Service Provider of the timing of such testing or calibration;
 - (ii) the Service Provider is entitled to attend such testing or calibration; and
 - (iii) promptly after receiving the results of such testing or calibration, the User must provide the Service Provider with a copy of those results.

3. Gas Quantity Measurement System

- (a) A Receipt Station shall include a Gas quantity measurement system (**Gas Quantity Measurement System**) which ensures that continuous measurement is maintained in the event of routine calibration, equipment maintenance, individual equipment malfunction, loss of external electricity supplies or loss of telemetry signals.
- (b) The Gas Quantity Measurement System must be such that the Primary Measurement elements and all Secondary Measurements required to convert the Primary Measurement to Standard Conditions and to calculate the Quantity of Gas are duplicated. The individual Primary and Secondary Measurements as well as the calculated Quantity of Gas shall be telemetered in real time to the SCADA System.
- (c) The Service Provider may at any time require the User to test or calibrate the Gas Quantity Measurement System.
- (d) The Service Provider is entitled to be present at a test or calibration and to receive copies of all test results.
- (e) The Service Provider shall bear the costs of a test or calibration if the test or calibration results show that the Gas Quantity Measurement System was accurate to within the tolerances agreed between the Service Provider and the User.
- (f) If the Gas Quantity Measurement System is being tested or calibrated other than under paragraph 3(c);
 - (i) the User shall notify the Service Provider of the timing of such testing or calibration;
 - (ii) the Service Provider is entitled to attend such testing or calibration; and
 - (iii) promptly after receiving the results of such testing or calibration, the User shall provide the Service Provider with a copy of those results.

4. Flow and Pressure Control System

The Receipt Station flow and pressure control system (**Flow and Pressure Control System**) shall be designed to:

- (a) prevent over-pressure of the Network;
- (b) provide control of the Network pressures and inflows;
- (c) prevent backward flow through the Receipt Station;

- (d) enable the operation and balancing of a particular part of the Network when more than one Receipt Station supplies that part; and
- (e) enable the immediate termination of supply.

Annexure 5 — Gas Pressure at Receipt Points

Receipt Point	Min. Delivery Pressure at outlet of Custody Transfer Station (kPa)	Max. Delivery Pressure at outlet of Custody Transfer Station(kPa)
<i>Wilton Network Section</i>		
Horsley Park	3,600+	4,500 [^]
Rosalind Park	3,800+	4,500 [^]
Port Kembla	2,600+	3,500
Wilton	3,800+	6,895
Albion Park	3,000+	14,895
Hexham (proposed)	2,200+	5,000 [%]
<i>Country Networks</i>		
Bargo	1,750	6,895
Bathurst	1,750	10,000
Blayney	1,750	10,000
Boorowa	1,750	6,895
Bowral	1,750	6,895
Coolamon	1,750	6,895*
Cootamundra	1,750	10,000
Cowra	1,750	10,000
Dubbo	1,750	10,000
Dubbo West	1,750	10,000
Forbes	1,750	10,000
Ganmain	1,750	6,895*
Goulburn	1,750	6,895
Junee	1,750	10,000
Leeton	1,750	6,895*
Lithgow	1,750	10,000
Marulan	1,750	6,895
Millthorpe	1,750	10,000
Moss Vale	1,750	6,895
Murrumbidgee	1,750	6,895*
Narrandera	1,750	6,895*
Narromine	1,750	10,000
Oberon	1,750	10,000
Orange	1,750	10,000
Parkes	1,750	10,000
Rockdale	1,750	6,895*

Receipt Point	Min. Delivery Pressure at outlet of Custody Transfer Station (kPa)	Max. Delivery Pressure at outlet of Custody Transfer Station(kPa)
Sally's Corner	1,750	6,895
Wallerawang	1,750	10,000
West Wyalong	1,750	6,895
Yass	1,750	6,895
Yoogali (Griffith)	1,750	6,895*
Young	1,750	10,000

If marked "+" then the Minimum Delivery Pressure may be subject to future increase to the Maximum Delivery Pressure

If marked "*" Upgrades to the Service Provider's facilities are required to accommodate 10,000 kPa.

If marked ^ 4500 kPa Maximum Delivery Pressure limitation is in place to satisfy technical code & license requirements due to third party activity. Maximum Delivery Pressures will be reinstated to 6,895 kPa when code and license requirements allow.

If marked % upgrades to the Service Provider's facilities are required to accommodate 6,895 kPa.

The Service Provider will notify Users of any updates to this Annexure and publish the updated Annexure on its website.

Annexure 6 —Responsibility for Delivery Station Components

1. Responsibility for Delivery Station Components where Delivery Point not served by Medium or Low Pressure Distribution Network and Delivery Station did not exist at 1 August 1997

Where the Delivery Point is served other than by the Medium or Low Pressure Distribution Network and where the Delivery Station was not in physical operation as at 1 August 1997:

- (a) the Service Provider does not own, and the User is responsible to operate and maintain and, if applicable, design the following Delivery Station components:
 - (i) concrete pads, security fencing, safety and firefighting equipment;
 - (ii) power supply;
 - (iii) stormwater and other services required by any local authority; and
 - (iv) noise mitigation facilities,such that the design, operation and maintenance of these components conforms to good engineering practice and industry standards as required by the Service Provider;

- (b) subject to agreement to the contrary with the User, the Service Provider must own, operate and maintain and, if applicable, design the following Delivery Station components and, if required by the Service Provider, the User must pay the Service Provider’s reasonable charges in connection with installing the following Delivery Station components:
 - (i) Gas meters;
 - (ii) pressure regulators and safety valves;
 - (iii) filters;
 - (iv) pressure and temperature measurement instrumentation;
 - (v) flow calculation equipment;
 - (vi) remote telemetry equipment and links and any additional equipment used for Gas quantity measurement, or for recording or transmitting data;
 - (vii) meter set pipe spools;

- (viii) meter set valves; and
- (ix) over pressure protection; and
- (c) the User is responsible to operate and maintain the pipe from the point 225 millimetres outside the boundary of the site to the meter control valve so that the operation and maintenance of the pipe conforms to good engineering practice and industry standards as required by the Service Provider; and
- (d) where the Service Provider provides, operates and/or maintains any of the Delivery Station components listed in paragraph 1(a) or 1(c), the User must pay the reasonable costs of providing, operating and/or maintaining those components.

2. Responsibility for Delivery Station Components where Delivery Point not served by Medium or Low Pressure Distribution Network and Delivery Station existed at 1 August 1997

Where the Delivery Point is served other than by the Medium or Low Pressure Distribution Network and where the Delivery Station was in physical operation as at 1 August 1997:

- (a) the Service Provider does not own, and the User shall be responsible to operate and maintain the following Delivery Station components:
 - (i) meter set pipe spools;
 - (ii) meter set valves;
 - (iii) concrete pads, security fencing, safety and firefighting equipment;
 - (iv) power supply;
 - (v) stormwater and other services required by any local authority; and
 - (vi) noise mitigation facilities,such that the operation and maintenance of these components conforms to good engineering practice and industry standards as required by the Service Provider;
- (b) the Service Provider owns, and is responsible to operate and maintain at its own cost, the following Delivery Station components:
 - (i) Gas meters;
 - (ii) pressure regulators and safety valves;
 - (iii) filters;

- (iv) pressure and temperature measurement instrumentation;
 - (v) flow calculation equipment;
 - (vi) remote telemetry equipment and links; and
 - (vii) any additional equipment used for Gas Quantity measurement, or for recording or transmitting data; and
 - (viii) over pressure protection;
- (c) the User is responsible to operate and maintain the pipe from the point 225 millimetres outside the boundary of the site to the meter control valve so that the operation and maintenance of the pipe conforms to good engineering practice and industry standards as required by the Service Provider; and
- (d) where the Service Provider operates and/or maintains any of the Delivery Station components listed in paragraph 2(a) or 2(c), the User must pay the reasonable costs of operating and/or maintaining those components.

3. Responsibility for Delivery Station Components where Delivery Point is served by Medium or Low Pressure Distribution Network

Where the Delivery Point is served by the Medium or Low Pressure Distribution Network:

- (a) the Service Provider does not own and the User is responsible to maintain any facilities required at the Delivery Point which are not usually required for Delivery Points of that type (such as noise mitigation facilities, fencing required by any local council or other authority), such that the maintenance of these components conforms to good engineering practice and industry standards as agreed by the Service Provider;
- (b) subject to agreement to the contrary with the User, the Service Provider must own, operate and maintain and may design the following Delivery Station components:
- (i) Gas meter;
 - (ii) pressure regulator;
 - (iii) filter; and
 - (iv) over pressure protection; and
- (c) the User is responsible to operate and maintain the pipe from the point 225 millimetres outside the boundary of the site to the meter control valve so that the operation and maintenance of the pipe conforms to good engineering practice and industry standards as required by the Service Provider; and

- (d) where the Service Provider operates and/or maintains any of the Delivery Station components listed in paragraph 3(a) or 3(c), the User shall pay the reasonable costs of operating and/or maintaining those components.

Annexure 7 – Additional terms and conditions applicable where Energy used by more than one Customer

Where any Gas delivered to a Delivery Point under a Haulage Reference Service under this Agreement is used in connection with the supply of Energy to, or the consumption of Energy by, the Customer as well as one or more End Customers, then the User:

- (a) acknowledges that the Service Provider makes no warranty or representation in relation to the suitability or reliability of the Gas delivery for use in any cogeneration facilities or other facilities used to convert natural gas into any other forms of Energy;
- (b) acknowledges and agrees that Gas delivery to the Delivery Point may be suspended, interrupted or curtailed from time to time in accordance with this Agreement and warrants and represents to the Service Provider that the User has informed its Customer:
 - (i) that Gas delivery to the Delivery Point can be so suspended, interrupted or curtailed from time to time and that the Service Provider disclaims any duty of care to the Customer or to any End Customer in relation to such suspension, interruption or curtailment;
 - (ii) that the standard Load Shedding provisions in this Agreement will be applied to the Delivery Point; and
 - (iii) that the Customer should familiarise and satisfy itself with risks associated with Gas supply;
- (c) acknowledges and agrees that the User must ensure that all necessary approvals and authorisations are obtained and all statutory obligations, laws and other legal requirements are satisfied with respect to any Energy production, distribution, supply or resale at the premises served by the Delivery Point;
- (d) acknowledges and agrees that the Service Provider will not be liable for and the User indemnifies the Service Provider in relation to any Damage suffered by or claims against the Service Provider in connection with or arising as a result of any Energy production, distribution, supply or resale at the premises served by the Delivery Point including defects in the supply of Energy at the premises;
- (e) acknowledges that where any Gas delivered to the Delivery Point is used in connection with the supply of hot water to residential units through a centralised gas fired hot water system, the End Customers at those units will not have the benefit of the standard design controls applied by the Service Provider to new residential centralised hot water systems where the Service Provider provides Measuring Equipment for each residential unit. Without limiting or restricting condition (c)

above, the User is responsible for satisfying all laws and customer expectations concerning the supply of hot water to End Customers at the premises;

- (f) agrees that all of the above conditions apply as long as Gas is delivered to the Delivery Point under this Agreement; and
- (g) agrees that any terms or conditions of this Annexure that are inconsistent with any other terms or conditions appearing elsewhere in the Agreement will prevail over those other terms and conditions to the extent of any inconsistency.

Jemena Gas Networks (NSW) Ltd

2015-20 Access Arrangement Information

Public

1 July 2015



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ABBREVIATIONS

AA	Access Arrangement
AAI	Access Arrangement Information
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGLUI	AGL Upstream Investments
CPI	Consumer Price Index
ECM	Efficiency Carryover Mechanism
EDD	Effective Degree Days
EGP	Eastern Gas Pipeline
HP	High Pressure
JGN	Jemena Gas Networks (NSW) Ltd
LRMC	Long Run Marginal Costs
MP	Medium Pressure
MSP	Moomba to Sydney Pipeline
Network Users	Users of the JGN network
NGR	National Gas Rules
RAB	Regulatory Asset Base
RY	Regulatory Year
STTM	Short Term Trading Market
TAB	Tax Asset Base
UAG	Unaccounted for Gas
WACC	Weighted Average Cost of Capital
WAPC	Weighted Average Price Cap

1. INTRODUCTION

1.1 PURPOSE

1. This Access Arrangement Information (**AAI**) has been prepared by Jemena Gas Networks (NSW) Ltd (ACN 003 004 322) (**JGN**). It provides supporting information to the access arrangement (**AA**) applicable to the NSW natural gas distribution network owned, controlled and operated by JGN for the period 1 July 2015 to 30 June 2020 (**AA**). It is prepared in accordance with the requirements of rule 72 of the National Gas Rules (**NGR**).

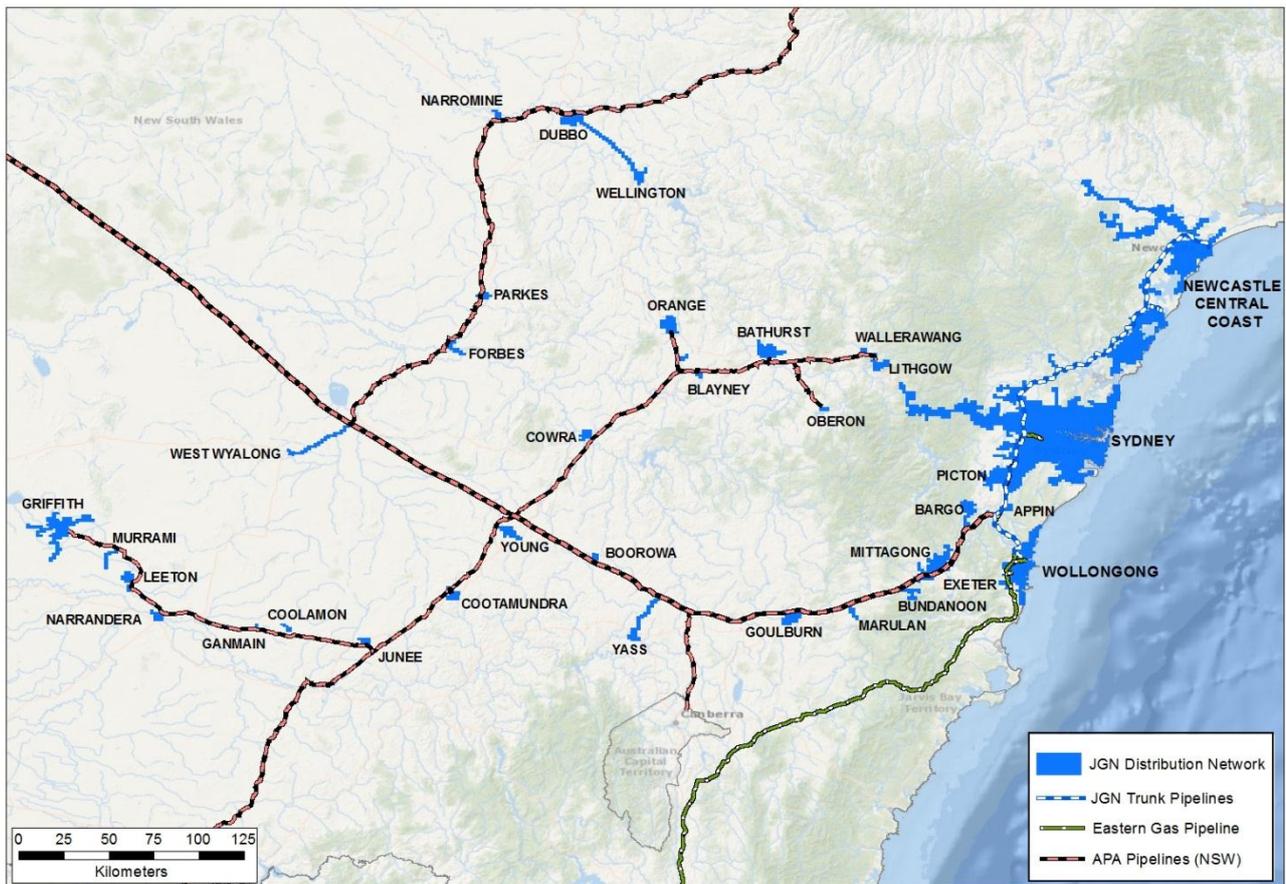
1.2 NETWORK OVERVIEW

2. JGN provides natural gas transportation and associated services to users of the JGN network (**Network Users**).
3. The JGN network has its origins in 1837 when The Australian Gas Light Company was formed to light the streets of Sydney. The network has grown through a combination of extensions, new developments and acquisitions. It now provides gas to more than 1.2 million customers in Sydney, Newcastle, Wollongong and the Central Coast, and over 20 country centres including those within the Central Tablelands, Central West, Southern Tablelands and Riverina regions of NSW.

1.2.1 CURRENT CONFIGURATION AND OPERATION

4. The majority of gas consumed in NSW is sourced from other states.
5. At present, gas is injected into the JGN Wilton network section (which provides gas to customers across Sydney, Newcastle, Wollongong and the Central Coast) at five receipt points with a sixth currently under construction. Gas is sourced at these receipt points from:
 - the Moomba to Sydney Pipeline (**MSP**), owned by APA Group, which principally transports gas produced in the Cooper Basin in South Australia to JGN's Wilton receipt point
 - the Eastern Gas Pipeline (**EGP**), owned by Jemena, which transports gas produced in the Gippsland Basin in Victoria to JGN's Albion Park, Port Kembla, and Horsley Park receipt points
 - the Rosalind Park Gas Plant, owned by the AGL Upstream Investments (**AGLUI**), which injects local coal seam methane into JGN's Rosalind Park receipt point
 - a gas storage facility and pipeline now being built by AGL at Tomago which will interconnect with the network at a new JGN receipt point at Hexham.
6. There are separate country receipt points (32 in all) for each of the country centres served by the JGN network. All of those centres are connected to the MSP or the Central West Pipeline, both of which are owned by APA Group.

Figure 1–1: JGN network overview map



7. Network Users are responsible for injecting natural gas from a transmission pipeline (MSP or EGP) or facility owner (AGLUI) into JGN's network through JGN's receipt points. Once injected into the network, JGN has contractual obligations with Network Users to transport that gas through the network to the Network Users' customers' premises. Custody transfer quality meters are located near each receipt point to measure the quantity of gas injected into the network.
8. The JGN network currently consists of approximately 267 km of trunk mains, 147 km of primary mains, 1,493 km of secondary mains and 23,470 km of medium and low pressure mains, as well as 55 trunk receiving stations and packaged off-take stations, 17 primary regulating stations, 619 district regulator sets and 2 bulk metering stations.
9. The JGN Wilton network section which serves the Sydney, Newcastle and Wollongong areas is the Short Term Trading Market (**STTM**) distribution system for the STTM Sydney Hub and gas delivered to receipt points in this network section is governed by STTM rules and procedures. The STTM is a market-based wholesale gas balancing mechanism established at defined gas hubs such as the STTM Sydney Hub and allows Network Users to buy gas directly from the STTM rather than through a shipper or producer. The Australian Energy Market Operator (**AEMO**) operates the STTM. While the STTM Sydney Hub is governed by the STTM, JGN's country network sections operate solely under a contractual supply chain framework. This means that Network Users still need to procure gas from a shipper or producer and arrange for that gas to be transported to receipt points for those network sections.
10. As the JGN network has limited gas storage capacity, to maintain operational gas pressure throughout each network section and ensure the safe and reliable operation of the network, there are contractual obligations on

Network Users to ensure the total quantity of gas injected and withdrawn from each network section on a day is equal—or balanced. There are also obligations on Network Users to ensure that the gas that is injected into JGN’s network meets a defined gas specification and is injected within the minimum and maximum gas pressure range for the relevant receipt point. For the STTM Sydney Hub, the expectation is that the STTM will manage gas balancing behaviours through financial incentives and penalties. JGN deems each country network section to be in balance.

1.3 INTERPRETATION

11. This AAI adopts the following drafting conventions:
 - monetary values are reported in real 2014-15 Australian dollars, unless indicated otherwise
 - annual values are reported on a 1 July to 30 June regulatory year (**RY**) basis, unless indicated otherwise
 - numerical values in tables may not tally due to arithmetic rounding
 - reference to a “rule” is a reference to a rule from the NGR
 - the document “Access arrangement JGN’s NSW gas distribution networks 1 July 2010 – 30 June 2015, amended by order of the Australian Competition Tribunal, 30 June 2011, further amended with regard to mines subsidence expenditure, 26 September 2011, June 2010” is referred to in this AAI as the **2010 AA**
 - the document “Access arrangement information for the access arrangement, JGN’s NSW gas distribution networks 1 July 2010 – 1 July 2015, amended by the order of the Australian Competition Tribunal, 30 June 2011, further amended with regard to mine subsidence expenditure, 26 September 2011, June 2010” is referred to in this AAI as the **2010 AAI**
 - the document “Final decision, Jemena Gas Networks (NSW) Ltd Access Arrangement 2015-20, June 2015” is referred to in this AAI as the **AER’s final decision**
 - references to the ‘2010-15 AA period’ or ‘earlier AA period’ refer to the period commencing 1 July 2010 and ending 30 June 2015
 - references to the ‘2015-20 AA period’ or ‘AA period’ refer to the period commencing 1 July 2015 and ending 30 June 2020.

12. An abbreviations list is also provided in this AAI.

2. CURRENT PERIOD OUTCOMES

2.1 CAPITAL EXPENDITURE BY ASSET CLASS

13. Table 2–1 sets out capital expenditure by asset class for the 2010-15 AA period. Values for RY11-RY14 are actuals, while RY15 values are estimates.

Table 2–1: Capital expenditure by asset class (\$2015, \$millions)

Asset Class	Actual	Actual	Actual	Actual	Estimate	Total
	2010-11	2011-12	2012-13	2013-14	2014-15	
Trunk Wilton-Sydney	-	-	-	-	-	-
Trunk Sydney-Newcastle	(0.00)	-	0.00	1.79	-	1.79
Trunk Wilton-Wollongong	-	-	-	-	-	-
Contract Meters	0.25	0.48	0.54	1.17	0.67	3.11
Fixed Plant - Distribution	22.56	20.93	6.78	3.02	16.80	70.08
HP Mains	17.70	22.12	11.43	9.27	9.43	69.96
HP Services	-	-	2.54	5.52	1.26	9.32
MP Mains	26.35	25.04	22.78	24.22	32.28	130.67
MP Services	35.62	45.66	44.60	51.45	58.48	235.80
Meter Reading Devices	3.88	4.74	4.79	5.99	7.80	27.20
Country POTS	3.31	8.74	0.83	0.24	1.43	14.56
Tariff Meters	24.85	27.16	28.16	31.90	43.05	155.11
Building	-	0.01	1.59	3.88	12.42	17.90
Computers	-	-	-	0.24	-	0.24
Software	42.14	27.67	12.59	8.99	43.12	134.51
Fixed Plant	0.32	0.45	1.24	0.32	1.10	3.42
Furniture	0.02	0.02	-	-	0.03	0.06
Land	-	-	0.92	0.94	1.98	3.83
Leasehold Improvements	-	0.61	0.04	-	24.17	24.82
Low value assets	-	-	-	-	-	-
Mobile Plant	0.12	0.23	0.50	0.76	0.91	2.52
Vehicles	3.75	2.90	2.11	6.26	2.50	17.52
Stock	-	-	-	-	-	-
Equity Raising Costs	2.60	-	-	-	-	2.60
Access Arrangement Costs	2.31	0.00	0.04	4.83	1.10	8.28
Total	185.78	186.76	141.47	160.78	258.54	933.32

(1) Include allowed equity raising costs from the last AA review as actuals. sts.

2.2 OPERATING EXPENDITURE

14. Table 2–2 sets out operating expenditure by category for the 2010-15 AA period. Values for RY11-RY14 are actuals, while RY15 values are estimates.

Table 2–2: Operating expenditure by asset class (\$2015, \$millions)

Category	Actual	Actual	Actual	Actual	Estimate	Total
	2010-11	2011-12	2012-13	2013-14	2014-15	
Operating and maintenance	102.93	99.95	103.05	114.36	115.08	535.37
Administration and overheads	24.67	27.17	29.72	17.30	14.63	113.50
Marketing	6.45	6.34	5.66	7.65	7.48	33.59
Government levies	3.10	5.29	3.32	3.98	3.98	19.66
UAG	13.14	16.44	14.51	13.74	16.41	74.26
Carbon	-	-	9.25	7.17	0.04	16.45
Debt raising costs	-	-	-	-	-	-
Total	150.29	155.20	165.52	164.20	157.62	792.83

2.3 PIPELINE USAGE

15. Table 2–3 provides pipeline usage for the 2010-15 AA period. Values for RY11-RY14 are actuals, while RY15 values are estimates.

Table 2–3: Pipeline daily demand (TJ)

	Actual	Actual	Actual	Actual	Estimate
	2010-11	2011-12	2012-13	2013-14	2014-15
Minimum demand	156.08	124.79	157.23	157.08	157.84
Maximum demand	416.20	382.78	385.62	372.18	356.89
Average demand	274.44	248.30	258.49	248.28	231.39

16. Table 2–4 provides customer numbers by tariff class for the 2010-15 AA period. Values for RY11-RY14 are actuals, while RY15 values are estimates.

Table 2–4: Customer numbers by tariff class (number)

Tariff class	Actual	Actual	Actual	Actual	Estimate
	2010-11	2011-12	2012-13	2013-14	2014-15
Residential	1,096,101	1,124,125	1,158,188	1,194,557	1,230,934
Small business	14,064	15,188	15,933	16,827	17,183
Total volume customers	1,110,165	1,139,313	1,174,121	1,211,384	1,248,117
Demand customers	401	398	401	409	409

2 — CURRENT PERIOD OUTCOMES

Total customers	1,110,566	1,139,711	1,174,522	1,211,793	1,248,526
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3. CAPITAL BASE

3.1 OPENING CAPITAL BASE FOR THE EARLIER AA PERIOD

17. The opening regulatory asset base (**RAB**) as at 1 July 2010 is the closing RAB as at 30 June 2010 of \$2,312.7M (total) from the 2010 AAI. That amount includes estimated net capex of \$94.2M for 2009-10. Actual net capex for 2009-10 was \$96.9M. The difference (\$2.7M), uplifted at the weighted average cost of capital (**WACC**) for 5 years, is included as an adjustment of \$4.4M in 2015. Details of the adjustment are shown in Table 3–1.

Table 3–1: Adjustment for difference between estimated and actual net capex in 2009-10 (\$nominal, \$millions)

Asset class	Closing RAB	Difference between estimated and actual net capex for 2009-10			WACC uplift	Adjustment in 2014-15
	30-Jun-10	Estimate	Actual	Difference		
Wilton-Wollongong trunk	8.44	-	-	-	-	-
Wilton-Newcastle trunk	129.47	2.21	0.05	(2.17)	(1.37)	(3.54)
NSW distribution network	2,174.80	91.95	96.83	4.88	3.09	7.97
Combined total	2,312.71	94.17	96.88	2.71	1.72	4.43

(1) Net capex is capex after accounting for capital contributions and disposals.

3.2 CLOSING CAPITAL BASE FOR THE EARLIER AA PERIOD

18. JGN accounts for inflation by indexing the capital base. This is consistent with the approach taken in past revisions of JGN's AA, with the NGR, and with the precedent set in the majority of Australian regulatory decisions. Therefore, JGN has adjusted its capital base as follows:

$$\text{capital base} = \text{opening capital base} + \text{indexation at CPI} + \text{conforming capital expenditure} - \text{depreciation} + \text{conforming assets from speculative investment account} - \text{redundant assets} + \text{re-used redundant assets} - \text{asset disposals.}^1$$

19. The following projections of the capital base are based on actual data for capex, capital contributions and asset disposals for the years 2010-11, 2011-12, 2012-13 and 2013-14. In addition:
- consumer price index (**CPI**) values are as set out in Table 3–2
 - economic and remaining asset lives are as presented in sections 3.4.2 and 3.4.3.

¹ Rule 77.

Table 3–2: Increase in CPI (per cent)

Year	Annual increase in the CPI (per cent)
2010-11	2.65
2011-12	3.10
2012-13	2.20
2013-14	2.75
2014-15	1.72

(1) Source: Australian Bureau of Statistics.

(2) Values are year on year CPI inflation for the year to December for the eight capital cities as published by the Australian Bureau of Statistics.

20. In rolling forward the capital base to 2015, JGN has not included any conforming assets from a speculative investment account, classified any assets as redundant assets, or re-used any assets previously classified as redundant.
21. JGN has deducted forecast depreciation in rolling forward its capital base from 2010-11 to 2014-15 in accordance with clause 3.1(c) of its 2010 AA.
22. Table 3–3 to Table 3–6 set out JGN's roll forward of the combined total capital base and for each of the Wilton to Wollongong and Wilton to Newcastle trunk pipelines and the NSW distribution system (including the Central West distribution system) respectively over the earlier AA period.

Table 3–3: Roll forward of combined total capital base over earlier AA period (\$nominal, \$millions)

	2010-11	2011-12	2012-13	2013-14	2014-15
Opening balance	2,312.71	2,456.60	2,611.22	2,697.06	2,801.51
Add net capex at start of year ⁽²⁾	76.25	82.80	63.46	69.67	123.00
Add indexation of assets ⁽³⁾	63.42	78.81	58.96	75.95	50.23
Add net capex at end of year ⁽²⁾	78.27	85.37	64.86	71.58	125.11
Less depreciation ⁽⁴⁾	(74.06)	(92.35)	(101.44)	(112.74)	(124.05)
Adjustment	-	-	-	-	4.43
Closing balance	2,456.60	2,611.22	2,697.06	2,801.51	2,980.24

(1) Values for 2014-15 are estimates based on JGN's current outlook.

(2) Net capex = gross capex (including equity raising costs) less capital contributions less asset disposals.

(3) Indexation of assets = (opening balance + net capex at start of year) x CPI for the year.

(4) Depreciation is forecast depreciation as approved by the AER.

(5) These notes also apply to the other RAB roll forward tables in chapter 3.

Table 3–4: Roll forward of Wilton to Wollongong trunk pipeline capital base over earlier AA period (\$nominal, \$millions)

	2010-11	2011-12	2012-13	2013-14	2014-15
Opening balance	8.44	8.46	8.51	8.49	8.50
Add net capex at start of year	-	-	-	-	-
Add indexation of assets	0.22	0.26	0.19	0.23	0.15
Add net capex at end of year	-	-	-	-	-
Less depreciation	(0.20)	(0.21)	(0.21)	(0.22)	(0.22)
Adjustment	-	-	-	-	-
Closing balance	8.46	8.51	8.49	8.50	8.42

Table 3–5: Roll forward of Wilton to Newcastle trunk pipeline capital base over earlier AA period (\$nominal, \$millions)

	2010-11	2011-12	2012-13	2013-14	2014-15
Opening balance	129.47	130.15	131.34	131.33	133.73
Add net capex at start of year	(0.00)	-	0.00	0.87	-
Add indexation of assets	3.44	4.04	2.90	3.63	2.30
Add net capex at end of year	(0.00)	-	0.00	0.89	-
Less depreciation	(2.76)	(2.85)	(2.91)	(2.99)	(3.05)
Adjustment	-	-	-	-	(3.54)
Closing balance	130.15	131.34	131.33	133.73	129.43

Table 3–6: Roll forward of NSW distribution system capital base over earlier AA period (\$nominal, \$millions)

	2010-11	2011-12	2012-13	2013-14	2014-15
Opening balance	2,174.80	2,317.99	2,471.37	2,557.25	2,659.28
Add net capex at start of year	76.25	82.80	63.46	68.80	123.00
Add indexation of assets	59.76	74.51	55.88	72.09	47.79
Add net capex at end of year	78.27	85.37	64.86	70.68	125.11
Less depreciation	(71.10)	(89.30)	(98.32)	(109.53)	(120.77)
Adjustment	-	-	-	-	7.97
Closing balance	2,317.99	2,471.37	2,557.25	2,659.28	2,842.38

23. The closing balance values for 2014-15 constitute the opening capital base for the 2015-20 AA period.

3 — CAPITAL BASE

3.3 PROJECTED CAPITAL BASE IN THE AA PERIOD

24. The projected capital base in the 2015-20 AA period is set out in Table 3–7, Table 3–8, Table 3–9 and Table 3–10.

Table 3–7: Roll forward of combined total capital base over the AA period (\$nominal, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	2,980.24	3,133.01	3,262.58	3,387.85	3,481.59
Add net capex at start of year	108.32	102.96	107.38	97.12	85.93
Add indexation of assets	78.76	82.52	85.93	88.87	90.97
Add net capex at end of year	111.08	105.59	110.12	99.59	88.12
Less depreciation	(145.39)	(161.50)	(178.17)	(191.84)	(179.04)
Adjustment	-	-	-	-	-
Closing balance	3,133.01	3,262.58	3,387.85	3,481.59	3,567.57

Table 3–8: Roll forward of Wilton to Wollongong capital base over the AA period (\$nominal, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	8.42	8.98	9.62	10.60	11.74
Add net capex at start of year	0.28	0.32	0.49	0.56	0.29
Add indexation of assets	0.22	0.24	0.26	0.28	0.31
Add net capex at end of year	0.29	0.33	0.50	0.58	0.30
Less depreciation	(0.23)	(0.25)	(0.26)	(0.28)	(0.30)
Adjustment	-	-	-	-	-
Closing balance	8.98	9.62	10.60	11.74	12.33

Table 3–9: Roll forward of Wilton to Newcastle trunk pipeline capital base over the AA period (\$nominal, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	129.43	134.27	135.84	138.04	141.06
Add net capex at start of year	2.28	0.69	1.03	1.46	1.45
Add indexation of assets	3.36	3.44	3.49	3.56	3.63
Add net capex at end of year	2.34	0.71	1.06	1.50	1.48
Less depreciation	(3.15)	(3.27)	(3.38)	(3.50)	(3.62)
Adjustment	-	-	-	-	-
Closing balance	134.27	135.84	138.04	141.06	144.00

Table 3–10: Roll forward of NSW distribution system capital base over the AA period (\$nominal, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	2,842.38	2,989.77	3,117.12	3,239.21	3,328.79
Add net capex at start of year	105.76	101.95	105.87	95.09	84.20
Add indexation of assets	75.18	78.84	82.19	85.02	87.03
Add net capex at end of year	108.45	104.55	108.57	97.52	86.34
Less depreciation	(142.00)	(157.98)	(174.53)	(188.06)	(175.12)
Adjustment	-	-	-	-	-
Closing balance	2,989.77	3,117.12	3,239.21	3,328.79	3,411.24

3.4 DEPRECIATION

3.4.1 SUMMARY

25. JGN has established a depreciation schedule that reflects the economic lives and cash flow needs of the business consistent with the NGR requirements.
26. Table 3–11 summarises JGN's forecast depreciation over the 2015-20 AA period, determined by applying the real straight-line depreciation method.

Table 3–11: Forecast depreciation over the AA period (\$nominal, \$millions)

Depreciation	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Total	145.39	161.50	178.17	191.84	179.04	855.94

3.4.2 ASSUMPTIONS ON ECONOMIC LIFE OF ASSETS FOR REGULATORY DEPRECIATION

27. The economic lives that JGN has adopted for its assets are set out in Table 3–12.

Table 3–12: Economic lives of JGN assets (years)

Asset Class	Economic Asset Life (years)
Trunk Wilton-Sydney	80
Trunk Sydney-Newcastle	80
Trunk Wilton-Wollongong	80
Contract Meters	20
Fixed Plant - Distribution	50
High Pressure (HP) Mains	80
HP Services	50
Medium Pressure (MP) Mains	50

Asset Class	Economic Asset Life (years)
MP Services	50
Meter Reading Devices	20
Country POTS	50
Tariff Meters	20
Buildings	48
Computers	5
Software	5
Fixed Plant	10
Furniture	10
Land	n/a
Leasehold Improvements	10
Low value assets	10
Mobile Plant	10
Vehicles	6

3.4.3 REMAINING ASSET LIVES

28. Remaining asset lives for the capital base at 30 June 2015 are set out in Table 3–13.

Table 3–13: Remaining asset lives as at 30 June 2015 (years)

Asset Class	Remaining life (years)
Trunk Wilton-Sydney	38.1
Trunk Sydney-Newcastle	46.2
Trunk Wilton-Wollongong	37.9
Contract Meters	7.2
Fixed Plant - Distribution	50.0
HP Mains	58.5
HP Services	50.0
MP Mains	26.2
MP Services	36.9
Meter Reading Devices	20.0
Country POTS	31.6
Tariff Meters	9.2
Building	48.0
Computers	5.0
Software	4.0

Asset Class	Remaining life (years)
Fixed Plant	8.6
Furniture	10.0
Land	-
Leasehold Improvements	10.0
Low value assets	10.0
Mobile Plant	8.4
Vehicles	3.2
Stock	1.0
Equity Raising Costs	49.9
Weighted average remaining asset life	32.8

3.4.4 FORECAST DEPRECIATION

29. The amount of regulatory depreciation for each asset class is determined for each year of the AA period by applying the real straight-line depreciation method to the opening regulatory value of each asset class for each year. Real straight-line depreciation (as distinct from historical cost straight-line) involves deducting the same real amount of depreciation in each year of an asset's life.
30. Forecast regulatory depreciation for the 2015-20 AA period is provided in Table 3–14. A demonstration of how the forecast is derived is included in the revenue forecast model that accompanies the AER's final decision.

Table 3–14: Forecast depreciation over AA period (\$nominal, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wilton-Wollongong trunk	0.23	0.25	0.26	0.28	0.30	1.32
Wilton-Newcastle trunk	3.15	3.27	3.38	3.50	3.62	16.92
NSW distribution network	142.00	157.98	174.53	188.06	175.12	837.70
Total	145.39	161.50	178.17	191.84	179.04	855.94

31. Forecast depreciation for the AA period, adjusted for the difference between forecast and actual CPI, will be used in rolling forward the capital base to the beginning of the AA period beginning on 1 July 2020 (rule 90(2) of the NGR).

3 — CAPITAL BASE

3.5 CAPITAL CONTRIBUTIONS

32. Table 3–15 and Table 3–16 set out JGN's capital contributions over the 2010-15 and 2015-20 AA periods, respectively.

Table 3–15: Capital contributions over the earlier AA period (\$nominal, \$millions)

	2010-11	2011-12	2012-13	2013-14	2014-15 estimate	Total
Total contributions received ⁽²⁾	7.49	3.71	5.34	14.48	10.34	41.36

(1) The value or 2014-15 is an estimate based on JGN's current outlook.

(2) Capital contributions are assumed to be received 50 per cent at the start of the year, and 50 per cent at the end of the year, and are converted to year-end dollars.

Table 3–16: Capital contributions over the AA period (\$nominal, \$millions)

Details	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Total contributions received ⁽¹⁾	5.56	4.32	3.98	4.01	4.03	21.90

(1) Capital contributions are assumed to be received 50 per cent at the start of the year, and 50 per cent at the end of the year, and are converted to year-end dollars.

3.6 CONFORMING CAPITAL EXPENDITURE

33. Table 3–17 and Table 3–18 set out JGN's conforming capital expenditure over the 2010-15 and 2015-20 AA periods, respectively.
34. JGN's basis for the conforming capital expenditure forecasts is set out by capital expenditure type in its initial proposal Access Arrangement Information.²

Table 3–17: Conforming capital expenditure over the earlier AA period (\$nominal, \$millions)

Details	2010-11	2011-12	2012-13	2013-14	2014-15 estimate	Total
Market expansion	57.63	65.36	76.20	92.85	103.73	395.76
System reinforcement, replacement and renewal	64.52	79.63	40.96	39.45	69.45	294.01
Non-system assets	44.18	29.86	18.20	25.77	85.36	203.36
Gross capital expenditure	166.33	174.85	135.37	158.06	258.54	893.14
Less capital contributions	(7.49)	(3.71)	(5.34)	(14.48)	(10.34)	(41.36)
Conforming capital expenditure	158.83	171.13	130.03	143.58	248.20	851.78

(1) Values for 2014-15 are estimates based on JGN's current outlook.

(2) Capex is assumed to be spent 50 per cent at the start of the year, and 50 per cent at the end of the year, and converted to year-end dollars.

² Jemena Gas Networks, *2015-20 Access Arrangement Information*, 30 June 2014, pp 54-65.

Table 3–18: Conforming capital expenditure over the AA period (\$nominal, \$millions)

Details	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Market expansion	76.02	74.68	73.54	72.81	72.11	369.16
System reinforcement, replacement and renewal	99.50	102.69	108.29	99.97	90.19	500.64
Non-system assets	52.34	38.22	42.55	30.75	18.16	182.03
Gross capital expenditure	227.85	215.60	224.38	203.53	180.46	1,051.82
Less capital contributions	(5.49)	(4.27)	(3.96)	(4.05)	(4.14)	(21.91)
Conforming capital expenditure	222.36	211.33	220.41	199.49	176.32	1,029.91

(1) Capex is assumed to be spent 50 per cent at the start of the year, and 50 per cent at the end of the year, and converted to year-end dollars.

3.7 DISPOSALS

35. Table 3–19 and Table 3–20 set out JGN's asset disposals over the 2010-15 and 2015-20 AA periods respectively.

Table 3–19: Asset disposals over the 2015-20 AA period (\$nominal, \$millions)

	2010-11	2011-12	2012-13	2013-14	2014-15 estimate	Total
Total asset disposals ⁽¹⁾	6.48	2.98	1.71	2.35	0.09	13.62

(1) The value for 2014-15 is an estimate based on JGN's current outlook.

(2) Asset disposals are assumed to occur 50 per cent at the start of the year, and 50 per cent at the end of the year, and are converted to year-end dollars.

Table 3–20: Asset disposals over the 2015-20 AA period (\$nominal, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Total asset disposals ⁽¹⁾	0.13	0.11	0.15	0.34	0.19	0.91

(1) Asset disposals are assumed to occur 50 per cent at the start of the year, and 50 per cent at the end of the year, and are converted to year-end dollars.

4. DEMAND

4.1 DEMAND FORECASTING APPROACH

36. The demand forecasting approach involves forecasting customer numbers and the average consumption per connection to provide total forecast demand.³

4.1.1 APPROACH TO FORECASTING CUSTOMER NUMBERS

37. The approach to forecasting customer connections involved:
- using regression analysis to determine the historical trend in new connections to derive a suitable forecast for each year
 - analysing the historical trend in the rate of disconnections to derive a suitable forecast for each year
 - adjusting connection forecasts for factors which are not present in the historical trend, including forecast changes in the relative prices of gas and electricity.

4.1.2 APPROACH TO FORECASTING DEMAND PER CONNECTION

38. The approach to forecasting demand per connection involved:
- normalising total demand per annum for the effects of weather
 - dividing total demand by number of connections to determine consumption per connection
 - determining the historical trend in consumption per connection to establish a base for projection
 - adjusting consumption per connection forecasts for factors which are not present in the historical trend, including the impact of rising wholesale gas prices and increasing appliance substitution.

4.1.2.1 Weather normalisation

39. The historical gas consumption data was weather normalised using Effective Degree Days (**EDD**), where cooler temperatures (below a given threshold), result in higher gas use for heating purposes. This approach is based on AEMO guidelines.⁴ The approach is summarised in Box 4–1.

³ Rule 72(1)(d) provides that the AAI must include to the extent practicable a forecast of pipeline capacity over the 2015-20 AA period and the basis upon which the forecast has been derived. Capacity information for a distribution network is not available or meaningful for a distribution pipeline. The JGN network is a geographically dispersed network made up of interconnected pipes and there are a number of practical considerations governing why the calculation of capacity is not practicable.

⁴ AEMO, *2012 review of the weather standards for gas forecasting*, April 2012.

Box 4–1 Weather normalisation method

The process of weather normalising demand using EDD involves:

- specifying the EDD index for calculating EDD. This involves using regression analysis to determine the coefficients providing the best fit between demand and weather for JGN's NSW network
- using historical temperature data at the Sydney Airport weather station, determine the trend in historical EDD
- determining an appropriate 'normalised' EDD figure for each year (either a trending series or, if no trend in EDD is apparent, the average yearly EDD) which represents normal weather conditions. In the case of Sydney Airport no long-term trend in EDD was evident, thus an average EDD was used
- comparing the actual EDD recorded each year to the normalised EDD figure for that year to obtain the 'abnormal' EDD
- using regression analysis to determine the sensitivity of demand to EDD in each year for each customer class, multiplying this factor by the abnormal EDD figure to arrive at the total abnormal gas demand due to weather for each year
- subtracting abnormal demand from actual demand to arrive at weather normalised demand for each customer class.

4.1.2.2 Price elasticity

40. Projected retail gas and electricity prices impact on forecast gas consumption.
41. Over time, higher gas prices result in customers using less gas. The demand forecasts incorporate this relationship through a long-term own price elasticity of -0.3 for residential customers, and -0.35 for non-residential customers.
42. Over time, decreases in retail electricity prices relative to gas prices will also result in customers using less gas. The demand forecasts capture this relationship through a long-term cross price elasticity of -0.1 for residential customers and non-residential customers.

4.2 DEMAND FORECASTS

43. Tables 4–1 to 4–3 set out JGN's forecast customer numbers, average consumption and total consumption over the 2015-20 AA period respectively.

Table 4–1: Forecast customer numbers by customer type

	2015-16	2016-17	2017-18	2018-19	2019-20
Total Volume market	1,248,117	1,283,522	1,316,413	1,346,765	1,374,592
Total Demand market	409	443	441	441	441
Total customers	1,248,526	1,283,965	1,316,854	1,347,206	1,375,033

Table 4–2: Forecast average daily consumption by customer type and MDQ (TJ)

	2015-16	2016-17	2017-18	2018-19	2019-20
Volume market	98.24	95.70	96.12	96.03	95.71
Demand market	132.85	132.78	130.49	128.62	126.46
Total average load	231.08	228.49	226.60	224.66	222.17
Demand market MDQ/CD	278.99	276.78	272.29	269.31	266.93

Table 4–3: Forecast consumption by customer type (TJ): 2016-20

	2015-16	2016-17	2017-18	2018-19	2019-20
Total volume market	35,954	34,932	35,083	35,052	35,030
Total demand market	48,622	48,466	47,627	46,948	46,285
Total consumption	84,576	83,398	82,710	82,000	81,315

44. Forecast average residential consumption is set out in Table 4–4.

Table 4–4: Forecast average consumption by volume market type (GJ)

Demand per Connection	2015-16	2016-17	2017-18	2018-19	2019-20
Existing residential	19.35	18.79	18.52	18.22	18.00
Electricity to gas (E to G)	11.37	11.04	10.88	10.70	10.58
New estates	17.35	16.85	16.60	16.33	16.14
New medium density	15.82	15.37	15.14	14.89	14.72
Small business	206.09	196.08	189.74	182.14	173.99
Industrial and Commercial (I&C)	468.85	415.19	408.02	397.56	385.36

5. OPERATING EXPENDITURE

5.1 FORECASTING BASIS

45. Opex for the 2015-20 AA period is forecast using two methods:
- *base, step and trend approach*—applied to the adjusted base year opex amount, which excludes opex cost categories that are subject to specific annual forecasts over the 2015-20 AA period
 - *specific year-by-year forecasts*—for items where base year costs are not representative of the future.
46. Base year opex has been adjusted by subtracting costs relating to non-recurrent events and circumstances that are not expected to endure. The adjusted base year costs have been trended forward, escalating or de-escalating the forecast by applying a rate of change.
47. Step changes are then added to the trended adjusted base year. These costs reflect forecast prudent and efficient opex not captured by the base year expenditure or trend escalation.

5.2 OPERATING EXPENDITURE FORECAST

48. Table 5–1 summarises JGN's forecast opex for the 2015-20 AA period.

Table 5–1: JGN forecast O&M costs over the AA period (\$2015, \$millions)

Level 1 category	Level 2 category	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
O&M	Maintenance	28.37	27.51	27.61	27.70	27.85	27.93	28.01
	Emergency response	4.50	4.40	4.42	4.43	4.46	4.47	4.48
	Management - O&M	12.66	12.39	12.44	12.48	12.54	12.58	12.61
	Network planning	6.52	6.39	6.41	6.43	6.46	6.48	6.50
	Network control and operational switching	7.05	6.90	6.92	6.95	6.98	7.00	7.02
	Project governance and related functions	5.08	4.97	4.99	5.01	5.03	5.05	5.06
	Quality and standard functions	3.51	3.44	3.45	3.46	3.48	3.49	3.50
	Other	13.56	13.84	15.44	14.45	14.74	14.60	14.70
	IT	14.32	14.01	14.84	16.32	16.33	16.37	16.41
	Corporate overheads - O&M	17.31	16.94	17.00	17.06	17.15	17.20	17.25

5 — OPERATING EXPENDITURE

Level 1 category	Level 2 category	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	Pigging/Integrity digs, ad hoc mains renewal	1.49	4.28	-	-	-	-	-
Non-O&M (A&O)	Corporate overheads - A&O	9.36	9.25	9.34	9.37	9.42	9.45	9.44
	Management - A&O	2.41	2.36	2.37	2.37	2.39	2.39	2.40
	Other directs	5.53	3.03	3.04	3.05	3.11	7.54	6.36
Non-O&M (Other)	Government levies	3.98	3.98	3.98	3.98	3.98	3.98	3.98
	Marketing	7.65	7.48	8.81	8.84	8.88	8.90	8.92
	Unaccounted for gas (UAG)	13.74	16.41	15.95	16.02	16.00	15.99	16.04
	Carbon costs	7.17	0.04	0.04	0.04	0.04	0.04	0.04
	Debt raising costs	-	-	1.47	1.50	1.52	1.54	1.53
Consolidated	Total JGN opex	164.20	157.62	158.51	159.45	160.38	165.00	164.26

6. RATE OF RETURN

6.1 RATE OF RETURN

49. The allowed rate of return (specified as a nominal vanilla WACC) is 5.41 per cent per annum as set out in Table 6–1.

Table 6–1: JGN’s WACC

Parameters	Value (per cent)
Return on equity	7.10
Return on debt	4.28
Inflation	2.55
Leverage	60.00
Gamma	40.00
Corporate tax rate	30.00
Nominal vanilla WACC	5.41

(1) Return on debt, return on equity, and nominal WACC are estimated using data from the sample averaging period of the 20 business days to 30 January 2015 (inclusive).

(2) Gamma is discussed in chapter 10.

(3) Values may not add due to rounding.

6.2 RETURN ON DEBT FORMULA

50. The return on debt for each financial year of the access arrangement period is to be calculated as follows:

(a) For Financial Year 2015-16: $kd_{2015-16} = R_{2015-16}$

(b) For Financial Year 2016-17: $kd_{2016-17} = (0.9 \times R_{2015-16}) + (0.1 \times R_{2016-17})$

(c) For Financial Year 2017-18: $kd_{2017-18} = (0.8 \times R_{2015-16}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18})$

(d) For Financial Year 2018-19: $kd_{2018-19} = (0.7 \times R_{2015-16}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18}) + (0.1 \times R_{2018-19})$

(e) For Financial Year 2019-20: $kd_{2019-20} = (0.6 \times R_{2015-16}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18}) + (0.1 \times R_{2018-19}) + (0.1 \times R_{2019-20})$

where:

kd_t is the return on debt for Financial Year t of the Access Arrangement Period;

and

R_t is the annual return on debt observation for each financial year t of the access arrangement period (other than financial year 2015-16), calculated in accordance with section 5 of the AA. For financial year 2015–16, $R_t = 4.28$ per cent.

7. CORPORATE INCOME TAX

7.1 VALUE OF IMPUTATION CREDITS

51. The value of imputation credits is 0.4. This is a departure from the value of 0.5 included in the AER's 2013 rate of return guideline, based on a lower estimate of the 'utilisation rate' than 0.7 determined after a re-examination of evidence since the guideline was made.

7.2 COST OF CORPORATE INCOME TAX

52. Table 7–1 shows how JGN's tax asset base (**TAB**) rolls forward over the AA period and provides details of the cost of tax calculation for that period.

Table 7–1: Cost of corporate income tax for the AA period (\$nominal, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening TAB	982.31	1,073.84	1,143.03	1,214.13	1,260.66
Plus capex	224.89	212.81	221.44	200.67	178.03
Less depreciation	(133.36)	(143.63)	(150.34)	(154.14)	(151.98)
Closing TAB	1,073.84	1,143.03	1,214.13	1,260.66	1,286.70
Revenue requirement (post tax) ⁽¹⁾	396.15	421.61	447.38	473.86	467.23
Plus capital contributions	5.56	4.32	3.98	4.01	4.03
Less opex ⁽²⁾	(162.56)	(167.69)	(172.96)	(182.49)	(186.30)
Less interest expense	(79.25)	(83.04)	(86.48)	(89.43)	(91.54)
Less tax depreciation	(133.36)	(143.63)	(150.34)	(154.14)	(151.98)
Taxable income	26.54	31.58	41.59	51.81	41.44
Tax loss carried forward	-	-	-	-	-
Tax rate (per cent) ⁽³⁾	0.37	0.37	0.37	0.37	0.37
Tax payable	9.71	11.55	15.22	18.95	15.16
Value of imputation credits	(3.88)	(4.62)	(6.09)	(7.58)	(6.06)
Net cost of corporate tax	5.83	6.93	9.13	11.37	9.10

(1) Revenue requirement = building block revenue (excluding tax wedge).

(2) Opex includes debt raising costs.

(3) Tax rate is the grossed up tax rate equal to $rt / (1 - (1 - \gamma) * rt)$. Grossing up recognises that, for purposes of the building block calculation, the net cost of corporate tax forms part of JGN's pre-tax revenue requirement and is itself subject to tax.

8. INCENTIVE MECHANISMS

8.1 2010-15 AA PERIOD

53. JGN's 2010 AA includes an incentive mechanism relating to the rate of unaccounted for gas (**UAG**). JGN is provided a fixed allowance for a quantity of UAG based on a target percentage rate of total network receipts. In the 2010-15 AA period this rate is 2.34 per cent of receipts. If the actual UAG rate is below (above) this rate, JGN over (under) recovers its actual UAG costs.
54. The 2010 AA stipulates a one year lag for the pass through of the recoverable amount (which captures the penalty or reward).⁵ The pass through amounts for RY11-RY14 have been recovered through JGN's reference tariffs for RY12-RY15.
55. In accordance with the annual reference tariff variation mechanism the penalty or reward for RY15 UAG performance will be reflected in reference tariffs for 2016-17.

8.2 2015-20 AA PERIOD

8.2.1 UNACCOUNTED FOR GAS

56. To provide a continuous incentive to manage network leakages, a UAG incentive mechanism applies in the 2015-20 AA period as follows:
- the current UAG incentive scheme applies based on an efficient annual target rate of UAG
 - JGN is compensated for variation in total market volumes and costs of purchasing UAG (which remain outside JGN's control) through an automatic annual adjustment
 - the efficient level of UAG is represented as two different UAG target rates—one applied to daily metered customer withdrawals and the other to gas received to supply non-daily metered customers
 - a two year lag is applied to cost recovery, removing reliance on forecast gas receipts and allowing JGN to submit its annual tariff variation notice by 15 March each year.
57. The mechanism is specified in section 2 of schedule 3 to the AA.

8.2.2 OPERATING EXPENDITURE

58. JGN applies an efficiency carryover mechanism (**ECM**) to 2015-20 AA period opex. This provides JGN a continuous incentive to seek opex efficiencies over the AA period.
59. The operation of the ECM—apart from clause 12.1(h)(vi)—is expressed in a fixed principle set out in clause 12 of the AA. The primary features of the ECM are:
- JGN will keep the benefit (or will incur the cost) of delivering actual opex lower (higher) than forecast opex in each year of an AA period
 - the ECM carries forward JGN's incremental efficiency gains for the length of the carryover period

⁵ A time value of money (WACC) adjustment is applied to account for this lag.

8 — INCENTIVE MECHANISMS

- this carryover period length is five years
- the carryover amounts is an additional 'building block' when setting JGN's reference service revenue for the AA period commencing 1 July 2020.

9. REFERENCE TARIFFS

9.1 PRICING PRINCIPLES AND BASIS OF REFERENCE TARIFFS

60. The following pricing principles and objectives have been considered when constructing current tariff classes and charge components for the 2015-20 AA period:
- *recover our efficient costs of operation*—we need to recover our allowed revenue to continue to provide safe and reliable natural gas services into the future
 - *keep gas competitive*—maintain and enhance the attractiveness and position of natural gas as a value for money fuel of choice in NSW
 - *price efficiently and equitably*—ensure that similar customers are grouped together and that these customers pay for gas in a way that encourages efficient use of the network
 - *provide stability in our network tariffs and end-retail prices*—where possible minimise any sharp change in end customer bills
 - *provide simplicity and transparency in our tariffs*—consider customer preferences, the transaction costs of providing customised tariffs and ensuring customers and stakeholders can make sense of our charges.
61. To support these objectives, tariff classes have been split between two different customer categories:
- volume customers, who include residential and small industrial and commercial end customers
 - demand customers, who are larger commercial and industrial end customers.
62. Within the volume and demand categories, individual customers are primarily distinguished based on their location, the characteristics of the end customer, and likelihood of their consumption being more or less than 10 TJ of gas per year. In most cases volume customers have consumption below 10 TJ per annum and demand customers have consumption above 10 TJ per annum—which is a common delineation across jurisdictions.
63. To accommodate intermediaries, there may be limited instances where it is not appropriate to apply the 10 TJ delineation. These exceptions are set out in the assignment criteria in JGN's reference tariff schedule.
64. The volume tariff classes for the haulage reference service are set out in Table 9–1.

Table 9–1: JGN’s volume reference tariff classes

Tariff category	Number of tariff classes	Tariff classes	Types of customers	Why included
Volume individual metered	2	VI-Coastal VI-Country (previously V-Coastal and V-Country)	<ul style="list-style-type: none"> Most of our more than 1.2 million existing customers, including residential and small and medium businesses consuming up to 10 TJ per annum New customers consuming up to 10 TJ per annum with individual metering by JGN. 	Maintains exiting tariff classes for most of JGN’s existing and new customers.
Volume boundary metered (new)	2	VB-Coastal VB-Country	Residential end customers in higher-density residential developments and small business customers in commercial developments supplied energy by an energy intermediary that sits between the boundary meters and the end customers.	Increasing demand for boundary metered supply to higher-density developments where energy intermediaries then on-sell energy to residential or business end customers. We want to encourage innovative, efficient and customer focused energy services.
Residential distributed generation technology (new)	4	VRT-03, VRT-04, VRT-06, VRT-10	Residential end customers supplied energy by an intermediary using a large-scale generation unit in a residential precinct (consuming more than 50 TJ per annum).	Recent technological, market and policy developments mean residential customers in large precincts may be supplied electricity, heating or cooling from a gas fired plant (cogeneration or trigeneration). We want to encourage innovative, efficient and customer focused energy services, and promote gas usage to lower average prices for all customers.

65. The demand tariff classes for the haulage reference service are set out in Table 9–2. The numbers associated with the tariff classes are ‘identifiers’. These identifiers relate to groups of postcodes and are set out within the AA. Cost relativities of supplying demand customers in different postcodes are ranked using a system of cost-reflective drivers.

Table 9–2: JGN demand reference tariff classes

Tariff category	Number of tariff classes	Tariff class names	Types of customers	Why included
Capacity country	1	DC Country	Most of our large industrial customers	Maintains existing tariff classes
Capacity coastal	11	DC1 to DC11		

Tariff category	Number of tariff classes	Tariff class names	Types of customers	Why included
Throughput	1	DT		
Major end-user (throughput)	5	DMT1 to DMT5		
First response	2	DCFR-06 & DMTFR-03	Several large industrial customers with flexibility in operations to reduce demand as a first priority response	Grandfathered tariff classes to maintain existing benefit these customers provide

9.2 COST ALLOCATION METHOD

66. A single reference service—the haulage reference service— is offered. The NGR require JGN to allocate its total revenues to reference and non-reference services.
67. The cost allocation method involves taking the required cost of service (building blocks), deducting revenues associated with non-reference services (including negotiated revenues) and from non-pipeline services and then allocating the residual costs to the haulage reference service.
68. Revenue for other non-reference services is calculated based on the forecast level of activity for those services and their prices. Revenue not related to pipeline services includes third party hits income, rental income, property enquiry income and doubtful debts recovered income. Revenue is not allocated to a reference service as the underlying costs are excluded from building block revenues. Deducting these revenues from the building block revenues ensures costs are not duplicated by allocations to reference services.

9.3 RELATIONSHIP BETWEEN COSTS AND TARIFFS

69. Tariffs are demonstrated to support allocative efficiency and reflect the costs of its different customer bases via:
 - demonstration of efficient prices including estimates of:
 - stand-alone and avoidable costs
 - long run marginal costs (**LRMC**)
 - consideration of transaction costs
 - consideration of customer’s ability to respond to price signals
 - a description of how ancillary charges are efficient.

9.3.1 STAND-ALONE AND AVOIDABLE COSTS

70. The expected revenue recovered for each tariff class should lie on or between the stand-alone cost of providing the reference service and the avoidable cost of not providing the reference service.

9 — REFERENCE TARIFFS

71. Stand-alone and avoidable cost estimates for each tariff class, and the approach to calculating these, are set out in the initial proposal.⁶ This demonstrated that JGN's expected revenue for each tariff class lies between the two efficiency measures.

9.3.2 LONG RUN MARGINAL COST

72. LRMC has been taken into account in setting its tariffs.
73. LRMC has been calculated for each of its volume tariff classes using the average incremental approach. The model has produced LRMC values of zero for the demand market as there is no growth in this market during the forecast horizon. That is, the demand market is not expected to drive incremental growth-related investment on JGN's network. This is consistent with the incremental cost to the shared network being specific to individual demand customers' characteristics.
74. Table 9–3 details LRMC for JGN's volume tariff classes.

Table 9–3: LRMC for JGN tariff classes (\$nominal/GJ)

Tariff Class	LRMC
VI-Coastal	14.93
VI-Country	17.19
VB-Coastal	12.35
VB-Country	12.20
VRT-03	12.63
VRT-04	12.16
VRT-06	12.00
VRT-10	12.00

75. Table 9–4 details estimated LRMC values for tariff components in the volume market.

Table 9–4: LRMC for each tariff class by tariff component

Tariff Class	Tariff Component		
	Fixed \$/annum	Variable \$/GJ chargeable demand	Variable \$/GJ
VI-Coastal	43.56	-	13.03
VI-Country	93.71	-	13.11
VB-Coastal	6.21	-	12.08
VB-Country	6.21	-	11.93
VRT-03	15.12	11.97	-
VRT-04	5.81	11.90	-
VRT-06	5.81	11.75	-

⁶ JGN, *JGN 2015-20 access arrangement information*, Appendix 13.1, 30 June 2014.

Tariff Class	Tariff Component		
	Fixed \$/annum	Variable \$/GJ chargeable demand	Variable \$/GJ
VRT-10	5.81	11.75	-

(1) Note that the values are calculated per end customer. That is, for the boundary metered tariffs, \$6.21 is the LRMC for supplying each end customer behind the meter and not the LRMC of each boundary metered customer.

Taking LRMC into account

76. Factors applicable to the consideration of LRMC for gas network pricing, and which explain why LRMC estimates are not equivalent to JGN’s tariff levels, are:
- the NGR permit JGN to recover its building block cost of services, which includes a return on sunk costs (i.e. our RAB) and fixed opex and can therefore be expected to exceed LRMC—this point is acknowledged by rule 94(5)
 - at an aggregate network level, JGN’s capacity requirements are not driven so much by load peaks as by volume market expansion (i.e. new customers)
 - customers told us they prefer variable volume-based charges as they see fixed charges as a barrier to gas connection
 - LRMC estimates can be subjective and rely on assumptions and quality of input information
 - ensuring natural gas, as a discretionary fuel, remains competitive—recovering some costs via usage rather than fixed charges empowers customers to be able to control their bills and increases the attractiveness for new customers to connect
 - seeking stability in end-retail prices—LRMC estimates can be volatile when re-made over time. JGN has considered the relativities between the LRMC estimates between the tariff classes.
77. Gas networks are very different from electricity distribution businesses, which must also take account of LRMC when setting tariffs. Gas, and in particular the JGN network, has lower penetration and utilisation than electricity and faces competition from other fuel sources. In addition, climate is a significant determinant of the customer mix and utilisation of the network. These factors affect the application of LRMC to signal the impact of incremental consumption because JGN seeks to increase the efficient utilisation of its network. While the rules provide that tariffs are to take into account LRMC, since the building blocks revenue is greater than LRMC, not every tariff class and tariff parameter can be set at LRMC.
78. Although volume customers are largely driving incremental demand, capacity constraints are not experienced to the extent that electricity networks do. For this reason, JGN is not subject to the same incentives to price throughput at LRMC. Customer preferences are also taken into account for low usage-based charges to encourage energy efficiency.
79. Demand customers have large loads and are considered on an individual basis when they connect to JGN’s network. Consistent with rule 79(2)(b), these considerations examine the incremental revenues from the customer relative to the incremental costs. Where the expected costs exceed the revenues, JGN charges a capital contribution to the connecting customer. The fact that these users pay a contribution for any capacity development costs not covered by JGN’s existing charges means JGN’s net LRMC can be expected to trend towards its prices for these customers.
80. Finally, marginal costs are essentially forward-looking since they reflect the expected change in costs that arise from changes in demand. Because they are forward looking, invariably the estimates are subjective, reliant on the assumptions made and quality of the input information. This has been a consideration when taking into account the LRMC estimates.

9.3.3 TRANSACTION COSTS

81. Transaction costs—such as metering charges and administrative costs—have been considered when determining tariffs and tariff classes for reference services. This includes how to establish an appropriate balance of transaction costs that supports JGN’s pricing objectives noted in section 9.1.
82. The decision to retain a structure for charges based on customer size (volume versus demand) is economically efficient for a number of reasons. For example, it would be inefficient to charge individually metered volume customers consuming less than 10 TJ a year on capacity as that would require more sophisticated daily metering and data handling. Such metering costs are avoided by charging these customers on throughput using basic metering equipment.
83. Similarly, postage stamping⁷ tariffs for coastal and country areas avoids transaction costs for VI and VB customers. It would be considerably more costly to charge these customers based on zonal location for limited benefit in terms of network savings arising from any demand response. The minor additional administrative burden to offer tariff classes for intermediaries is justifiable to ensure greater cost reflectivity for these volume tariffs and reflect the demand for these boundary metered tariffs.
84. In comparison to the VI and VB customers, JGN charges demand customers on capacity as they have the necessary metering equipment for daily reads. In addition, unlike VI and VB, demand and VRT customers are charged based on location. This is because:
- the size of the customers’ usage and associated impact on the network warrant the additional costs of targeted price signalling (i.e. to manage capacity demands and network location decisions)
 - this addresses the bypass risk that JGN may otherwise face as it does not have an exclusive franchise area.
85. JGN introduced the existing tariff classes for demand customers in 2010, reducing transaction costs for retailers and customers at that time. The proposed closure of the first response tariffs to new customers will further reduce transaction costs as JGN and retailers will not need to maintain those tariff classes for which there has been no first response uptake.
86. In addition, JGN’s simplified reference services will also avoid transaction costs associated with having multiple fixed charge components for each tariff class. This will improve customer understanding of our charges and improve participation in energy markets, including reducing the administrative costs and complexity of retail comparator websites.
87. The tariffs and tariff classes for the 2015-20 AA period provide the correct balance between minimising transaction costs and ensuring that customers have incentives to respond to pricing signals.

9.3.4 RESPONSE TO PRICE SIGNALS

88. JGN’s tariffs and charging components have been structured to allow customers and end customers to respond to price signals and control their bills. It is for this reason a declining block structure is applied and the fixed charge is minimised.
89. The use of a declining block structure means customers face reduced costs for additional gas usage. This is an appropriate price signal for customers where the marginal costs of supplying additional units is materially lower than the average costs, encouraging increased network utilisation.

⁷ ‘Postage stamping’ refers to the practice of applying the same price or set of prices within a specified location. Note that JGN still differentiates prices within the coastal or country areas depending on customer or end customer characteristics.

9.3.5 ANCILLARY CHARGES

90. JGN ancillary charges seek to recover the cost of user-initiated activities. The user-requested ancillary activities, which attract an ancillary charge, are set out in the JGN's reference tariff schedule (see schedule 2 of the AA). Ancillary charge levels are also included in the reference tariff schedule.
91. The ancillary charges are set to recover JGN's costs of providing the relevant activities to volume and demand customers and ensure other customers are not required to inefficiently cross-subsidise the costs of these user-initiated activities. They have been determined based on JGN's incremental costs and are consistent with benchmarks from other jurisdictions.

10. ANNUAL REFERENCE TARIFF VARIATION

10.1 HAULAGE REFERENCE SERVICES

92. For its haulage reference service, JGN has a tariff basket annual tariff variation mechanism as permitted under rule 97(2)(b) in the form of a weighted average price cap (**WAPC**) formula for the 2015-20 AA period.
93. JGN implements this WAPC using the CPI-X price control formula and annual tariff variation mechanism. The specification is set out in the AA. The mechanism also includes an automatic adjustment factor to true-up forecast and actual costs for certain uncontrollable cost categories, and a cost pass through adjustment factor to allow tariffs to vary for pass through amounts approved in accordance with clause 3 of the AA.
94. A WAPC constrains the overall movement in reference tariffs within the AA period. It provides JGN incentives, consistent with the long-term interests of customers, to:
- increase volumes and network utilisation as it does not constrain the revenue that JGN might recover, supporting productive and allocative efficiency
 - price at marginal cost to help ensure that customers susceptible to bypassing the network are retained, again supporting allocative efficiency.
95. The tariff basket approach is consistent with customers' long-term interests by always balancing to the weighted average price. A tariff basket approach allows JGN to respond to market changes and maintain efficient tariff structures consistent with rule 97(3)(a). Further, a WAPC means JGN, and not its customers, bears the risk where actual demand is different from the AER allowance. This places the risk with JGN as the party best placed to manage it. It also motivates JGN to:
- encourage growth, therefore increasing asset utilisation to the benefit of its customers
 - price according to the incidence of its costs.

10.2 ANCILLARY CHARGES

96. JGN maintains its charges for user-requested ancillary activities in real terms over the 2015-20 AA period unless the underlying costs materially change. This seeks to promote price-stability for these activities.

11. TOTAL REVENUE AND KPIS

11.1 TOTAL REVENUE REQUIREMENT

97. JGN's total required revenues for each year of the AA period are set out in Table 11–1. The smoothed and unsmoothed revenues and X-factors are set out in Table 11–2. The set of X-factors provides JGN's price path. Table 11–3 provides the average annual price changes.

Table 11–1: JGN total revenue (\$2015, \$millions)

Building block	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Return on capital	162.82	166.35	168.93	170.35	170.05	838.49
Return of capital (depreciation)	64.97	75.10	85.52	93.11	77.65	396.36
Opex	158.51	159.45	160.38	165.00	164.26	807.61
Tax	5.68	6.59	8.47	10.28	8.02	39.04
Total revenue	391.98	407.50	423.30	438.74	419.98	2,081.49

- (2) There are no increments or decrements for any year resulting from the operation of an incentive mechanism to encourage gains in efficiency

Table 11–2: Revenues and X-factors (\$real, \$millions)

	2015-16	2016-17	2017-18	2018-19	2019-20	NPV
Total building block revenue - unsmoothed	391.98	407.50	423.30	438.74	419.98	1,916.05
Total building block revenue – smoothed	485.00	428.21	398.35	379.37	381.04	1,916.05
X-factor ⁸	20.43%	12.00%	7.00%	4.90%	-	N/A

- (1) Total price change (C) for any year equals $(1 - A) \times (1 + B) - 1$

- (2) Years are from July to June.

Table 11–3: Average annual price changes (per cent)

	2015-16	2016-17	2017-18	2018-19	2019-20	Cumulative % total
Real price change	(20.43%)	(12.00%)	(7.00%)	(4.90%)	-	(44.33%)
Inflation forecast	2.55%	2.55%	2.55%	2.55%	2.55%	12.75%
Nominal price change	(18.40%)	(9.76%)	(4.63%)	(2.47%)	2.55%	(32.71%)

- (1) Years are from July to June.

- (2) Nominal price change is calculated as $(1 + \text{real price change}) \times (1 + \text{inflation forecast}) - 1$.

⁸ Under the CPI-X form of control (represented by the formula $(1-X) \times (1+CPI)$), a positive X-factor is a decrease in average prices.

11.2 KEY PERFORMANCE INDICATORS

98. JGN has opex KPIs. Table 11–4 sets out JGN's opex KPIs, based on JGN's demand and opex forecasts.

Table 11–4: KPIs: Operating cost per metre and cost per customer site (\$2015)

	2015-16	2016-17	2017-18	2018-19	2019-20
Operating cost per metre	6.00	5.96	5.93	6.03	5.94
Operating cost per customer site	123.42	121.01	118.94	119.86	117.13

12. COMPLIANCE CHECKLIST

Table 12–1: Compliance checklist – revised AAI

Provision	Requirement	Reference
National Gas Rules		
72(1)(a)	The access arrangement information must include: (i) capital expenditure (by asset class) over the earlier access arrangement period; and (ii) operating expenditure (by category) over the earlier access arrangement period; and (iii) usage of the pipeline over the earlier access arrangement period showing: (A) for a distribution pipeline, minimum, maximum and average demand...; and (B) for a distribution pipeline, customer numbers in total and by tariff class...	(i) section 2.1 (ii) section 2.2 (iii) section 2.3
72(1)(b)	The access arrangement information must include how the capital base is arrived at and, if the access arrangement period commences at the end of an earlier access arrangement period, a demonstration of how the capital base increased or diminished over the previous access arrangement period.	Chapter 3
72(1)(c)	The access arrangement information must include the projected capital base over the access arrangement period, including: (i) a forecast of conforming capital expenditure for the period and the basis for the forecast; and (ii) a forecast of depreciation for the period including a demonstration of how the forecast is derived on the basis of the proposed depreciation method.	Section 3.3 and (i) section 3.6 (ii) section 3.4
72(1)(d)	The access arrangement information must include to the extent it is practicable to forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period, a forecast of pipeline capacity and utilisation of pipeline capacity over that period and the basis on which the forecast has been derived	Chapter 4
72(1)(e)	The access arrangement information must include a forecast of operating expenditure over the access arrangement period and the basis on which the forecast has been derived	Chapter 5
72(1)(f)	The access arrangement information must include the key performance indicators to be used by the service provider to support expenditure to be incurred over the access arrangement period	Section 11.2
72(1)(g)	The access arrangement information must include: the proposed return on equity the return on debt the allowed rate of return ...for each regulatory year of the access arrangement period, in accordance with rule 87, including any departure from the methodologies set out in the rate of return guidelines and the reasons for that departure.	Sections 6.1 and 6.2.
72(1)(ga)	The access arrangement information must include the proposed formula (if any) that is to be applied in accordance with rule 87(12).	Section 6.1
72(1)(h)	The access arrangement information must include the estimated cost of corporate income tax calculated in accordance with rule 87A, including the proposed value of imputation credits referred to in that rule.	Chapter 7

12 — COMPLIANCE CHECKLIST

72(1)(i)	The access arrangement information must include, if an incentive mechanism operated for the previous access arrangement period - the proposed carry-over of increments for efficiency gains or decrements for efficiency losses in the previous access arrangement period and a demonstration of how allowance is to be made for any such increments or decrements.	Section 8.1
72(1)(j)	The access arrangement information must include the proposed approach to the setting of tariffs including: (i) the suggested basis of reference tariffs, including the method used to allocate costs and a demonstration of the relationship between costs and tariffs; and (ii) a description of any pricing principles employed but not otherwise disclosed under this Rule.	(i) chapter 9 (ii) section 9.1
72(1)(k)	The access arrangement information must include the service provider's rationale for any proposed reference tariff variation mechanisms.	Chapter 10
72(1)(l)	The access arrangement information must include the service provider's rationale for any proposed incentive mechanism.	Section 8.2
72(1)(m)	The access arrangement information must include the total revenue to be derived from pipeline services for each regulatory year of the access arrangement period.	Section 11.1