DRAFT DECISION
Jemena Gas Networks (NSW) Ltd
Access Arrangement

2020 to 2025

Attachment 13
Capital expenditure sharing scheme

November 2019

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on the access arrangement that will apply to Jemena Gas Networks (NSW) Ltd ('JGN') for the 2020–2025 access arrangement period. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Services covered by the access arrangement

Attachment 2 – Capital base

Attachment 3 – Rate of return

Attachment 4 – 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

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Attachment 13 – Capital expenditure sharing scheme

Contents

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
AGL	AGL Energy Limited
Capex	Capital expenditure
CCP/CCP19	Consumer Challenge Panel, sub-panel 19
CESS	Capital expenditure sharing scheme
CPF	Contingency payment factor
EBSS	Efficiency benefit sharing scheme
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
FSC	Farrier Swier Consulting
JGN	Jemena Gas Networks (NSW) Ltd
NGL	National Gas Law
NGR	National Gas Rules
NPV	Net present value
NSW	New South Wales
Opex	Operating expenditure
PIAC	Public Interest Advocacy Centre
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
WACC	Weighted average cost of capital

13 Capital expenditure sharing scheme

This attachment outlines our assessment of JGN's proposal for a capital expenditure sharing scheme (CESS) for the 2020–25 access arrangement period. The design of JGN's proposed CESS is based on our approved CESS for the Victorian gas businesses (2018–2022) but with adjustments. The most significant of which is that JGN's CESS will not apply to connections capital expenditure (capex).

13.1 Draft decision

Our draft decision approves the application of a CESS for JGN that excludes connections capex in the 2020–25 access arrangement period.[1] However, we require amendments to be made to JGN's proposal that:

- remove the provision that CESS is a fixed principle for the 2020-25 access arrangement period and for the next two access arrangement periods
- require removal of outliers and determine performance targets based on internal ones
- tighten the width of the contingent payment factor to 90–100.

13.2 Assessment approach

A full access arrangement may include (or we may require it to include) one or more incentive mechanisms to encourage efficiency in the provision of services by the service provider.[2] Incentive mechanisms may provide for carrying over increments for efficiency gains, or decrements for efficiency losses, from one access arrangement period into the next.[3] An incentive mechanism must be consistent with the revenue and pricing principles.[4]

We consider the following revenue and pricing principle is most relevant for assessing JGN's proposed incentive scheme:

> 'A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides.
>
> The economic efficiency that should be promoted includes—
>
> (a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and
>
> (b) the efficient provision of pipeline services; and

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1 The operation of the CESS is set out in: JGN, *2020-25 Access Arrangement Proposal, JGN's NSW gas distribution network, 1 July 2020 – 30 June 2025*, Section 13, p.26, and Schedule 9, p.76.

2 NGR, r. 98(1).

3 NGR, r. 98(2).

4 NGR, r. 98(3).

(c) the efficient use of the pipeline.'[5]

13.3 JGN's proposal

If implemented in our final decision, this will be the first time that we apply a CESS to JGN in an access arrangement. The scheme that JGN proposes we apply is designed differently to other schemes, although it is based on the scheme that we have applied to Victorian gas distribution businesses.[6]

JGN state that a CESS will ensure that all of its expenditure is covered by incentive schemes, and this better supports outcomes that are aligned to its customers' long term interests.[7]

JGN engaged Farrier Swier Consulting (FSC) to design its CESS, with reference to the CESS we approved for the Victorian gas distribution businesses (2018–2022).

A deep dive workshop, inviting various stakeholders including the AER, provided feedback to JGN on the FSC design.[8]

JGN revised its draft CESS proposal based on stakeholder feedback. The feedback JGN took into account in its proposed CESS is that incentives should be restricted to the part of the capex program that is within JGN's control (that is, exclude new connections related capex).

This means JGN's proposed CESS approximately halves the amount of capex that can apply when determining the CESS amount (that is, $427.2 million verses total capex of $791.1million (excluding corporate overheads, $2019–20)).

JGN has developed measures to monitor service performance. Six target measures have been proposed, these are:

- unplanned System Average Interruption Frequency Index (SAIFI) (weighting 10 per cent)
- unplanned System Average Interruption Duration Index (SAIDI) (weighting 10 per cent)
- mains and service leads (weighting 30 per cent)
- meter leaks (weighting 10 per cent)
- poor quality supply (weighting 30 per cent)
- estimated meter reads (weighting 10 per cent).

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5 NGL, s. 24(3).

6 JGN, *2020-25 Access Arrangement Proposal, Attachment 7.11, Incentive schemes*, p. 3.

7 Ibid, p. 3.

8 JGN, *CESS Stakeholder workshop*, 9 April 2019

Performance targets for each measure have been set using the last five years of historical data. The performance targets are weighted to produce a Contingent Payment Index. The Contingent Payment Index will be used to scale down rewards if service performance is less than the target level. Consistent with the Victorian CESS, the threshold of performance below which no reward is payable to JGN for an under-spend is an index score of 80 (base is 100).

13.3.1 Interrelationships

The incentive scheme JGN proposes relates to various areas of the business covered by the 2020–25 access arrangement.[9] For example, introduction of a CESS will affect the size of the capital base and may alter the balance of investment signals between capex and operating expenditure (opex). We aim to incentivise service providers to make efficient decisions on when and what type of expenditure to incur, and to balance expenditure efficiencies with service standards.

13.4 Reasons for draft decision

In agreeing to implement a CESS for JGN, we have had regard to:

- submissions received on JGN's 2020–25 proposal
- analysis of the pros and cons of a CESS for gas distribution businesses when we last considered it (that is, for Victorian distribution business, 2018–2022)
- the specific benefits and risks relating to JGN and how its proposed CESS mitigates these risks.

13.4.1 Submissions

The majority of submissions, in principle, supported incentive regulation, noting that JGN already has in place an efficiency benefit sharing scheme (EBSS).[10] However, submissions expressed concern with JGN's material overspend in connections capex, and underspend in most other parts of its capex forecasts in the current (2015–20) period as justification for caution in approving a CESS for JGN.

Other issues raised in submissions were:

- CESS should provide for incentives over metrics the business has under its control[11]

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9 The efficiency carryover mechanism for opex is a related scheme.

10 CCP19, *Submission to the AER on JGN's Regulatory Proposal*, August 2019; PIAC, *Submission to Jemena Gas Networks' 2020 Plan*, August 2019; AGL, *Jemena Gas Networks (NSW) Access Arrangement 2020–25*, August 2019; and ECA, *Jemena Gas Networks (NSW) Access Arrangement 2020–25 Proposal – Submission to the AER*, August 2019.

11 CCP19, *Submission to the AER on JGN's Regulatory Proposal*, August 2019; PIAC, *Submission to Jemena Gas Networks' 2020 Plan*, August 2019; and AGL, *Jemena Gas Networks (NSW) Access Arrangement 2020–25*, August 2019.

- targets should be set at levels that truly represent achievements beyond business as usual[12]
- the AER should undertake an examination of the outcome of the Victorian CESS before committing to its implementation for this access arrangement[13]
- it is difficult for the regulator to know whether a reduction in capex is due to a deferral or efficiency improvement[14]
- ECA expressed the view that, at this time, a sufficient case for a CESS had not been made. ECA also wondered that the fact that gas is a fuel of choice is sufficient incentive, and no further incentives should be required.[15]

JGN's proposal to exclude connections capex had stakeholder support.[16]

Only Origin expressed outright support for a CESS.[17]

13.4.2 Considerations on CESS

After weighing up the pros and cons, we have agreed to JGN's proposal for a CESS but subject to further revisions, given our and stakeholder concerns.

A proposal for CESS for gas distribution networks was extensively considered in the 2018–22 Victorian gas distribution resets.[18]

The benefits of a CESS are that a business would only incur efficient capex by:

- smoothing capex incentives throughout the access arrangement period
- reducing capital base growth
- addressing the imbalance in the incentives applicable to decisions about whether to undertake capex or opex, particularly toward the end of the access arrangement period.

The main risk of a CESS is that the service provider could achieve the savings through a reduction in service standards.

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12 PIAC, *Submission to Jemena Gas Networks' 2020 Plan*, August 2019; and EnergyAustralia, *Jemena Gas Networks (NSW) - Access Arrangement 2020–25*, August 2019.

13 Ibid.

14 AGL, *Jemena Gas Networks (NSW) Access Arrangement 2020–25*, August 2019; and ECA, *Jemena Gas Networks (NSW) Access Arrangement 2020–25 Proposal – Submission to the AER*, August 2019.

15 ECA, *Jemena Gas Networks (NSW) Access Arrangement 2020–25 Proposal – Submission to the AER*, August 2019.

16 CCP19, *Submission to the AER on JGN's Regulatory Proposal*, August 2019; and PIAC, *Submission to Jemena Gas Networks' 2020 Plan*, August 2019.

17 Origin, *Jemena Gas Networks (NSW) Access Arrangement Proposal 2020–25*, August 2019.

18 AER, *Draft Decision AusNet Services Gas Access Arrangement 2018 to 2022, Attachment 14 - Other incentive schemes*, July 2017, pp.6-14; *Draft Decision Australian Gas Networks Victoria and Albury gas access arrangement, 2018 to 2022, Attachment 14 – Other incentive schemes*, June 2017, pp. 6-14.

These trade-offs have already been discussed in our Victorian gas distribution business resets (2018–22) and are not repeated here.[19]

The section below instead focuses on design improvements to JGN's proposed CESS that take into account JGN's circumstances and areas where we think the design of the CESS can be improved to address stakeholder concerns.

13.4.2.1 Deferral mechanism

JGN proposes that the CESS payment is to be adjusted where a service provider has deferred capex in the current period and:

- the amount of the deferred capex in the current period is material
- the amount of the estimated underspend in capex in the current period is material
- total approved forecast capex in the next period is materially higher than it is likely to have been if a material amount of capex was not deferred in the current period.

We accept the proposed deferral mechanism, noting that it is the same as our published CESS Guideline.[20] Our consultant, Zincara, suggests that "materiality" should be discussed between the AER and JGN. Our CESS Guideline does not define materiality and we think this requires a broader discussion than just for this access arrangement. If the deferral mechanism is applied, then a discount rate should be employed to account for the time value of money.

13.4.2.2 Aggregate capex of separate capex category, and ex post review and year 5

JGN proposes that the CESS apply to capex in aggregate, instead of each expenditure category. Further, non-conforming capex in the ex-post review will be excluded. In addition, final year capex will need to be an estimate and where the actual capex differs from the estimate, an adjustment to take into account the difference can be made in the future.

We accept these elements of the CESS mechanism as reasonable and consistent with the application of CESS elsewhere.

13.4.2.3 Contingent payment index

JGN's contingent payment index proposes six measures (Table 14.1). The target set for each measure is based on averaging of five year historical data where available.

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[19] AER, *Draft Decision AusNet Services Gas Access Arrangement 2018 to 2022, Attachment 14 - Other incentive schemes*, July 2017, p. 14-10; Draft Decision Australian Gas Networks Victoria and Albury gas access arrangement, 2018 to 2022, Attachment 14 – Other incentive schemes, June 2017.

[20] https://www.aer.gov.au/system/files/1.%20AER%20explanatory%20statement%20-%20capital%20expenditure%20incentive%20guideline%20-%20November%202013.DOCX

Each measure is weighted (30 per cent where the measure strongly aligns with the capex program, and 10 per cent where alignment is moderate).

Zincara, while recommending accepting the measures, made the observation that the measures should be relevant to the NSW market, and the targets published should be less than JGN's internal targets. For example, JGN's published internal target for the number of estimated meter reads is 5 per cent; but for CESS, JGN is proposing a target of 5.93 per cent, a figure lower than its internal target.[21]

We agree with Zincara that where actual performance targets are below internal targets, the business should strive to achieve these internal targets. We would be lowering performance levels if we accept the actual performance without consideration of the internal targets.

Given these concerns, we recommend that JGN review its proposed targets against internal targets for each measure. As part of this exercise, the calculation of performance targets should remove outliers.[22] We will also consider the weights applying to the revised measures in our final decision.

Table 14.1 JGN's calculated targets

Measure	Basis	Target	Data Source	Weighting
Unplanned SAIFI	Outages per 1,000 customers	3.33	RIN response for customer numbers and outage frequency data	10
Unplanned SAIDI	Hours per 1,000 customers	40.95	RIN response for customer numbers and outage duration reported to NSW Fair Trading for outage that affects 5 or more customers	10
Mains and services leaks	Leaks per km of mains	0.16	RIN response for mains length and leak data	30
Meter leaks	Leaks per 1,000 customers	8.15	RIN response for customer and leak data	10
Poor quality supply	Events per 1,000 customers	0.92	RIN response for customer numbers and poor quality supply event data	30
Estimated meter reads	% estimates	5.93%	SAP data.	10

Source: JGN, *Attachment 7.11 - Incentive schemes*, June 2019.

[21] Zincara, *Access Arrangement 2019, JGN Capital Expenditure Review*, November 2019, p. 119.

[22] Ibid, p. 123.

13.4.2.4 Contingent payment factor

As in the Victorian CESS, JGN's proposal is that the threshold for performance below which no reward is payable for an underspend is a contingent payment factor (CPF) score of 80 (base is 100).

Our consultant's review of the calculation of performance measures is that they are relatively constant (except SAIDI). Our consultant notes that the only justification JGN has provided for its range of 80–100 for the CPF is that it is consistent with our approved Victorian CESS.

We agree with Zincara's suggestion that JGN consider and provide further rationale for its proposed range. In particular, why that range should not be 90–100. We will consider JGN's position in our final decision.[23]

13.4.2.5 Exclusion of connections capex

We accept JGN's proposal, based on stakeholder feedback, to exclude new connections capex from the capex that is subject to a CESS.

This reflects stakeholders' concern with the difference between the forecast allowance and actual/estimated connections capex (that is, $336.4 million allowance versus $480 million actual ($2019–20)) during the 2015–20 period.[24] This difference arose due to underestimated housing growth during the 2015–20 period.[25] Stakeholders took the view that connections capex is driven by market forces for both volumes and unit rates. Limiting CESS to apply to only matters that are within JGN's control is reasonable, and better targets CESS.

13.4.2.6 Overall

We note that it is not possible to identify whether the CESS will definitively result in consumers being better off. This is because there is no counterfactual outcome to compare a businesses' behaviour with a CESS, relative to its behaviour without a CESS. We are also some time away from reviewing the CESS we approved for the Victorian gas distribution businesses.

Our draft decision to apply the CESS follows from our analysis of JGN's proposal, submissions received, and with reference to our considerations of the Victorian gas distribution businesses (2018–22). We will continue to consult on its operation, monitor the outcomes and address any issues that may arise at the time of the next access arrangement review.

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23 Ibid, p. 124.

24 JGN, *2020-25 Access Arrangement Proposal, Attachment 5.1, Capital Expenditure*, p. 14.

25 JGN, *2020-25 Access Arrangement Proposal, Attachment 8.1, Overview of JGN's demand forecast*, p. 12.

For this reason, we do not approve JGN's proposal to apply a fixed principle for 10 years in relation to the CESS. Consistent with our Victorian considerations, it is premature to specify the funds that the CESS will apply too.

13.4.2.7 WACC

Our Victorian decisions used a nominal weighted average cost of capital (WACC), and averaged it over the access arrangement period.

In its 2020–25 access arrangement proposal, JGN proposes to use a different WACC for each year and in real terms. However, JGN's illustrative CESS model uses a nominal WACC (updated each year) to calculate the efficiency gains and future net present value (NPV) of these efficiency gains. It also uses a real WACC (updated each year) to calculate the yearly financing benefits which are then compounded to future NPV terms using a nominal WACC (updated each year).

JGN's illustrative model is consistent with the CESS model used for our October 2019 draft decision for SA Power Networks (SAPN).[26] The CESS model used for our October 2019 SAPN draft decision is an updated CESS model, relative to the model used in our Victorian gas distribution decisions, using a real WACC for the calculation of the financing benefits. This updated CESS model was first applied in our 2017 final determination for TransGrid and we consider is correct for the reasons set out in the TransGrid final determination (although we note that relative to the SAPN CESS, the JGN CESS also has a further contingent payment factor side constraint as discussed above).

We propose changes to the mathematical notation in clause 13 of the JGN 2020–25 access arrangement undertaking to make it mathematically consistent with JGN's illustrative CESS, that we consider is applying the CESS as intended. We will work with JGN in finalising the drafting of the 2020–25 access arrangement to ensure the CESS mathematical notation is clear and operates as intended.[27]

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[26] https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/sa-power-networks-determination-2020-25/draft-decision

[27] ECA, *Response to Jemena Gas Networks (JGN) 2020–25 Access Arrangement Proposal*, August 2019.

13.5 Revisions

We require the following revisions to make the access arrangement proposal acceptable:

Revision 13.1	Remove clauses 13.2 from the Access arrangement, JGN's NSW gas distribution network, 1 July 2020-30 June 2015.
Revision 13.2	Revise capex forecasts in clause 13.1(h)(iv) of the Access arrangement, JGN's NSW gas distribution network, 1 July 2020-30 June 2015.
Revision 13.3	Add clause 13.(i)(iv) A discount rate will be applied to account for the time value of money. This adjustment will also be required for the penultimate year of the Access Arrangement where finalised actual capex figures are not available before finalising the regulatory determination.
Revision 13.4	Schedule 9: JGN to propose revised targets at (g) by removing outliers and reviewing targets against internal targets.
Revision 13.5	Review clause 13.1(g) and provide further rationale for the proposed range, and why that range should not be 90-100.
Revision 13.6	Revise CESS mathematical formulas in clause 13 to ensure they operate as intended and the drafting is consistent with the illustrative CESS model.