Draft decision

Jemena Gas Networks (NSW) access arrangement 2025 to 2030
(1 July 2025 to 30 June 2030)

Attachment 10 – Reference tariff variation mechanism

November 2024

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Email: aerinquiry@aer.gov.au
Tel: 1300 585 165

AER reference: AER22005460

Amendment record

Version	Date	Pages
1	29 November 2024	28

List of attachments

This attachment forms part of our draft decision on the access arrangement that will apply to Jemena Gas Networks (NSW) for the 2025–30 access arrangement period (2025–30 period). It should be read with all other parts of this draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Services covered by the access arrangement (no attachment - covered in the Overview)

Attachment 2 – Capital base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency carryover mechanism

Attachment 9 – Reference tariff setting

Attachment 10 – Reference tariff variation mechanism

Attachment 11 – Non-tariff components

Attachment 12 – Demand

Attachment 13 – Capital expenditure sharing scheme

Contents

List of attachments .... **iii**

10 Reference tariff variation mechanism **1**

10.1 Annual reference tariff variation mechanism 1

10.2 Cost pass through mechanism 9

10.3 Revisions 22

Glossary **24**

10 Reference tariff variation mechanism

This attachment sets out our consideration of the reference tariff variation mechanism and cost pass through mechanism proposed by Jemena Gas Networks' (JGN) (NSW). The reference tariff variation mechanism for JGN's gas transportation service:

- permits building block revenues to be recovered smoothly over the access arrangement period subject to any differences between forecast and actual demand
- accounts for actual inflation
- accommodates other reference tariff adjustments that may be required, such as for an approved cost pass through event
- sets administrative procedures for the approval of any proposed changes to reference tariffs – that is, updating tariffs each year.

The reference tariff variation mechanism for JGN's ancillary reference service consists of individual price caps for each element of that service.

The cost pass through mechanism allows us to vary reference tariffs for the occurrence of a specified event which materially increases or decreases the cost of providing the reference service. The inclusion of a pass through mechanism recognises a service provider can face risks beyond its control, which may have a material impact on costs.

10.1 Annual reference tariff variation mechanism

10.1.1 Draft decision

We approve JGN's proposed reference tariff variation mechanism for the 2025–30 access arrangement period except for the elements of its proposed mechanism that we consider are not consistent with the National Gas Rules (NGR). In particular:

- the transportation tariff variation mechanism should not include provision for levies and licence fees
- the proposed CPI-X tariff variation mechanism for ancillary reference services should be revised to reflect CPI adjustments instead (as per other gas distributors).

We require the annual reference tariff submission date to be changed from 15 April to 15 March, to facilitate earlier confirmation of new network tariffs ahead of each upcoming regulatory year.

We discuss our reasons for this draft decision below.

10.1.2 JGN's proposal

For the 2025–30 access arrangement period, JGN proposed a new hybrid tariff variation mechanism for gas transportation, incorporating elements of both weighted average price cap and revenue cap regulation.[1] JGN currently provides its reference service under a weighted average price cap tariff variation mechanism, consistent with other regulated gas distributors.

JGN proposed a new tariff variation mechanism for its ancillary reference service tariffs, consistent with splitting the existing single 'reference service', encompassing both transportation and ancillary services, into separate gas transportation and ancillary reference services.[2] That is, a new tariff variation mechanism is required for the newly established stand-alone ancillary reference service.

Below, we describe in detail JGN's proposed tariff variation mechanisms for gas transportation and ancillary reference services.

10.1.2.1 Gas transportation hybrid tariff variation mechanism

JGN's proposed new hybrid tariff variation mechanism comprises a +/- 5% threshold and a volume risk sharing ratio of 50:50 with customers. This means that for a regulatory year in which actual gas volumes are within 5% above or below forecast volumes, weighted average price cap regulation applies as usual. If actual volumes for a regulatory year are more than 5% higher or lower than forecast, JGN and customers will split the costs/benefits. That is, any revenue over or under recovery driven by volumes being more than 5% higher or lower than forecast, will be split equally between JGN and customers (via higher or lower reference tariffs in future years).

10.1.2.2 Ancillary reference service tariff variation mechanism

The proposed new mechanism for ancillary services, a weighted average price cap, incorporates CPI-X adjustments using pre-set X-factors to annually escalate these tariffs.[3] JGN's proposed X factors reflect those used by JGN to estimate labour costs incorporated in its opex and capex allowance proposals for the 2025-30 period – set out in Table 10.1 below.

Table 10.1 JGN proposed X-factors for ancillary reference service annual tariff adjustments

Year	2026-27	2027-28	2028-29	2029-30
X factor	-0.489%	-0.456%	-0.533%	-0.573

Source: Jemena Gas Networks (NSW) Ltd, *2025-30 Access Arrangement Proposal, Attachment 10.1 Pricing*, p.45.

JGN submitted formulae to give effect to its new ancillary reference service tariff variation mechanism, with its 2025−30 access arrangement revisions proposal.[4]

1 Jemena Gas Networks (NSW) Ltd, *2025-30 Access Arrangement Proposal, Attachment 10.1 – Pricing,* p. 34.

2 Jemena Gas Networks (NSW) Ltd, *2025-30 Access Arrangement Proposal, Attachment 10.1 – Pricing,* pp. 44-45.

3 The formulation is CPI-X because the X value is expressed as a negative. Within the formula the negative X-factor in addition to the "the minus" sign provides a positive outcome. ie. CPI plus X.

4 Jemena Gas Networks (NSW) Ltd, *2025-30 Access Arrangement, JGN's NSW gas distribution network 1 July 2025 – 30 June 2030,* pp. 9-10.

10.1.2.3 Other aspects of the tariff variation mechanism being maintained

JGN proposed to maintain other aspects of the tariff variation mechanism. These include the cost pass through factor and other aspects of the automatic adjustment factor.

JGN also proposed to maintain the same tariff variation process that currently applies. That is, JGN proposed to submit its annual reference tariff variation proposal to us for approval by 15 April of each year, allowing tariffs to be updated for the return on debt adjustment. JGN also proposed to submit to us a pricing model to demonstrate compliance with the tariff variation mechanism.

10.1.3 Assessment approach

Under the NGR, a reference tariff variation mechanism for an access arrangement:[5]

- must be designed to equalise (in present value terms):
  - forecast revenue from reference services over the access arrangement period, and
  - the portion of total revenue allocated to reference services for the access arrangement period, and
- may provide for variation of a reference tariff:
  - in accordance with a schedule of fixed tariffs, or
  - in accordance with a formula set out in the access arrangement, or
  - as a result of a cost pass through for a defined event, or
  - by the combination of two or more of these operations.

A formula for varying reference tariffs may (for example) provide for variable caps on the revenue to be derived from a particular combination of reference services; or tariff basket price control; or revenue yield control; or a combination of all or any of these factors.[6]

We must have regard to various factors in deciding whether an access arrangement's reference tariff variation mechanism is appropriate.[7] These are:

- the need for efficient reference tariff structures
- the possible effects of the reference tariff variation mechanism on administrative costs
- the regulatory arrangements (if any) applicable to the relevant reference services before the commencement of the proposed reference tariff variation mechanism
- the desirability of consistency between regulatory arrangements for similar services
- any other relevant factor.

Further, the reference tariff variation mechanism must give us adequate oversight and powers to approve reference tariff variations.[8]

---

5 NGR, r. 92(2).

6 NGR, r. 97(2).

7 NGR, r. 97(3).

8 NGR, r. 97(4).

We made our decision on JGN's proposed reference tariff variation mechanism having regard to each of these factors, and their implications for natural gas consumers, potential users, JGN and other stakeholders. In doing so, we took into account the nature and scope of pipeline reference services to which reference tariffs are applicable. Our assessment also included a comparison of:

- the proposed reference tariff variation mechanism with those in JGN's current access arrangement
- consistency with other recent gas distribution access arrangement decisions (and electricity determinations under the National Electricity Rules (NER))
- consistency in JGN's approach across the provision of similar services.

We assessed the potential impact of JGN's proposal for meeting the revenue and pricing principles (RPP) and the National Gas Objective (NGO). The NGO was updated late last year to include an emissions reduction objective:[9]

> The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to—
>
> (a) price, quality, safety, reliability and security of supply of natural gas; and
>
> (b) the achievement of targets set by a participating jurisdiction—
>
> (i) for reducing Australia's greenhouse gas emissions; or
>
> (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

We have taken into account the new emissions reduction objective, expected changes in gas demand over the 2025-30 period, the impact this can have on price stability over the period, and incentives on the service provider to develop efficient tariffs. We have also taken into account submissions provided to us by stakeholders.

10.1.4 Interrelationships

The gas transportation reference tariff variation mechanism has interrelationships across other key parts of our draft decision. For example, it interrelates with the total revenue JGN can earn, the services JGN provides to its customers to recover those revenues, and the tariffs it charges for the use of those services.

JGN's reference tariffs are currently adjusted annually by the application of a weighted average price cap formula. The X factor in the formula is revised annually to reflect the updates to the return on debt as a result of the adoption of a trailing average approach to determining the cost of debt.

JGN's gas transportation reference tariffs are derived from the total revenue requirement after consideration of demand for each tariff category. Specific automatic adjustments occur on an annual basis to adjust JGN's total revenue requirement as certain expenses are 'trued up' to reflect actual outcomes. This means the tariffs we determine (including the means of

9 National Gas (South Australia) Act 2008, s. 23. This includes the latest amendment to the NGO which came into effect on 21 November 2023.

varying the tariffs from year to year) are the binding constraint across the 2025–30 period, rather than the total revenue requirement set out in our decision.

10.1.5 Reasons for draft decision

We approve JGN's proposed reference tariff variation mechanisms for the 2025–30 period, except that our draft decision is to amend:

- the gas transportation tariff variation mechanism to exclude provision for taxes and licence fees
- the tariff variation mechanism for ancillary reference services to reflect CPI adjustments instead of the x-factor (as per other gas distributors).

10.1.5.1 Gas transportation hybrid tariff variation mechanism

We consider JGN's hybrid tariff variation mechanism reflects the changed regulatory context for provision of gas transportation services, the NGO now incorporates an emissions reduction element, while balancing concerns of potential tariff year-on-year volatility.

Weighted average price cap regulation incentivises network service providers, such as JGN, to grow the volume of gas (natural gas being a fossil fuel) carried by their networks. This is because networks retain any revenue earnt from actual volumes being higher than forecasts used to determine their network tariffs. Equally, gas networks incur costs if actual volumes are lower than forecasts. That is, weighted average price caps assign volume risk to networks.[10]

The main alternative approach, revenue cap regulation, does not provide the same incentive because network service providers can earn only their approved revenue – under or over revenue recoveries are trued-up over time. However, revenue cap regulation would create risk of tariff volatility from year to year due to the revenue true-ups. While weighted average price cap regulation provides for relatively stable tariffs. Revenue caps also assign volume risk to customers, in that the network is guaranteed to earn its target revenue, regardless of actual volumes compared to targets.

JGN's proposed hybrid tariff variation mechanism manages the risk of tariff volatility by limiting revenue true-ups to instances when actual volumes are more than 5% higher (or lower) than targets. Also, JGN's hybrid mechanism splits 50:50 the revenues associated with actual volumes being outside the 5% upper and lower volume boundaries. This means customers would only be impacted by half of any changes above or below the 5% volume boundaries. Also, the incentive for a network to grow volumes is weakened, but not altogether removed, under this hybrid approach.

JGN's consultation process suggested that stakeholders support the proposed hybrid approach and 50:50 cost sharing ratio. However, stakeholders have expressed a range of views in submissions to us, both as part of the current JGN reset and in the context of our

---

[10] Network service providers have opportunity to manage their volume risk by submitting to the AER an access arrangement variation proposal, under NGR cl.65. They could propose to amend their access arrangement to account for lower volumes by raising tariffs. We note that customers do not have the same opportunity in the event that actual volumes are higher than targets.

2023 gas review.[11] While almost all potential viewpoints can be found amongst the wide variety of stakeholder views expressed, on balance stakeholder submissions to us have supported retaining the current weighted average price cap tariff variation mechanism for gas transportation services.

This stakeholder preference to retain weighted average price caps is often couched in terms of volume risk better sitting with networks than with customers. However, stakeholders are also critical of revenue over-recoveries achieved by networks under price cap regulation (because actual volumes have been higher than forecasts) and called for incentives for further network growth to be removed. There is obvious tension between these various stakeholder positions. Moreover, the ability for networks to seek to reopen approved access arrangements in the event of low volumes tends to be discounted, or ignored, by many stakeholders.[12]

JGN's hybrid proposal was opposed by three recent submissions on its access arrangement proposal. The Institute for Energy Economics and Financial Analysis (IEEFA) recommended that a price cap should be maintained for all regulated gas distribution networks.[13] It submitted that it would be inequitable to change this allocation of risk at this point in time because IEEFA expects actual volumes may be lower than forecast in coming years, while in recent years gas distributors have achieved higher actual volumes compared to forecasts. It viewed the current approach, over recent years, as providing a one-sided benefit to the gas networks. IEEFA also submitted that JGN's proposal to switch to a hybrid price/revenue cap, would transfer stranded asset risks from the network to its consumers. IEEFA commented:[14]

> "The AER's decision on JGN's gas network access arrangement ought to support a managed decline in demand across Jemena's network, while removing incentives for the network to grow."

The Justice and Equity Centre (JEC) submitted that consumers should not take on any level of volume risk, and that it does not support Jemena's proposal to deviate from weighted average price-cap regulation.[15] JEC submitted that JGN has the greatest scope to manage volume risk by improving its volume forecasting approach in conjunction with planned measures to facilitate long-term reductions to demand. JEC did not consider JGN's proposed tariff variation an appropriate or efficient mechanism to address emissions reduction objectives.

Alinta Energy submitted that JGN should face over-forecasting risk as part of future access arrangement periods since it has been the beneficiary of volume under-forecasting.[16] Alinta

---

11 Australian Energy Regulator, '*Review of gas distribution network reference tariff variation mechanism and declining block tariffs*', October 2023.

12 NGR, cl.65.

13 Energy Economics and Financial Analysis, Submission - Jemena Gas Networks (NSW) - Access arrangement 2025–30, August 2024, p.3.

14 Energy Economics and Financial Analysis, Submission - Jemena Gas Networks (NSW) - Access arrangement 2025–30, August 2024, p.1.

15 Justice and Equity Centre, *Submission - JGN access arrangement 2025-30 issues paper*, p 28.

16 Alinta Energy, *Submission - Issues paper on the early signal pathway expectations: Jemena Gas Networks (NSW) access arrangement 1 July 2025 to 30 June 2030*, p. 5.

Energy also wanted JGN to justify and explain why the existing risk allocation is inequitable from its perspective.

In response to these submissions, we note gas networks can instigate an access arrangement re-opener if volumes produce material losses.[17] Customers have no such option. Application of a revenue cap would remove the incentive for the network to grow volumes and while the incentive is retained under a hybrid approach, it is weakened..

While we give appropriate weight to stakeholder views, simply retaining weighted average price cap regulation would not take account of the emissions reduction element in the updated NGO. We publicly raised the possibility of hybrid tariff variation mechanisms being appropriate in our 2023 gas review.[18] JGN's stakeholder consultation process elicited support for its hybrid proposal.

We also note that stakeholder support for retaining weighted average price cap regulation is consistently premised on expectations that volume forecasting accuracy will be improved or that declining gas volumes would naturally lead to network revenue under-recoveries under price cap regulation. It's unclear that these expectations are well founded. Actual volumes may outperform forecast volumes regardless of whether the market is falling or rising. Again, to the extent actual volumes are in future lower than forecasts used to determine transportation tariffs, networks can apply to reopen their access arrangements to achieve new volume forecasts.

10.1.5.2 Taxes and licence fee factor

JGN proposed to include separate adjustments for levies and licence fees within its transportation tariff variation mechanism, consistent with its existing transportation tariff variation mechanism. However, our decisions on the Victorian access arrangements removed these separate adjustments and re-allocated cost recovery into the ex ante opex allowances.

Our draft decision is that the separate adjustments for these costs be removed from JGN's tariff variation mechanism, consistent with our other decisions. Our reasoning for this approach is set out in attachment 6 – Operating expenditure.

10.1.5.3 Abolishment costs

Our draft decision is to socialise a portion of abolishment costs across transportation tariffs. This is where the cost of small customer connection abolishments are recovered partly through an upfront, discounted, per-customer ancillary reference service tariff, with the balance of abolishment costs recovered from all gas customers as part of the transportation tariff. This is discussed further in attachment 9 – Reference tariff setting.

If our final decision maintains this approach, a "true-up mechanism" in the control mechanism for transportation tariffs will be required to respond to differences between forecast and

---

17 NGR cl.65

18 AER, *Final decision - Review of gas distribution network reference tariff variation mechanism and declining block tariffs*, October 2023, p 7.

actual abolishment costs. The true-up will be for both quantity and price to accommodate existing uncertainty of the abolishment forecast volumes and costs.

A new "A factor" for abolishment will be incorporated into the transportation reference service tariff control formula which is separately defined and is the sum of:

- the difference between the abolishment forecast (incorporated in the opex allowance) for year t-1 and estimated costs (submitted to the AER ahead of year t) for year t-1
- the difference between abolishment estimates (submitted to AER ahead of year t-1) for year t-2 and the actual volume (submitted to the AER ahead of year t) for year t-2.

10.1.5.4 Ancillary reference service tariff variation mechanism

We consider JGN's proposed X-factors are likely to produce ancillary reference service tariffs higher than necessary for JGN to recover its efficient costs. JGN's proposal to use CPI-X adjustments to set ancillary reference service tariffs is also inconsistent with approaches taken by other regulated gas distributors.

Our draft decision is to not approve JGN's proposed CPI-X tariff variation mechanism and that JGN's access arrangement should instead apply simple CPI adjustments to escalate these tariffs, consistent with our AusNet, AGN Victoria and Albury, Multinet and AGN SA access arrangement decisions.

10.1.5.5 Other aspects of tariff variation mechanism being maintained are appropriate

We are satisfied with JGN's proposal to maintain other aspects of the tariff variation mechanism described above in section 10.1.2.3. However, the submission date for annual tariff variations is to be changed from the proposed 15 April to 15 March, to facilitate earlier finalisation of network tariffs for each upcoming regulatory year. JGN has indicated its agreement to this change.

10.1.6 Reasons for draft decision

We are satisfied that the weighted average price cap formulas within JGN's 2025–30 access arrangement proposal under a new hybrid form of control are appropriate, except that amendments are required to the:

- transportation tariff variation mechanism to exclude levies and licence fees
- CPI-X tariff variation mechanism for ancillary reference services so that CPI adjustments are used instead.

These changes are consistent with approved access arrangements for other gas distributors.

We note that we assess compliance with the price cap control formulae as part of the annual tariff variation mechanism. In doing so, we apply the assessment approach set out in section 10.1.3 above.

10.2 Cost pass through mechanism

10.2.1 Draft Decision

We accept the cost pass through events JGN proposed for the 2025–30 access arrangement period, subject to some amendments to align with our recent determinations.[19] Our cost pass through definitions are set out in Table 10.2.

We also accept the Fixed Principle included in JGN's 2025–30 access arrangement.

The reasoning behind our final decision is set out in section 10.3.6.

10.2.2 JGN's proposal

JGN proposed seven cost pass through events, four without amendments relative to what is effective in the 2020–25 access arrangement, two existing events with amendments to the event definitions, and one new event. The four events JGN proposed to retain without amendment over the 2025–30 access arrangement period were:[20]

- Terrorism event
- Natural disaster event
- Insurer credit risk event
- Regulatory change event.

The two existing cost pass through events JGN proposed to amend were:

- the insurance cap event, which JGN proposed to amend to align with recent AER decisions[21]
- the service standard event, which JGN proposed to amend to include judicial decisions in addition to legislative and administrative acts or decisions.[22]

JGN also proposed a new tax change event.

JGN proposed amending the wording of three clauses in the access arrangement relating to the cost pass through mechanism to incorporate the separation of transportation and ancillary services.[23]

---

19 AER, *Final decision Attachment 15 – Pass through events – Ausgrid – 2024–29 Distribution revenue proposal*, April 2024; AER, *Draft decision Attachment 15 – Pass through events – Ausgrid – 2024–29 Distribution revenue proposal*, September 2023; AER, *AusNet 2023–28 – Draft decision – Attachment 10 Reference tariff variation mechanism*, December 2022.

20 JGN, *2025–2030 Access Arrangement Proposal - Attachment 10.2 - Cost pass through mechanisms*, 28 June 2024, p. v.

21 JGN, *2025–2030 Access Arrangement Proposal - Attachment 10.2 - Cost pass through mechanisms*, 28 June 2024, p. 2.

22 JGN, *2025–2030 Access Arrangement Proposal - Attachment 10.2 - Cost pass through mechanisms*, 28 June 2024, p. 4.

23 JGN, *2025–2030 Access Arrangement Proposal - Attachment 10.2 - Cost pass through mechanisms*, 28 June 2024, p. 1.

JGN proposed the same notification and materiality provisions as in the 2020–25 access arrangement. These includes that JGN may seek our approval to pass through costs arising from the occurrence of a pass through event. It has 90 business days from a cost pass through event occurring to notify the AER. When the costs of the pass through event are known (or able to be estimated to a reasonable extent), then the costs shall be notified to the AER. The AER must then make a decision to approve or reject the cost pass through event proposal. The AER must notify JGN of its decision as to whether a cost pass through event has occurred, and the amount that should be passed through in JGN's reference tariffs, within 40 business days unless the time limit is extended.[24]

In terms of materiality, JGN proposed to maintain a materiality threshold by reference to 'the smoothed Total Transportation Reference Service Revenue for that Financial Year approved by the AER in the JGN Revenue Model'.[25]

10.2.3 Assessment approach

The NGR state that a reference tariff variation mechanism may provide for the variation of a reference tariff:[26]

> …as a result of a cost pass through for a defined event (such as a cost pass through for a particular tax).

As a component of the reference tariff variation mechanism, a cost pass through mechanism must be assessed having regard to the matters in rule 97(3)[27] of the NGR and must give us adequate oversight and power to approve reference tariff variations.[28]

We must approach this assessment in a manner likely to contribute to the achievement of the NGO,[29] as set out in the National Gas Law (NGL).[30]

In addition, we must take into account the RPP whenever we exercise discretion in approving or making those parts of an access arrangement relating to a reference tariff.[31] The RPP include the principle that the service provider should be provided with a reasonable opportunity to recover at least the efficient costs incurred in providing reference services and complying with a regulatory obligation or requirement.[32] They also provide incentives to promote economic efficiency.[33] The RPP require us to have regard to the economic costs

---

24 JGN, *Proposed access arrangement – JGN's NSW gas distribution network – 1 July 2025–30 June 2030*, 28 June 2024, clause 3.5(i), p. 11.

25 JGN, *Proposed access arrangement – JGN's NSW gas distribution network – 1 July 2025–30 June 2030*, June 2024, p. 10.

26 NGR, r. 97(1)(c).

27 In summary: efficient reference tariff structures; administrative costs; prior regulatory arrangements; consistency between regulatory arrangements; risk sharing arrangements implicit in the access arrangement any other relevant factor.

28 NGR, r. 97(4).

29 NGL, s. 28(1)(a).

30 NGL, s. 23.

31 NGL, s. 28(2)(a).

32 NGL, s. 24(2).

33 NGL, s. 24(3).

and risks of the potential for under- and over-investment by a service provider, to promote efficient investment.[34]

Our decision on the reference tariff variation mechanism includes a decision on what categories of pass through event to approve as part of it.[35] In approaching this part of our task, we also take into account the following "other relevant factors":[36]

- whether the type of event is covered by another category of pass through event
- whether the nature or type of event can be clearly identified at the time the access arrangement is approved for the service provider
- whether a prudent service provider could reasonably prevent an event of that nature or type from occurring or substantially mitigate the cost impact of such an event
- whether the relevant service provider could insure against the event, having regard to:
  - the availability (including the extent of availability in terms of liability limits) of insurance against the event on reasonable commercial terms
  - whether the event can be self-insured on the basis that: it is possible to calculate the self-insurance premium; and the potential cost to the relevant service provider would not have a significant impact on the service provider's ability to provide network services.

These factors appear in the NER, where they guide our decision on whether to approve additional categories of pass through event beyond those already included in the NER.[37] We consider they are consistent with the factors referred to in the NGR (rule 97(3)), and pertinent to our examination of the degree to which a proposed category of event is likely to contribute to the achievement of the NGO.[38]

The Australian Energy Market Commission (AEMC) described the purpose of these considerations as:

> "…to incorporate and reflect the essential components of a cost pass through regime. It was intended that in order for appropriate incentives to be maintained, any nominated pass through event should only be accepted when event avoidance, mitigation, commercial insurance and self-insurance are unavailable. That is, a cost pass through event is the least efficient option for managing the risk of unforeseen events."[39]

> "…that a pass through event should only be accepted when it is the least inefficient option and event avoidance, mitigation, commercial insurance and self-insurance are found to be inappropriate. That is, it is included after

34 NGL, s. 24(6).

35 NGR, r. 97(1)(c).

36 NGR, r. 97(3)(e).

37 NER, cll. 6.5.10(b) and 6A.6.9(b); NER, [Chapter 10: Glossary, definition of 'nominated pass through event considerations'](#).

38 NGL, s. 23.

39 AEMC, *Rule Determination, National Electricity Amendment (Cost pass through arrangements for Network Service Providers) Rule 2012*, 2 August 2012, p. 19.

ascertaining the most efficient allocation of risks between a service provider and end customers."[40]

In line with the AEMC, we consider that pass throughs should only be accepted as a 'last resort'. We accept them only when event avoidance, mitigation and insurance are unavailable, and their acceptance is consistent with the RPP and will contribute to the achievement of the NGO. This approach maintains the incentives on service providers to use market-based mechanisms to mitigate the cost impacts that would arise if the event is triggered.[41] In turn, this promotes the efficient investment in, and efficient operation and use of, natural gas services for the long-term interests of consumers with respect to price.[42]

We also look to promote consistency in our approach to pass through categories across our electricity determinations and gas access arrangement decisions.[43]

10.2.4 Interrelationships

Except as provided by a reference tariff variation mechanism, a reference tariff is not to vary during the course of an access arrangement period.[44] In assessing and approving a reference tariff variation mechanism, we consider the potential impact of the proposed mechanism on the service provider's incentives under the access arrangement to operate its network—and manage its risks—in a manner consistent with the NGO and RPP.[45]

The pass through component of the reference tariff variation mechanism is also interrelated with other parts of this decision, in particular with the forecast operating expenditure (opex) and capital expenditure (capex) and rate of return included in our forecast revenue requirement. These interrelationships require us to balance the incentives in the various parts of our decision.

Pass through events are one way, but not the only way, in which service providers can manage their risks under an access arrangement. For systemic risks, service providers are compensated through the allowed rate of return. Service providers also face business-specific, or residual, risks. Service providers are compensated for the prudent and efficient management of these risks through the forecast opex and capex we include in our forecast revenue requirement for strategies such as:

- prevention (avoiding the risk)
- mitigation (reducing the probability and impact of the risk)
- insurance (transferring the risk to another party)

---

40 AEMC, *Rule Determination, National Electricity Amendment (Cost pass through arrangements for Network Service Providers) Rule 2012*, 2 August 2012, p. 20.

41 NGL, s. 24(3); AEMC, *Rule Determination, National Electricity Amendment (Cost pass through arrangements for Network Service Providers) Rule 2012*, 2 August 2012, p. 8.

42 NGL, s. 23; AEMC, *Rule Determination, National Electricity Amendment (Cost pass through arrangements for Network Service Providers) Rule 2012*, 2 August 2012, p. 8.

43 NGR r. 97(3)(d).

44 NGR, r. 97(5).

45 NGL, ss. 23 and 24.

- self-insurance (putting aside funds to manage the likely costs associated with a risk event).

An efficient business will manage its risk by employing the most cost-effective combination of these strategies. In order to maintain appropriate incentives under an access arrangement, we only accept pass through events where we are satisfied that event avoidance, mitigation, commercial insurance and self-insurance under approved forecasts of prudent and efficient opex and capex are either unavailable or inappropriate.[46]

For smaller expenditure, a service provider should generally utilise its existing expenditure allowance or reprioritise its work program rather than seek approval of a pass through.[47] This is reflected in the materiality threshold that applies to applications for cost pass through under the approved access arrangement.[48]

Opex cost pass through amounts approved in an access arrangement period are added to (or in the case of a negative pass through deducted from) forecast opex for the purpose of calculating efficiency carryover amounts under the efficiency carryover mechanism in the approved access arrangement.[49]

10.2.5 Reasons for draft decision

10.2.5.1 Insurance cap (now insurance coverage), insurance credit risk, natural disaster, regulatory change, terrorism events

Consistent with our past decisions, we consider that JGN's proposed insurance cap (now insurance coverage), insurance credit risk, natural disaster, regulatory change, and terrorism events, that will remain the same as in the 2020–25 access arrangement are appropriate as they:

- are not covered by another category of pass through event
- can be clearly identified at the time when we are approving the access arrangement
- are of the nature or type that a prudent service provider could not reasonably prevent from occurring or substantially mitigate their cost impact
- are prohibitively costly to cover by full insurance, or there is no available insurance cover on reasonable commercial terms.

As a result, we accept these proposed pass through events for the 2025–30 access arrangement.

---

46 This is consistent with the AEMC's conclusions in its review of the NER pass through arrangements. See: AEMC, *Cost pass through arrangements for Network Service Providers, Rule Determination*, 2 August 2012, pp. 19–20.

47 This is consistent with the AEMC's conclusions in its review of the regulation of network prices. See: AEMC, *Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Final Rule Determination*, 29 November 2012, pp. 187–188.

48 JGN, *Proposed access arrangement – JGN's NSW gas distribution network – 1 July 2025–30 June 2030*, June 2024, p. 10.

49 JGN, *Proposed access arrangement – JGN's NSW gas distribution network – 1 July 2025–30 June 2030*, June 2024, p. 24.

However, we require JGN to make some drafting amendments to the definitions of these approved nominated pass through events to ensure consistency with recent AER decisions, as set out in Table 10.2. These changes are to provide greater drafting consistency between JGN and other network service providers.

We sought clarification from JGN to understand its rationale for departing from our current definitions of the above cost pass through events. In response, JGN acknowledged that while its proposed definitions were broadly consistent with those in our recent decisions, the text, punctuation and vocabulary of some of the event definitions differ, particularly in the electricity context.[50] JGN proposed to adopt the Jemena electricity definition, for convenience and consistency within the Jemena Group, where it has a reason of this kind for departing from other networks' drafting in the drafting in the JGN 2020–25 access arrangement.[51]

We agree with JGN that consistency of cost pass through event definitions, as far as possible, across networks is beneficial to all parties (customers, businesses and the AER in administering any subsequent applications).[52] However, in the interests of consistency across gas and electricity network service providers, we have maintained consistency with our recent determinations for other networks, rather than favouring consistency between JGN and Jemena electricity.

10.2.5.2 Service standard event

The service standard event embedded in the National Electricity Rules (NER) is defined as:[53]

> A legislative or administrative act or decision that:
>
> (a) has the effect of:
>
> > (i) substantially varying, during the course of a regulatory control period, the manner in which a Transmission Network Service Provider is required to provide a prescribed transmission service, or a Distribution Network Service Provider is required to provide a direct control service; or
> >
> > (ii) imposing, removing or varying, during the course of a regulatory control period, minimum service standards applicable to prescribed transmission services or direct control services; or
> >
> > (iii) altering, during the course of a regulatory control period, the nature or scope of the prescribed transmission services or direct control services, provided by the service provider; and
>
> (b) materially increases or materially decreases the costs to the service provider of providing prescribed transmission services or direct control services.

50 JGN, *Response to information request IR – 013 - Opex step changes, Question 4*, 11 October 2024.

51 JGN, *Response to information request IR – 013 - Opex step changes, Question 4*, 11 October 2024.

52 JGN, *Response to information request IR – 013 - Opex step changes, Question 4*, 11 October 2024.

53 NER, Chapter 10: Glossary, definition of 'service standard event'.

This is the definition we and network service providers across electricity and gas industries have adopted over the past years.[54]

JGN proposed to amend the above definition to include a reference to clarify that in addition to legislative and administrative acts or decisions it should also apply in circumstances where judicial decisions have the same effect.[55] Specifically, JGN proposed to replace:[56]

> Service Standard Event means a legislative or administrative act or decision…

With

> Service Standard Event means a legislative, **judicial** or administrative act or decision…

In JGN's view, the proposed amendment clarifies that in addition to legislative and administrative acts or decisions, the service standard event would also apply in circumstances where judicial decisions have the same effect.[57]

Further, JGN omitted section (b) of the above definition, suggesting the cost pass through materiality threshold would not apply.[58] However, JGN did not explain this proposed change. JGN provided additional confidential material to us in response to our request for additional information on this matter.

While noting the additional material that JGN provided to us, we do not consider it has sufficiently justified its proposed amendment. The Service Standard Event definition refers to events that have the effect of substantially varying the manner in which network service providers must provide the relevant services, or of altering applicable minimum service standards, or of altering the nature or scope of those services. We consider that only a very small subset of possible judicial decisions would potentially have one of those effects, and that it is also not possible to clearly identify those decisions in advance. Further, judicial decisions are necessarily confined to the facts of each particular case. Any broader potential implications of judicial decisions can be addressed, where appropriate, by legislative acts or decisions (such as rule changes) which would fall within the existing definition.

We also note the precedent this would establish for future determinations and the need for broader public consultation with industry and other stakeholders to change the definition of a pass through event that, for electricity networks, is specified in the NER. We do not consider it good practice to introduce inconsistency between a definition of a cost pass though event

54 AER, *AusNet 2023–28 – Final decision – Attachment 10 Reference tariff variation mechanism*, June 2023; AER, *AGN 2023–28 – Final decision – Attachment 10 Reference tariff variation mechanism*, June 2023; AER, *MGN 2023–28 – Final decision – Attachment 10 Reference tariff variation mechanism*, June 2023.

55 JGN, *2025 - 2030 Access Arrangement Proposal - Attachment 10.2 Cost pass through mechanisms*, 28 June 2024, p. 4.

56 JGN, *2025 - 2030 Access Arrangement Proposal - Attachment 10.2 Cost pass through mechanisms*, 28 June 2024, p. 4.

57 JGN, *2025 - 2030 Access Arrangement Proposal - Attachment 10.2 Cost pass through mechanisms*, 28 June 2024, p. 4.

58 JGN, *Proposed access arrangement JGN's NSW gas distribution networks 1 July 2025 – 30 June 2030*, June 2024, p. 10.

for electricity and gas network service providers, especially where an event definition has been established through the rule making process.

For the above reasons, our draft decision is to require amendment of the service standard event in JGN's 2025–30 access arrangement, so that it matches the definition as set out in the NER. This definition does not include a 'judicial' decision. It also includes a materiality threshold, as set out in Table 10.2. This approach is consistent with our determinations across electricity and gas network service providers.

10.2.5.3 Tax change event

JGN proposed to adopt a tax change event as a new event for the 2025–30 access arrangement period, stating that this proposal is consistent with pass through regimes the AER accepted in other regulatory determinations relating to gas network providers.[59] JGN adopted our definition for this event,[60] which is also embedded in the NER.

Consistent with our past decisions,[61] we consider that JGN's proposed tax change event:

- is not covered by another category of pass through event
- can be clearly identified at the time when we are approving the access arrangement
- is of the nature or type that a prudent service provider could not reasonably prevent from occurring or substantially mitigate their cost impact
- is prohibitively costly to cover by full insurance or that there is no available insurance cover on reasonable commercial terms.

As a result, we have accepted the proposed tax change event for the 2025–30 access arrangement as proposed by JGN.

10.2.5.4 Materiality threshold

JGN proposed to retain the current process for application and AER approval of a cost pass through event, including the materiality threshold, which we approved in the 2020–25 access arrangement.[62] JGN submitted that this materiality threshold is consistent with the threshold currently applied to cost pass through events for other gas distribution businesses and electricity distribution network service providers. JGN proposed to apply this threshold symmetrically, for both positive events that increase its costs and negative events that decrease its costs.[63]

---

59 JGN, *2025 - 2030 Access Arrangement Proposal - Attachment 10.2 Cost pass through mechanisms*, 28 June 2024, p. 4.

60 JGN, *Response to information request IR – 013 - Opex step changes, Question 4*, 11 October 2024.

61 AER, *AusNet 2023–28 – Final decision – Attachment 10 Reference tariff variation mechanism*, June 2023; AER, *AGN 2023–28 – Final decision – Attachment 10 Reference tariff variation mechanism*, June 2023; AER, *MGN 2023–28 – Final decision – Attachment 10 Reference tariff variation mechanism*, June 2023.

62 JGN, *2025 - 2030 Access Arrangement Proposal - Attachment 10.2 Cost pass through mechanisms*, 28 June 2024, p. 1.

63 JGN, *2025 - 2030 Access Arrangement Proposal - Attachment 10.2 Cost pass through mechanisms*, 28 June 2024, p. 1.

JGN's proposed access arrangement defines the materiality threshold by reference to smoothed revenue. That is, costs incurred as a result of a cost pass through event are considered material if they are or are reasonably estimated to exceed 1% of the smoothed Total Transportation Reference Service Revenue for that Financial Year approved by the AER in the JGN Revenue Model.[64]

We note that the NGR is silent on the definition of materiality with respect to costs incurred by a network service provider as a result of a cost pass through event. However, the NER consider costs incurred as a result of pass through event are material if they exceed 1% of the annual revenue requirement. Specifically, the NER provide that:

> …an event results in a Distribution Network Service Provider incurring materially higher or materially lower costs if the change in costs (as opposed to the revenue impact) that the Distribution Network Service Provider has incurred and is likely to incur in any regulatory year of a regulatory control period, as a result of that event, exceeds 1% of the annual revenue requirement for the Distribution Network Service Provider for that regulatory year.

We understand that the materiality threshold for costs incurred as a result of a pass through event relates to unsmoothed annual revenue. We note that most of our determinations for gas network service providers regarding the materiality threshold specifically refers to 'smoothed revenue'.[65] This is inconsistent with the meaning in the NER of 'materially' as set out above. It is also inconsistent with the meaning we have applied for electricity network service providers (distribution and transmission) when reviewing cost pass through applications.

JGN submitted that its proposed materiality threshold is consistent with the threshold currently applied to cost pass through events for other gas distribution network service providers and electricity distribution network service providers.[66] While this is true in respect of other gas distribution network service providers, it is not the case for the electricity distribution network service providers because the NER refers to the materiality threshold in terms of 'annual revenue requirement', that is unsmoothed revenue. This is the meaning we have applied in our determinations and implemented in our review of cost pass through applications.

We understand that JGN's intention was to apply a materiality threshold that is consistent with that adopted by the other gas and electricity network service providers. Therefore, we require JGN to amend clauses 3.5(b) and 3.5(c) of its proposed access arrangement to reflect that the meaning of materiality threshold relating to cost pass through event refers to annual revenue requirement, rather than 'smoothed revenue'. Our approach ensures that the

64 JGN, *Proposed access arrangement JGN's NSW gas distribution networks 1 July 2025 – 30 June 2030*, June 2024, cl. 3.5 (b)-(c), p.10.

65 This matter was introduced in our 2018-22 draft decision for AGN. Please see: AER, *Draft decision Australian Gas Networks Victoria and Albury gas access arrangement 2018 to 2022 Attachment 11 – Reference tariff variation mechanism*, July 2017, p. 27.

66 JGN, *Proposed access arrangement JGN's NSW gas distribution networks 1 July 2025 – 30 June 2030*, June 2024, cl. 3.5 (b)-(c), p.10.

same meaning for materiality threshold applies across electricity and gas businesses. It is our intention to apply this correction to all gas network service providers in our future determinations.

We encourage JGN to identify any concerns with this amendment in its revised proposal so that we may consider this matter further for the final determination if necessary.

We also require JGN to amend clauses 3.5(b) and 3.5(c) to remove reference to the 'JGN revenue model' to clarify that a core threshold with respect to materiality is the relevant annual revenue approved by the AER.

10.2.5.5 Fixed principle

JGN proposed to continue to apply a Fixed Principle over the 2025–30 access arrangement to ensure the recovery of a cost pass through amount via reference tariffs adjustments can be spread across access arrangement periods, if not able to be recovered entirely within the current access arrangement period. We consider this Fixed Principle to be a formalisation of our standard approach regarding the recovery of a cost pass through amount and equivalent to a Fixed Principle already in application in JGN's 2020–25 access arrangement and also included in our determinations for other gas distribution access arrangements.[67] We consider it is important to ensure consistency wherever possible between networks and as such have accepted the inclusion of the Fixed Principle in clause 3.6 of JGN's 2025–30 access arrangement.

Table 10.2 AER's definitions of cost pass through events

Event	Definition
Terrorism Event	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: 1. 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 2. changes the costs to the Service Provider in providing Reference Services: Note: In assessing a Terrorism Event pass through application, 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.

67 AER, *AusNet Services, Approved Access Arrangement - Part B - Reference tariffs & reference policy - final decision revisions marked,* November 2017, p. 28; AER, *MGN – Access Arrangement 2023–28 – Tracked, June 2023*, pp. 22–29

Event	Definition
Natural Disaster Event	Natural Disaster Event means any natural disaster including, but not limited to cyclone, fire, flood, or earthquake that occurs during the Access Arrangement Period that changes the costs to the Service Provider in providing the Reference Services, provided the cyclone, fire, flood, earthquake or other event was: a) a consequence of an act or omission that was necessary for the Service Provider to comply with a regulatory obligation or requirement or with an applicable regulatory instrument; or b) not a consequence of any other act or omission of the Service Provider. Note: In assessing a Natural Disaster Event pass through application, 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.
Insurer Credit Risk Event	An Insurer Credit Risk Event occurs if an 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: a) 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 b) incurs additional costs associated with funding an insurance claim, which would otherwise have been covered by the insolvent insurer. Note: in assessing an Insurer Credit Risk Event pass through application, 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 covered by the insolvent insurer's policy, whether the Service Provider had reasonable opportunity to insure the risk with a different provider.
Regulatory Change Event	Regulatory Change Event means a change in a regulatory obligation or requirement that: a) falls within no other category of relevant Pass Through Event; and b) occurs during the course of an Access Arrangement Period; and c) substantially affects the manner in which the Service Provider provides Reference Services; and d) materially increases or materially decreases the costs of providing Reference Services.

Event	Definition
Insurance Coverage Event	An Insurance Coverage Event means an event where: 1. the Service Provider: a) makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy or set of insurance policies; or b) would have been able to make a claim or claims under a relevant insurance policy or set of insurance policies but for changed circumstances; and 2. the Service Provider incurs costs: a) beyond the relevant policy limit for that policy or set of insurance policies; or b) that are unrecoverable under a policy or set of insurance policies due to changed circumstances; and 3. the costs referred to in paragraph 2 above materially increase the costs to the Service Provider of providing Reference Services. For the purposes of this Insurance Coverage Event: • 'changed circumstances' means movements in the relevant insurance liability market that are beyond the control of the Service Provider, where those movements mean that it is no longer possible for the Service Provider to take out an insurance policy or set of insurance policies at all or on reasonable commercial terms that include some or all of the costs referred to in paragraph 2 above within the scope of that insurance policy or set of insurance policies. • 'costs' means the costs that would have been recovered under the insurance policy or set of insurance policies had: – the limit not been exhausted; or – those costs not been unrecoverable due to changed circumstances. • a relevant insurance policy is an insurance policy or set of insurance policies held during the Access Arrangement Period or a previous access arrangement period in which the Service Provider was regulated; and • the Service Provider will be deemed to have made a claim on a relevant insurance policy or set of insurance policies if the claim is made by a related party of the Service Provider in relation to any aspect of the Service Provider's Network or business; and • the Service Provider will be deemed to have been able to make a claim on a relevant insurance policy or set of insurance policies if, but for changed circumstances, the claim could have been made by a related party of the Service Provider in relation to any aspect of the Service Provider's Network or business.

Event	Definition
	Note for the avoidance of doubt, in assessing an Insurance Coverage Event through application under clause 3.5(i), the AER will have regard to: i) the relevant insurance policy or set of insurance policies for the event; ii) the level of insurance that an efficient and prudent service provider would obtain, or would have sought to obtain, in respect of the event; iii) any information provided by the Service Provider to the AER about the Service Provider's actions and processes; and iv) any guidance published by the AER on the matters the AER will likely have regard to in assessing any Insurance Coverage Event that occurs.
Service Standard Event	Service Standard Event means a legislative or administrative act or decision that: a) has the effect of: (1) substantially varying, during the course of an Access Arrangement Period, the manner in which the Service Provider provides a Reference Service; (2) imposing, removing or varying, during the course of an Access Arrangement Period, minimum service standards applicable to Reference Services; or (3) altering, during the course of an Access Arrangement Period, the nature or scope of the Reference Services provided by the Service Provider; and b) materially increases or materially decreases the costs to the Service Provider of providing Reference Services.
Tax Change Event	Tax Change Event occurs if: (a) any of the following during the course of the Access Arrangement Period: (1) a change in a Relevant Tax, in the application or official interpretation of a Relevant Tax, in the rate of a Relevant Tax, or in the way a relevant Tax is calculated; (2) the removal of a Relevant Tax; (3) the imposition of a Relevant Tax; and (b) as a consequence, the costs to the Service Provider of providing Reference Services are materially increased or decreased.

Source: AER analysis

10.3 Revisions

Table 10.3: JGN's reference tariff variation mechanism and cost pass through events revisions

Revisions	Column heading
Revision 10.1	Amend the ancillary reference service tariff variation mechanism to an annual CPI adjustment only, in place of the proposed CPI-X approach.
Revision 10.2	Remove taxes and licence fee adjustments from the annual tariff variation mechanism.
Revision 10.3	Amend the annual tariff variation submission date from 15 April to 15 March.
Revision 10.4	Amend clause 3.5(a) of the access arrangement to read: (a) The following are Cost Pass Through Events: (i) Tax Change Event; (ii) Terrorism Event; (iii) Natural Disaster Event; (iv) Insurance Coverage Event; (v) Insurer Credit Risk Event; (vi) Regulatory Change Event; and (vii) Service Standard Event
Revision 10.5	Amend clause 3.5(b) of the access arrangement to read: 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 Services 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 or is likely to incur in any Financial Year of the Access Arrangement Period, as a result of that event, exceeds one per cent of the Total Transportation Reference Service Revenue for that Financial Year approved by the AER.
Revision 10.7	Amend clause 3.5(c) of the access arrangement to read: 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 Services 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 or is likely to incur in any Financial Year of the Access Arrangement Period, as a result of that event, is or is reasonably estimated to exceed one per cent of the Total Transportation Reference Service Revenue for that Financial Year approved by the AER.
Revision 10.8	Amend Schedule 1 – Definitions of the access arrangement to reflect the definition of the following pass through events as specified in Table 10.2.

Revisions	Column heading
	Tax Change Event Terrorism Event Natural Disaster Event Insurance Coverage Event Insurer Credit Risk Event Regulatory Change Event Service Standard Event

Source: AER's analysis

Glossary

Term	Definition
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
Ancillary RS	Ancillary Reference Service
capex	capital expenditure
JGN	Jemena Gas Networks
NER	National Electricity Rules
NGL	National Gas Laws
NSW	New South Wales
NGO	National Gas Objectives
NGR	National Gas Rules
opex	operating expenditure
RPP	Revenue and pricing principles
Transportation RS	Transportation Reference Service