



Jemena Electricity Networks (Vic) Ltd

Pass through application

Ministerial Order - Stage 2
Victorian Emergency Backstop Mechanism



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Glossary

CSIP-AUS	CSIP-AUS means the Common Smart Inverter Profile Australia, SA HB 218:2023 Handbook, published by Standards Australia on 16 June 2023 and as amended from time to time or if superseded, the document(s) listed by Standards Australia as superseding the SA HB 218:2023 Handbook
Materially	For the purposes of the application of clause 6.6.1, 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.
Regulatory change event	A change in a regulatory obligation or requirement that: <ul style="list-style-type: none"> (a) falls within no other category of pass through event; and (b) occurs during the course of a regulatory control period; and (c) substantially affects the manner in which the Transmission Network Service Provider provides prescribed transmission services or the Distribution Network Service Provider provides direct control services (as the case requires); and (d) materially increases or materially decreases the costs of providing those services.
Service standard event	A legislative or administrative act or decision that: <ul style="list-style-type: none"> (a) has the effect of: <ul style="list-style-type: none"> (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.
Network device	Apparatus or equipment that: <ul style="list-style-type: none"> (a) enables a Local Network Service Provider to monitor, operate or control the network for the purposes of providing network services, which may include switching devices, measurement equipment and control equipment; (b) is located at or adjacent to a metering installation at the connection point of a retail customer; and (c) does not have the capability to generate electricity.

Abbreviations

AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ARR	Annual Revenue Requirement
CER	Customer Energy Resources
CoES	Certificate of electrical safety
CSIP-AUS	Common Smart Inverter Profile Australia
DERMS	Distributed Energy Resources Management System
DNSP	Distribution Network Service Provider
DPV	Distributed Photovoltaic
EG	Embedded Generation
ESC	Essential Services Commission
FTE	Full-Time Equivalent
GMM	Generation Monitoring Meter
ICCP	Inter-Control Centre Communications Protocol
JEN	Jemena Electricity Networks (Vic) Ltd, ACN 064 651 083
KVA	Kilovolt-amperes
LV	Low Voltage
MVA	Megavolt-amperes
NER	National Electricity Rules
OEM	Original Equipment Manufacturer
PTRM	Post-tax Revenue Model
SCADA	Supervisory Control and Data Acquisition
SCS	Standard Control Services
TNSP	Transmission Network Service Provider
TOC	Transmission Operation Centre
VEBM	Victorian Emergency Backstop Mechanism

Overview

This submission provides Jemena Electricity Networks (Vic) Ltd's (**JEN's**) application to the Australian Energy Regulator (**AER**) to recover costs associated with the Victorian Government's new licence conditions to deliver the Victorian Emergency Backstop Mechanism (**VEBM**). This application is provided in accordance with National Electricity Rule (**NER**) clause 6.6.1.

The Victorian Government designed and mandated the VEBM to ensure all new and replacement variable distributed photovoltaic (**DPV**) systems connected to Victorian distribution networks can be remotely interrupted or curtailed when the relevant distribution network service provider (**DNSP**) is directed by the Australian Energy Market Operator (**AEMO**) in a minimum system load event.

JEN requires new systems capabilities, operating processes and customer notification arrangements to comply with the VEBM service obligations added to our licence conditions. These investments and activities were not forecast in the scope and costs allowed in our current JEN 2021-26 price determination, yet we are incurring these new costs now to comply with the 2024 VEBM stage 2 commencement date.

Our actual and forecast increase in costs to deliver the VEBM total \$15.5 (\$M Nominal) for the period to 30 June 2026. This application sets out the measures we have taken to efficiently minimise these incremental costs, and the activities we have excluded from our requested passthrough amount.

When translated into a revenue adjustment for the 2025-26 pricing year, the indicative 2025-26 bill impact of this pass through is \$11.78 for an average residential customer. This represents an increase of approximately 0.75% relative to the price set under the Victorian Default Offer.

Whilst the VEBM is a government-mandated obligation on JEN, establishing the VEBM capability will deliver benefits to our customers by:

- enabling continual uptake of photovoltaic generation, allowing customers to lower their electricity bills through self-consumption of their self-generated electricity, and
- continuing to provide a safe and secure supply that benefits all customers through the effective management of grid stability by AEMO.

1. About this pass through application

1.1 Purpose

This submission provides Jemena Electricity Networks (Vic) Ltd's (**JEN's**) application to the Australian Energy Regulator (**AER**) to recover costs associated with the Victorian Government's new licence conditions imposed on JEN to deliver the Victorian Emergency Backstop Mechanism (**VEBM**). This application is provided in accordance with National Electricity Rule (**NER**) clause 6.6.1.

1.2 About the VEBM pass through event

As Victoria progresses to its legislated net zero emissions goals, increasing penetration of variable distributed photovoltaic (**DPV**) systems¹ has seen record minimum operational demand levels and an increasing risk of minimum system load emergency events in our state.

In response, the Victorian Government has designed and mandated the VEBM. The VEBM requires that all new and replacement DPV systems connected to Victorian distribution networks can be remotely interrupted or curtailed when the relevant distribution network service provider (**DNSP**) is directed by the Australian Energy Market Operator (**AEMO**) in a minimum system load event. AEMO directions will only be made when AEMO deems these as necessary to maintain whole of system security.

DNSPs require new systems capabilities, operating processes and customer notification arrangements to comply with the service obligations added to our licence conditions to implement the VEBM by the government's ambitious yet necessary timeframes.

More recently, JEN has been considering what future dynamic control capabilities we would need to integrate increasing levels of DPV and customer energy resources (**CER**) into our network in the future. However, we had not forecast the costs of deploying the functionality required by the VEBM during this 2021-26 regulatory control period. To implement these changes, JEN will necessarily incur additional costs and seeks to recover these through the cost recovery mechanism outlined in the JEN 2021-26 price determination.² Our incremental cost assessment approach is further discussed in section 3.2.4.

1.3 Relevant rules and regulatory instruments

1.3.1 VEBM regulations

The VEBM is being implemented in two stages:

- Stage 1 commenced on 25 October 2023 and applied to new and replacement DPV systems with a generating capacity greater than 200 kilovolt-amperes (**kVA**) and no more than 30 megavolt-amperes (**MVA**), requiring that from 1 January 2024, these be capable of remote interruption or curtailment by the relevant DNSP. Costs associated with this stage are not included in this application. Instead, JEN has absorbed the necessary costs to comply with this new obligation.
- Stage 2 currently commences on 1 July 2024 and applies to new and replacement distributed photovoltaic systems with a generating capacity of 200 kW and below.

The Victorian Government implemented the VEBM via two Ministerial Orders under section 33AB of the Electricity Industry Act 2000 (**the VEBM Orders**):

- Ministerial Order specifying licence condition 2023 (No.1) (**Stage 1 Order**) in Victoria Government Gazette No. S 542 Wednesday 11 October 2023 (Appendix B)

¹ Referred to as relevant embedded generating units in the VEBM Orders.

² AER, *Final decision - Jemena distribution determination 2021-26 - Attachment 15 - Pass through events*, April 2021.

- Ministerial Order specifying licence condition 2024 (**Stage 2 Order**) in Victoria Government Gazette No. S 31 Wednesday 31 January 2024 (Appendix B).

Our new VEBM licence conditions are enforced by the Victorian Essential Services Commission (**ESC**) and the VEBM Orders establish annual reporting obligations on us to support this.

At the time of submission, The Minister for Energy and Resources has issued an amending order for consultation³ that seeks to:

- Continue the current Stage 2 Order obligation for clauses 1,2, 3, 4 and 5(4), *and*
- Defer the commencement date for all other obligations in the Stage 2 Order until 1 October 2024.

Although the amending order is not finalised at the time of this submission, JEN has assessed the impacts of this change and determined that it has no bearing on the costs associated with this application. Further, despite being an amending order, JEN considers the commencement date of the Stage 2 Order has not changed.

1.3.2 NER pass through rules

NER clause 6.6.1 establishes the requirements and process for DNSPs and the AER to administer price adjustments for eligible cost pass through events. Relevant to this application, this clause establishes:

- the eligible pass through events, requirements for a positive pass through event application,
- arrangements for the timing of an application and the AER’s decision thereon,
- consultation requirements on the AER, and
- the relevant factors the AER will consider when deciding upon a cost pass through application.

1.4 Structure of this application

This application is structured to address the NER clause 6.6.1 requirements:

- Section 2 details the positive pass through event and the required eligible pass through amount
- Section 3 details the incremental costs that JEN is incurring as a result of the positive pass through event and addresses the cost related rule requirements.

This application is supported by the following appendices:

- Appendix A provides a compliance checklist
- Appendix B provides the VEBM Orders
- Appendix C provides JEN’s expenditure build-up model
- Appendix D provides our approach to calculating the cost past through amount
- Appendix E provides descriptions of new job roles
- Appendix F provides a confidential description of our software procurement approach
- Appendix G provides our claims for confidentiality over this submission.

³ <https://engage.vic.gov.au/victorias-emergency-backstop-mechanism-for-rooftop-solar>

1.5 Next steps

JEN's next steps relating to the VEBM include:

- Implementing our compliant stage 2 solution by the commencement date for that solution
- Adjusting our 2025-26 tariffs for the outcome of this pass through application
- Implementing our ongoing customer notification and system availability monitoring processes
- Implementing our annual reporting obligations
- Including the ongoing costs of delivering the VEBM capabilities from 1 July 2026 in our 2026-31 electricity distribution price review proposal.

2. What we are seeking and why

This section explains the eligibility trigger for this pass through application. It then steps through the costs we are seeking to recover and how these costs affect our required revenue adjustment and customer prices. Finally, this section notes how our new capabilities necessary to meet this Victorian government mandate will benefit customers.

2.1 The VEBM event changes our obligations and costs

The VEBM event occurred on 31 January 2024 when the Stage 2 Order was gazetted; this event was not contemplated when our 2021-26 price determination was made. The changes create new obligations and costs necessarily incurred relative to the service scope and funded activities in the 2021-26 determination by imposing new license obligations on us which we must comply with this year.

The new obligations and our associated incremental costs to meet these are detailed in section 3.1.

2.2 Form of eligible pass through

The Victorian Government's mandating of the VEBM as new licence obligations on Victorian DNSPs via the VEBM Orders represents a **service standard event** as defined in NER Chapter 10 and provided for in clause 6.1.1(a1)(2) that has occurred during the course of the current regulatory control period.

The VEBM, as enacted through the two VEBM Orders made under section 33AB(1)(a) and 33AC(1)(c) of the Electricity Industry Act 2000, is a legislative act that:

- imposes new minimum service standards regarding the connection of photovoltaic microgeneration units up to 30MVA
- alters the scope of the direct control services provided by Victorian DNSPs during the course of the current regulatory control period
- materially increases the costs of providing those services during the course of the current regulatory control period.

The new minimum services standards outlined in the Stage 2 Order include the requirement for DNSPs and connecting embedded photovoltaic generating units to have remote communication capabilities that allow for DNSP interruption or curtailment of photovoltaic embedded generation. In some circumstances under the Stage 2 Order, these minimum service standards are prescribed as CSIP-AUS, while other connecting embedded generating units may be required to comply with other non-prescribed minimum standards (for example, the ability to communicate through our supervisory control and data acquisition or **SCADA** system).

The new obligations and our activities required to meet these are detailed in section 3.1.

We note that in circumstances where the AER considers our new VEBM licence obligations do not qualify as a service standard event, this application also seeks approval of a **regulatory change event** as defined in NER Chapter 10 and provided for in clause 6.1.1(a1)(1). As this application demonstrates, the VEBM orders are a change in a regulatory obligation or requirement that:

- occurs during the course of a regulatory control period; and
- substantially affects the manner in which the JEN as a DNSP provides direct control services; and
- materially increases the costs of providing those services during the course of the current regulatory control period.

2.2.1 Date the positive change event occurred

For the purpose of this application and compliance with NER clause 6.6.1(c), 31 January 2024 is the date on which the positive change event occurred. This is the date of the gazetting of the Stage 2 Order, which represents the finalisation of all the changes to licence conditions in relation to the VEBM. The licence condition changes are the service standard event trigger, and to fully understand the extent of the service standard event it is necessary to complete the licence condition changes for both stages.

The 90 business day compliant period for lodging this pass through application concludes on 11 June 2024 after accounting for the following Victorian public holidays: Labour Day, Good Friday, Saturday before Easter Sunday, Easter Sunday, Easter Monday, ANZAC Day and King's Birthday.

This application was submitted on 7 June 2024.

2.3 Costs we need to recover

The actual and likely increase in costs JEN will incur that have driven the positive pass through amount involve total expenditure of \$15.5 (\$M Nominal) for the period to 30 June 2026. A breakdown of these costs by expenditure type and year is provided in Table 2–1.

Table 2–1: Total incremental VEBM expenditure to 30 June 2026 (\$k Nominal)

Expenditure type	2023-24	2024-25	2025-26	Total
Operating expenditure	197.9	2,398.8	2,779.1	5,375.8
Capital expenditure	6,458.9	3,686.7	0.0	10,145.6
Total expenditure	6,656.7	6,085.6	2,779.1	15,521.4

2.3.1 Costs exclusions

These costs do not include any:

- amount in respect of expenditure for a restricted asset as required by NER clause 6.6.1(c1)
- amount relating to an approved contingent project—JEN did not have a contingent project relating to the VEBM in its 2021-26 revenue determination
- amounts that will be recovered through alternative control services or negotiated services—JEN is not seeking recovery under this application where the curtailment functionality is installed as a part of a connection made under a negotiation connection offer. In this case, Stage 2 Order costs for the cost recovery of the non-market metering costs—as noted in 3.1.1.2—will be recovered as part of the negotiated connection offer
- costs relating to the Stage 1 Order
- costs of existing staff who have worked on the project where those staff have not been backfilled, nor the cost associated with deferring other projects to meet the obligations under the Stage 2 Order.

JEN is not seeking recovery of these costs as a part of this cost pass-through application.

2.3.2 Meeting the materiality threshold

For the purpose of a positive passthrough event under NER clause 6.6.1, the NER defines a cost variation as being **materially** higher if the change in costs (as opposed to the revenue impact) that a DNSP has incurred and is likely to incur, in any year of a regulatory control period, as a result of the event, exceeds 1% of the annual revenue requirement (**ARR**) for the DNSP for that regulatory year.

The additional operating expenditure and capital expenditure arising from meeting our new VEBM obligations greater than 1% of our ARR established in the PTRM from the AER's revenue determination for our current regulatory control period.

Table 2–2 shows how we will incur a material change in costs due to the VEBM service standard event.

Table 2–2: Total incremental VEBM expenditure to 30 June 2026 (\$ million, nominal)

Expenditure type	2023-24	2024-25	2025-26
Total expenditure	6.66	6.09	2.779
Annual revenue requirement	269.66	278.39	281.40
Materiality	2.5%	2.2%	1.0%

2.4 Revenue and pricing impacts

The incremental costs of our new capabilities required to meet this Victorian government mandate have been transposed into revenue and price impacts below.

2.4.1 Pass through amount

We have calculated the proposed positive pass amount as the change in our required revenues for the 2021-26 regulatory period due to the positive change event. That is, our proposed positive pass through amount incorporates the operating expenditure, return on capital and return of capital, as well as consequential tax allowance changes for the 2021-26 regulatory period arising from the incremental VEBM compliance expenditure.

We used the Standard Control Services (**SCS**) PTRM used for the 2024-25 pricing year with the incremental capital expenditure and operating expenditure—as noted in this application—to determine a new smoothed ARR. We then deducted the smoothed ARR from a version of the PTRM without the incremental operating expenditure and capital expenditure included to calculate the pass through amount. This model is provided as Appendix D with this application. Based on this approach, we have calculated the required positive pass through amount to be \$8.6 million (\$Nominal).

2.4.2 Indicative price impacts

As noted in Appendix D, the impacts to customer bills are constrained to the last regulatory year of the 2021-26 regulatory control period. Based on this, the indicative 2025-26 bill impact of this pass through is \$11.78 for an average residential customer. This represents a 2.6% increase in Standard Control Services charges for a residential customer, which equates to an increase of approximately 0.75% relative to the Victorian Default Offer prices.

2.5 How compliance with the VEBM benefits our customers

Whilst the VEBM is a government-mandated obligation on JEN, we note that establishing the capability to deliver the VEBM will deliver the following benefits to our customers. It:

- enables continual uptake of photovoltaic generation, allowing customers to lower their electricity bills through self-consumption of their self-generated electricity, and
- continues to provide a safe and secure supply that benefits all customers through the effective management of grid stability by AEMO.

3. How our requested costs meet the passthrough rules

Appendix A provides a compliance checklist for how our application and supporting materials meet the rule requirements. This section addresses rules 6.6.1(c)(6)(i) and 6.6.1(c)(6)(ii). In it we set out the new obligations, our approach to meeting those obligations, how we have costed of those obligations, and how we have minimised those costs and ensured they are only incremental SCS costs.

3.1 Activities to comply with our new licence obligations

3.1.1 Establishing or altering a connection of a relevant photovoltaic microgeneration unit

3.1.1.1 What this requires

Under clause 5 of the Stage 2 Order JEN must:

- not establish or alter a connection with a relevant photovoltaic microgeneration unit to our distribution system unless we are satisfied that the relevant photovoltaic microgeneration unit is emergency backstop enabled (clause 5(1))
- for the relevant photovoltaic microgeneration unit between 30 and 200 kVA capacity, an alternative VEBM can be deployed if JEN “is satisfied that the licensee is capable of remotely interrupting or curtailing electricity generation by the unit despite not being emergency backstop enabled” (clause 5(2)(b))
- operate a utility server capable of remotely interrupting and curtailing electricity generation by an emergency backstop enabled relevant photovoltaic microgeneration unit connected to our distribution system (clause 5(4))
- implement a process to monitor whether emergency backstop enabled relevant photovoltaic microgeneration units remain emergency backstop enabled and whether the licensee is capable of remotely interrupting or curtailing electricity generation by relevant photovoltaic microgeneration units (clause 5(5))
- not remotely interrupt or curtail electricity generation by an emergency backstop enabled relevant photovoltaic microgeneration unit unless directed to do so by AEMO, to test capability or for reasons agreed with the microgeneration unit owner (clause 5(6))
- include terms in its model standing offer, connection offer, connection contract or connection agreement to give effect to the Stage 2 Order stating that JEN may remotely curtail or interrupt the unit and the process we will follow to advise the owner or operator when the unit will be or has been curtailed (clause 5(7)).

3.1.1.2 How we will deliver this capability

JEN is delivering this capability via three key workstreams:

1. Digital systems, which comprise the design and implementation of:
 - LV Distributed Energy Resources Management System (**DERMS**) and Utility Server for the CSIP-AUS technology. CSIP-AUS enables control (trip, restore, setpoint) and monitoring capabilities over the public internet, allowing JEN to directly or indirectly communicate with photovoltaic generation inverters using a new JEN CSIP-AUS Utility Server and LV DERMS. CSIP-AUS is the preferred solution for photovoltaic generation inverters of up to and including 200kVA.

- Generation Monitoring Meters (**GMMs**) are being deployed concurrently with CSIP-AUS and adopted as an alternative method to comply with VEBM requirements—applicable for contestable revenue meter installations—for customers without a reliable internet connection or for non-inverter-based embedded generators. When connecting embedded generation using GMM, JEN will install a dedicated Vic AMI Current Transformer meter as a non-market meter. The GMM has control (trip and restore) capability and monitoring capability. As the GMM is a JEN-owned AMI meter, it interfaces directly into JEN’s existing AMI meshed radio communications network. The GMM’s internal load contactor is used to trip and restore the main contactors of the customer’s inverter. This meter is for its control and switching capabilities only; it is not used for meter data provision purposes.
- Modification of existing Electricity Distribution Portal and implementation of new CSIP-AUS Capability Commissioning Portal to enable photovoltaic embedded generation installers or customers to submit new required information and perform commissioning test of inverters.
- Establishment of Inter-Control Centre Communications Protocol (**ICCP**) with the Transmission Network Service Provider (**TNSP**) Transmission Operation Centre (**TOC**) to enable JEN’s Network Operation to manage and respond to AEMO direction through the TNSP TOC via the SCADA link for real-time information.

2. Change, communication and engagement, which comprises of:

- Developing change impact assessment and preparing plans to engage external and internal stakeholders
- Developing and implementing a resource plan for the project and ongoing performance of activities to meet VEBM requirements
- Working with external stakeholders including, but not limited to, AEMO, Victorian Government, Victorian DNSPs, Original Equipment Manufacturers (**OEMs**), installers and retailers, to plan, prepare and communicate information relating to VEBM
- Working with internal stakeholders within JEN to plan, prepare, communicate and train affected teams as a result of VEBM
- Developing and implementing the new operating model for the end-to-end process change.

3. Strategies, guidelines and documents, which comprise developing and implementing:

- strategies to ensure the digital solutions can continue to deliver against the forecast inverter volume increase to maintain compliance
- JEN’s positions, strategies and procedures to ensure OEMs, installers, and customers adhere to JEN’s procedures
- Industry guidelines, standards, connection agreements, customer support documents and training materials relating to VEBM and its ongoing compliance.

3.1.1.3 How we have costed this activity

To calculate the costs of these activities, we have undertaken several steps to ensure prudent and efficient levels of investment in systems and processes to comply with the Stage 2 Order requirements. These steps include:

- Identifying and selecting systems capable of complying with the obligations within the timeframes—we elaborate on this process in sections 3.2.2 and 3.2.3
- Identifying the resources and effort required to develop communications and documentation and then apply efficient resource rates using the process outlined in section 3.2.1 to determine efficient costs.

3.1.2 Administering notification requirements when interrupting or curtailing generation

3.1.2.1 What this requires

Under clause 6 of the Stage 2 Order, JEN must notify a customer when remotely curtailing or interrupting that customer's embedded generating unit. This must be done in accordance with the following requirements that differ based on the trigger for the interruption or curtailment:

- if following direction from AEMO, JEN must—as soon as practical—publish a notice in a prominent part of our website with information on the nature of the interruption (clause 6(1))
- if to carry out tests, or for other agreed upon reasons which result in a customer's generation being interrupted for a cumulative total of more than 15 minutes within a 48-hour period, we must give affected customers at least 48 hours written notice of the test via the customer's nominated preferred method of communication identified under clause 11.4.1 of the Electricity Distribution Code of Practice or electronically if no preference has been nominated, or in accordance with explicit informed consent in the relevant customer's contract or agreement (clause 6(2)).

We must also inform the customer if we determine their internet connection is down and they are unable to communicate with JEN's systems (clause 7(1)(d)).

3.1.2.2 How we will deliver this capability

Under JEN workstreams “change, communication and engagement” and “strategies, guidelines and documents”, JEN will:

- conduct internal training to ensure our Network Operation and other affected teams follow the right work instructions and procedures to notify customers:
 - when remotely curtailing or interrupting a customer's relevant embedded generating units following an emergency event as directed by AEMO; or
 - when giving at least 48 hours written notice if JEN carries out regular VEBM tests which result in a customer's generation being interrupted for a cumulative total of more than 15 minutes within a 48-hour period.
- develop and prepare training materials, which include work instructions for unplanned and planned outages of a customer's generation unit that falls within the scope of the Stage 2 Order and the notification processes.

JEN will also implement the requisite systems changes necessary to fulfil these obligations. In addition, JEN will implement communication mechanisms to inform customers about testing via their preferred communication needs and inform them when their internet communication is down and they are unable to communicate with JEN's systems.

3.1.2.3 How we have costed this activity

To fulfil this requirement, JEN has costed the new full-time equivalent (**FTE**) resources in each the project implementation, manual establishment and ongoing automated phases of the project to:

- develop technical work instructions and monitor, manage and report ongoing technical compliance (i.e., technical compliance management and reporting). Note: this new resource is delivering requirements under clauses 5, 6, 7 and 8

- develop customer factsheets, notification work instructions, communication and liaison plans for customers (i.e., customer communication and liaison management). Note: this new resource is delivering requirements under clauses 5, 6 and 7
- perform day-to-day planning by the Network Operations team managing and operating the VEBM scheme in coordination with AEMO and the TNSP's TOC (i.e. network operations). Note: this new resource is delivering requirements under clauses 5 and 6.

JEN has also factored in the incremental cost of communicating with customers using their preferred communication needs per the Electricity Distribution Code of Practice. For most of JEN's customers, no preferred method has been nominated, and the default communication method (mail) is adopted. JEN has estimated mailing costs in this application.

3.1.3 Establishing customer related procedures

3.1.3.1 What this requires

Under clause 7 of the Stage 2 Order JEN must establish customer procedures for the process we will take to establish compliance or notify a customer of non-compliance prior to connection of relevant units, and the processes for testing and future notification of non-compliance. These procedures must be published on our website, updated from time to time, and we must notify the ESC when they are updated or amended.

3.1.3.2 How we will deliver this capability

Under JEN workstreams “change, communication and engagement” and “strategies, guidelines and documents”, JEN will:

- prepare procedures for embedded generation emergency backstop requirements, outlining the requirements and related processes and procedures JEN has implemented for external stakeholders, i.e., inverter OEMs, customers, and installers, in relation to Embedded Generation (**EG**) and VEBM systems
- engage with OEMs to ensure they implement the changes, for example, complete the inverter validation test with JEN Utility Server and prepare other changes, including their Portal, to support the installers
- develop training materials for installers to ensure they follow the new processes and comply with new VEBM requirements
- develop factsheets and other related VEBM requirements for customers.

These procedures will be supported by system changes necessary to comply with the obligation.

3.1.3.3 How we have costed this activity

This has been costed as explained above in section 3.1.2.3.

3.1.4 Meeting our reporting obligations

3.1.4.1 What this requires

Under clause 8 of the Stage 2 Order, JEN must include—in its distribution system planning report submitted to the ESC in accordance with the Electricity Distribution Code of Practice—details of:

- any interruption or curtailment of electricity generation

- the number of connections of relevant photovoltaic microgeneration units to our distribution system that are emergency backstop-enabled
- the aggregate capacity in megawatts of all relevant photovoltaic microgeneration units in our distribution system that are emergency backstop enabled.

3.1.4.2 How we will deliver this capability

JEN will deliver this capability through its reporting function within the new digital systems developed, particularly the LV DERMS, Utility Server, and GMM systems. This new reporting requirement will be published in JEN's Distribution Annual Planning Report each year.

3.1.4.3 How we have costed this activity

A new FTE resource has been allocated under “technical compliance management and reporting” to deliver this new requirement, among other obligations contained within the Ministerial Order.

New FTE resources have also been allocated to digital workstreams to maintain the new digital systems accordingly. The reporting function is one of the many functions that must be maintained.

3.1.4.4 Our forecast costs

We have not forecast any incremental cost for this activity given data will be available from the systems captured above and our existing staff will continue to prepare our Distribution Annual Planning Report.

3.2 How we have minimised our costs while achieving compliance

In addition to adopting an activity scoping exercise that ensures only incremental activities required for VEBM compliance are included (as described in section 3.1 above), we have also worked to ensure that our costs for delivering those activities in a timely and compliant way are efficient. This section explains how our approaches to resourcing, technology selection, procurement and cost exclusions have achieved this.

3.2.1 Resourcing approach

JEN has taken a prudent approach to resources using a blend of JEN employees allocated to the project, supplemented by consultants and/or contractors. This approach seeks to deliver the most efficient outcomes when matching the role type with the required task.

Consultants and contractors have been onboarded at competitive market rates. For ongoing or future work, we used benchmarking unit rates from Hays salary guide using the same principles that apply to developing our regulatory proposals.

Staff have sought expert advice from vendors, experts who have had experience in deploying control systems and OEMs, drawn down from prior system deployment experience and sought expertise on scoping obligations against the Stage 2 order requirements to determine the optimal resourcing model. A description of each role is outlined in Appendix E.

3.2.2 Technology selection

As explained in Section 3.1, the digital systems we've developed are minimal viable products that meet our new licence obligations. The technologies selected include:

- CSIP-AUS technology, which is prescribed within our new licence obligation. The Utility Server is a gateway communication with customers' inverters, and LV DERMS provides the required functions to manage and coordinate large volumes of inverters across JEN efficiently
- GMM technology is an alternative technology where CSIP-AUS cannot be suitably implemented for customers, and we leverage our existing AMI infrastructure to deliver an efficient solution for customers
- The existing Electricity Distribution Portal modification and the new CSIP-AUS Capability Commissioning Portal are minimal viable products that we require for customers to submit their information and perform commissioning tests of inverters
- Establishing ICCP with the TNSP's TOC using our existing SCADA technology is also a minimal viable product for effectively communicating real-time information with AEMO via the TNSP's TOC.

3.2.3 Procurement approach

JEN conducted a market scan throughout 2023 to determine if known vendors had an offering in the market that would meet the CSIP-Aus Utility Server (and associated LV DERMS) requirements being introduced by the Victorian Government under the proposed ministerial order.

Our market testing approach and resulting vendor assessment are provided in Appendix F.

3.2.4 Costs that have been excluded

As noted in the section 2.3.1, we have sought to minimise costs by excluding costs that are recoverable through alternative control services or negotiated services.

In relation to the Stage 2 Order:

- JEN does not have a regulatory allowance for a system or services to comply with the new obligations. With the CSIP-AUS standard required in the Stage 2 Order (namely, SA HB 218:2023 Handbook) not being released until after the 2021-26 determination was made, it was not possible to have contemplated the standard at the time of submitting the 2021-26 regulation proposal.
- JEN has not asked for nor received an operating expenditure step change in its 2021-26 regulatory determination for the operating expenditure items asked for in this submission, nor was the required operating expenditure included in the base year adopted for the 2021-26 determination.

Appendix A Compliance checklist

Compliance checklist

A1. How this submission addresses the rules

This appendix provides summary information outlining how this pass through application submission and supporting materials comply with the NER pass through provisions (as set out in CI 6.6.1). It references where the relevant information can be found.

Table A1–1: Pass through application compliance checklist

NER clause	Requirement	Compliance demonstration	See
6.6.1(a1)	(a1) Any of the following is a pass through event for a distribution determination: (1) a regulatory change event; (2) a service standard event; (3) a tax change event; (4) a retailer insolvency event; and (5) any other event specified in a distribution determination as a pass through event for the determination.	This application seeks approval of incremental cost recovery for a service standard event for the VEBM. In circumstances where the AER considers our new VEBM licence obligations do not qualify as a service standard event, this application seeks approval of a regulatory change event.	Section 2.2
6.6.1 (a)	If a positive change event occurs, a Distribution Network Service Provider may seek the approval of the AER to pass through to Distribution Network Users a positive pass through amount.	This application demonstrates how JEN is incurring materially higher costs to comply with the new licence obligations arising from the Stage 2 Order.	Whole application including supporting materials
6.6.1 (c)	To seek the approval of the AER to pass through a positive pass through amount, a Distribution Network Service Provider must submit to the AER, within 90 business days of the relevant positive change event occurring, a written statement.	This application provides evidence on the period over which the Victorian Government introduced the VEBM through a staged approach, where the event occurred on release of the final stage on 31 January 2024, when JEN's full obligations were known for the purpose of optimised compliance planning and costing, and for the purposes of the pass through application. This application was lodged within the 90 business day timeframe	Section 2.2.1
6.6.1(c)(1)	A written statement must specify the details of the positive change event	The Stage 2 Order establishes the positive change event.	Section 2.1
6.6.1(c)(2)	A written statement must specify the date on which the positive change event occurred	The event occurred on 31 January 2024 when the Stage 2 Order was gazetted.	Section 2.1
6.6.1(c)(3)	A written statement must specify the eligible pass through amount in respect of that positive change event	The incremental costs to the end of the current regulatory control period are provided and the resulting revenue adjustment for the pass through amount is provided.	Section 2.4.1
6.6.1(c)(4)	A written statement must specify the positive pass through amount the Distribution Network Service Provider proposes in relation to the positive change event	We have identified the required revenue variation in 2025-26.	Section 2.4.1

NER clause	Requirement	Compliance demonstration	See
6.6.1(c)(5)	A written statement must specify the amount of the positive pass through amount that the Distribution Network Service Provider proposes should be passed through to Distribution Network Users in the regulatory year in which, and each regulatory year after that in which, the positive change event occurred	We have identified the required revenue variation in 2025-26, which is the only year in which prices will be affected by this application.	Section 2.4.1
6.6.1(c)(6)(i)	A written statement must specify evidence of the actual and likely increase in costs	We have set out the new obligations, our approach to meeting those obligations, costing those obligations, the resulting incremental costs and how we have minimised those costs and ensured they are only incremental SCS costs.	Section 3
6.6.1(c)(6)(ii)	A written statement must specify evidence that such costs occur solely as a consequence of the positive change event		
6.6.1(c)(6)(iii)	A written statement must specify evidence in relation to a retailer insolvency event	This application does not relate to a retailer insolvency event.	n/a
6.6.1(c)(7)	A written statement must specify such other information as may be required under any relevant regulatory information instrument	We have provided an updated version of the AER's PTRM.	Appendix D
(6) (c1)	The positive pass through amount proposed by the Distribution Network Service Provider under subparagraph (c)(4) must not, in whole or in part, be in respect of expenditure for a restricted asset, unless the Distribution Network Service Provider has submitted an exemption application with the statement under paragraph (c), which requests an asset exemption under clause 6.4B.1(a)(3) in respect of that asset or class of asset for the positive pass through amount.	Our application does not include any such expenditure.	Section 2.3.1

Appendix B

Victorian Emergency Backstop Mechanism Orders

B1. Stage 1 order

Refer to attachment A of this submission.

B2. Stage 2 order

Refer to attachment B of this submission.

Appendix C

Expenditure Model

C1. Expenditure model

Refer to attachment C [REDACTED]

Appendix D

Calculating the cost pass through amount

D1. Calculating the cost pass through amount

JEN has undertaken the following steps to calculate the cost pass through amount:

- (1) Determined the incremental operating expenditure and capital expenditure for the 2021 to 2026 regulatory control period necessary to comply with the new requirement.
- (2) Added the expenditures—by year—to JEN's 2021-26 Post-tax Revenue Model (**PTRM**) update incorporating the eligible pass through amount. This update was based on the approved version of our PTRM model which incorporates the 2024-25 return on debt update.
- (3) Recalculated the smoothed annual revenue requirement based on the new costings, ensuring the incremental revenue recovery only applies in the years which annual distribution tariffs have not been approved. This approach is necessary as it is not possible to update approved distribution tariffs. In the present case, it is only the 2025-26 regulatory year in which the smoothed annual revenue requirement changes apply using the above-noted approach.
- (4) Subtracted the updated smoothed ARR from the original version of the PTRM to determine the cost pass through amount.

The models used to undertake this exercise are:

- Attachment D - AER - JEN 2021-26 Final Decision SCS PTRM - 2024-25 RoD update – baseline.xlsm
- Attachment E - AER - JEN 2021-26 Final Decision SCS PTRM - 2024-25 RoD update – update.xlsm

The difference in the smoothed revenue requirement between these two models—representing the cost pass through amount—is provided in section 2.4.1.

Appendix E

Role descriptions

E1. Role descriptions

A brief description of each role involved in managing the backstop mechanism is outlined in Table E1 below.

Table E1–1: Role descriptions

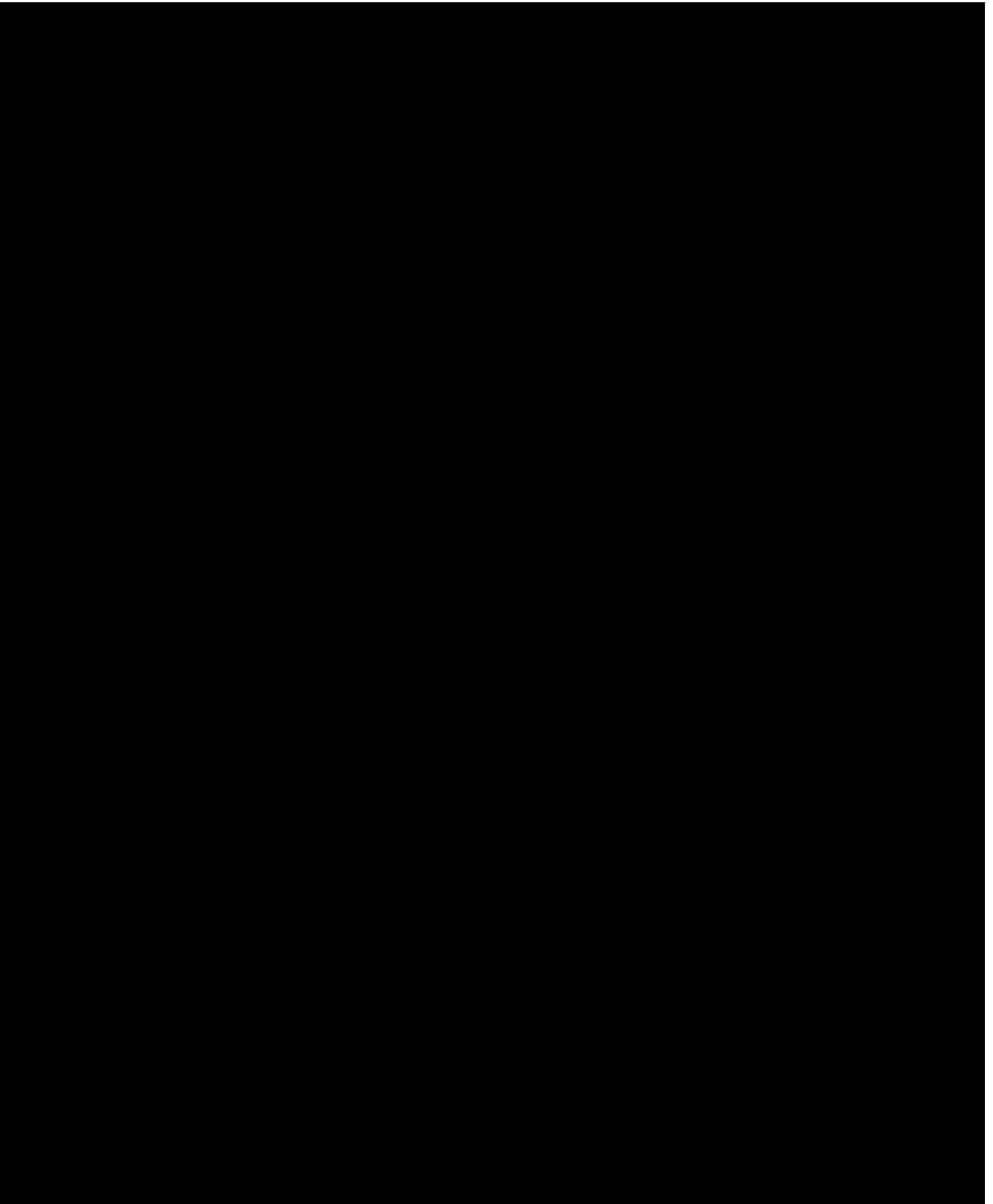
Role Title	Included in application	Description
Customer service support officer	Yes	Startek team members will work to review and validate approx. 20-30 embedded generation applications a day. Validation activity includes reviewing the Certificate of Electrical Safety (CoES) to ensure completeness, reviewing the inverter settings screenshots to ensure the installer has applied them compliantly, and facilitating CSIP-Aus commissioning steps with the JEN back-of-house digital teams. Startek will also be available to take any phone calls from installers or customers seeking assistance or guidance along the connection journey.
Team Leader	Yes	The Team leader is required to help manage day to day operations, activities, and work allocation of the Startek customer service support team. The Team leader is responsible to ensure all assessments and commissioning activities are actioned within an agreed, reasonable timeframe, and serve as an escalation pathway for any customer enquiries.
Senior Future Network Engineer	Yes	The Senior Future Network Engineer delivers technical compliance management & reporting - Future Network, which covers specific technical compliance management and reporting activities under clauses 5(5), 5(6), 6(1), 6(2), 7 and 8 of Stage 2 Order. Refer to sections 3.1.1.2, 3.1.2.2, 3.1.3.2 and 3.1.4.2 on how JEN will deliver this capability.
Commercial Lead – Grid Stability	Yes	Provides ongoing support of OEM onboarding process.
Senior Commissioning Engineer	Yes	Emergency Backstop Commissioning - Basic Connection Which covers the capability and capacity required to commission inverters onto the Utility Server and LV-DERMs to meet the requirements of 5(1), 5(2).
Senior Commissioning Engineer	No	Emergency Backstop Commissioning - Negotiated Connection Covers the SCADA capability required for the design, configuration, testing and support of the SCADA integration for negotiated connections.
Senior DERMs Specialist	Yes	Provides ongoing systems support (CSIP-Aus - DERMS), which covers the support required to ensure the Utility Server / LV DERMs platform remains compliant with the requirements to have a fully functional Utility Server and LV-DERMs platform. To meet the requirements of 5(1), 5(2), 5(4), 5(5).
AWS Cloud Engineer	Yes	Provides ongoing systems support (CSIP-Aus - AWS Cloud), which covers the support required to ensure the integrity of the Cloud Services dependencies upon the Utility Server and the LV-DERMs. To meet the requirements of 5(1), 5(2), 5(4).
Senior Operation Engineer	Yes	Bridges the operations between the operations operational.
Project Manager	No	The Negotiated Connection (greater than 30kVA) project manager, manages the cost estimation and delivery of any network augmentation required to enable the connection (for example, comms cable, field commissioning, modem installations and meter installations).

Role Title	Included in application	Description
Senior Commissioning Engineer	No	SCADA/Communication field installation & commissioning- Negotiated connection, which covers field works for negotiated connections to fulfil the specific obligations under clauses 5(1) and 5(2) of Stage 2 Order. Refer to section 3.1.1.2 on how JEN will deliver this capability.
Senior Network Planning Engineer	No	Network Planning - Negotiated Connection covers the additional scoping activities for negotiated connections to fulfil the specific obligations under clauses 5(1) and 5(2) of Stage 2 Order. Refer to section 3.1.1.2 on how JEN will deliver this capability.
Senior GMM s Specialist	Yes	Provides on-going GMM systems support and testing which covers the additional capability and activities required for the GMM system support (monitoring, upkeep) and execution of the GMM integration workflows to meet the requirements of clauses 5(1), 5(2).

Appendix F

Software selection

F1. Software selection



Appendix G

Claims for confidentiality

G1. Claims for confidentiality

The following table identifies specific sections of this passthrough submission that JEN claims to be commercial-in-confidence and the basis of the claim. These claims are consistent with the requirements set out in the AER's Confidentiality Guideline (August 2017).

JEN has provided reasons detailing how and why disclosure of the information would cause detriment to the business. JEN understands that this confidential information being available to the AER to perform its functions under the rules provides a public benefit, and has assessed that, in all identified cases, JEN's confidentiality reasons, together with the benefits already realised through the AER's confidential use of this data, are not outweighed by any additional public benefit to disclosure of the information.

Table G1–1: Claims for confidentiality.

Document title	Title, page and paragraph number	Description of the confidential information	Topic the confidential information relates to	Confidentiality category	Why the confidential information falls into the selected category	How and why detriment would be caused from disclosing the confidential information	Reasons supporting why the identified detriment is not outweighed by the public benefit
Jemena Electricity Networks (Vic) Ltd Pass through application Ministerial Order - Stage 2 Victorian Emergency Backstop Mechanism (this document)	s. 3.2.3	Information about vendor and product selection	Procurement approach Vendor assessment	Market-sensitive information	Information gathered through tendering processes is commercial in confidence and maintaining confidentiality ensures rigour to commercial negotiations	Public disclosure could impact Jemena's ability to procure resources in the future, meaning customers may be more exposed to higher costs in the future.	While the detriment of publishing the information is clear, JEN is not aware of any material incremental benefit from the AER publishing this information, as opposed to using it on a confidential basis.
Jemena Electricity Networks (Vic) Ltd Pass through application	Whole model	Information about the procured service engaged	Outcomes of the procurement approach	Market-sensitive information	Information gathered through tendering processes is	Public disclosure could impact Jemena's ability to procure resources	While the detriment of publishing the information is clear, JEN is not aware of

Document title	Title, page and paragraph number	Description of the confidential information	Topic the confidential information relates to	Confidentiality category	Why the confidential information falls into the selected category	How and why detriment would be caused from disclosing the confidential information	Reasons supporting why the identified detriment is not outweighed by the public benefit
Ministerial Order - Stage 2 Victorian Emergency Backstop Mechanism (Attachment C - Jemena - Stage 2 backstop cost pass through model – SUBMISSION.xlsx)		through competitive terming processes			commercial in confidence and maintaining confidentiality ensures rigour to commercial negotiations.	in the future, meaning customers may be more exposed to higher costs in the future.	any material incremental benefit from the AER publishing this information, as opposed to using it on a confidential basis.

Table G1–2: Proportion of confidential material

Submission Title	Number of pages of submission that include information subject to a claim of confidentiality	Number of pages of submission that do not include information subject to a claim of confidentiality	Total number of pages of submission	Percentage of pages of submission that include information subject to a claim of confidentiality	Percentage of pages of submission that do not include information subject to a claim of confidentiality
Jemena Electricity Networks (Vic) Ltd Pass through application Ministerial Order - Stage 2	1	37	38	2.6%	97.4%

Submission Title	Number of pages of submission that include information subject to a claim of confidentiality	Number of pages of submission that do not include information subject to a claim of confidentiality	Total number of pages of submission	Percentage of pages of submission that include information subject to a claim of confidentiality	Percentage of pages of submission that do not include information subject to a claim of confidentiality
Victorian Emergency Backstop Mechanism (this document)					
Networks (Vic) Ltd Pass through application Ministerial Order - Stage 2 Victorian Emergency Backstop Mechanism (Attachment C - Jemena - Stage 2 backstop cost pass through model – SUBMISSION.xlsx ⁴)	8	0	8	100%	0%

⁴ For the purposes of claiming confidentiality, we interpret each worksheet in the spreadsheet to represent one page.