



Jemena Electricity Networks (Vic) Ltd

Application to reopen the 2021-26 Electricity Distribution Price Review Determination

Reopening JEN's distribution determination for capital expenditure



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Glossary

| | |
|---|---|
| The event | <p>For the purposes of the application of clause 6.6.5(a), the event is:</p> <p style="padding-left: 40px;"><i>An unforeseen series of connection applications and connection inquiries from customers (where a customer requires a supply for maximum demand above 10 MW) resulting in a greater than anticipated increase in demand for network capacity over the 2021-2026 regulatory control period and causing JEN to incur additional capital expenditure.</i></p> <p>We retain the definition of major connection customers from JEN's original January 2020 proposal, referring to customers requiring a supply for a maximum demand exceeding 10MW. This includes connection inquiries where the customer's demand will surpass 10MW and where they are already at that capacity and seek upgrading.</p> |
| Material unforeseen capital expenditure | <p>For the purposes of the application of clause 6.6.5(a), an event involves a Distribution Network Service Provider incurring materially unforeseen capital expenditure if the total of the capital expenditure required during the regulatory control period to rectify the adverse consequences of the event:</p> <p>(i) exceeds 5% of the value of the regulatory asset base for the relevant Distribution Network Service Provider for the first year of the relevant regulatory control period;</p> <p>(ii) is such that, if undertaken, it is reasonably likely (in the absence of any other reduction in capital expenditure) to result in the total actual capital expenditure for that regulatory control period exceeding the total of the forecast capital expenditure for that regulatory control period as accepted or substituted by the AER in accordance with clauses 6.5.7(c) or 6.12.1(3)(ii) (as the case may be).</p> |
| Regulatory change event | <p>A change in a regulatory obligation or requirement that:</p> <p>(a) falls within no other category of pass through event; and</p> <p>(b) occurs during the course of a regulatory control period; and</p> <p>(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</p> <p>(d) materially increases or materially decreases the costs of providing those services.</p> |
| Service standard event | <p>A legislative or administrative act or decision that:</p> <p>(a) has the effect of:</p> <p style="padding-left: 40px;">(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</p> <p style="padding-left: 40px;">(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</p> <p style="padding-left: 40px;">(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</p> <p>(b) materially increases or materially decreases the costs to the service provider of providing prescribed transmission services or direct control services.</p> |

Abbreviations

| | |
|-------|--|
| AEMO | Australian Energy Market Operator |
| AER | Australian Energy Regulator |
| ARR | Annual Revenue Requirement |
| Augex | Augmentation capital expenditure |
| EDCoP | Electricity Distribution Code of Practice |
| DAPR | Distribution annual planning report |
| DNSP | Distribution Network Service Provider |
| ICCS | Incremental cost customer specific |
| ICSN | Incremental cost of shared network |
| ISP | Integrated System Plan |
| JEN | Jemena Electricity Networks (Vic) Ltd, ACN 064 651 083 |
| kVA | Kilovolt-amperes |
| LV | Low Voltage |
| MVA | Megavolt-amperes |
| NEO | National Electricity Objective |
| NER | National Electricity Rules |
| PTRM | Post-tax Revenue Model |
| RIN | Regulatory information notice |
| SCS | Standard Control Services |
| SoNS | systems of national significance |
| TCPR | Transmission Connection Planning Report |
| VHBA | Victorian Health Building Authority |

Overview

This submission provides Jemena Electricity Networks (Vic) Ltd. (**JEN's**) application to the Australian Energy Regulator (**AER**) to reopen its current JEN 2021–26 electricity distribution price determination for a capital expenditure variation event. This application is provided in accordance with National Electricity Rules (**NER**) clause 6.6.5. It seeks to recover the material unforeseen standard control service costs associated with additional customer initiated major connection projects, being those connections where a customer requires a supply for maximum demand above 10 MW.

Our 2021–26 proposal had forecast five new customer initiated major connection projects that fall within the 2021–26 period which were individually forecast on a bottom-up basis given their scale totalling capital expenditure of \$20.5 million (June 2021 dollars, exclusive of overheads, on a net basis exclusive of capital contributions).¹ These formed a part of the capital expenditure forecast the AER approved for 2021–26.

Since that decision was made, and as at 30 September 2024, JEN has had inquiries for more than 3,800MVA of new major connections, including 1,691MVA that are considered highly likely to complete or commence delivery in the 2021–26 period. These comprise 12 data centre connection applications and inquiries and 7 infrastructure project connection applications and inquiries.

Consistent with our customer values and connection obligations we have worked tirelessly to deliver these unforeseen connections. In doing so, we will incur:²

- additional major connection capital expenditure of \$275.1M
- consequential augmentation capital expenditure of \$14.0M
- consequential network overheads capital expenditure of \$13.5M.³

At the same time, adding the additional chargeable demand from the new major connections helps reduce average consumer bills for JEN's existing customers. Although there is a cost increase, this is more than offset by the volume increase. For instance, Figure ES-1 illustrates how projected average residential bills change if updated to add both the volume and costs associated with the connections the subject of this reopener application.⁴ It shows that as these major connections come online and utilise their projected demand, the saving in average bills is expected to be \$101 per average residential bill by 2030-31.

¹ JEN, *2021–26 Electricity Distribution Price Review Regulatory Proposal Attachment 05-01 Forecast capital expenditure*, January 2020, Table 5.4 on p.72.

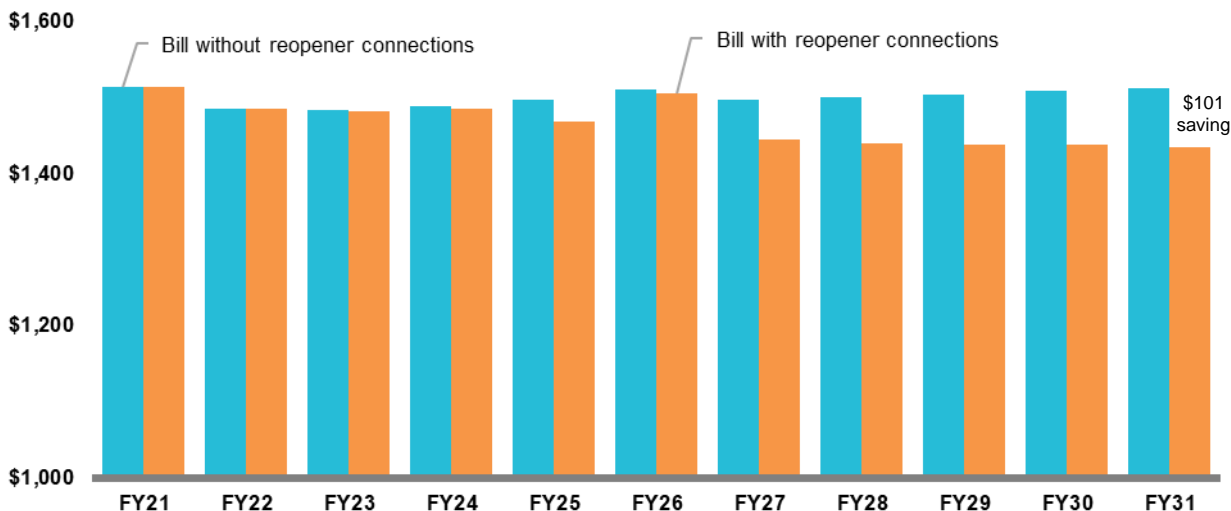
All financial values are in \$ as at 30 June 2021 unless otherwise stated.

² We use the term 'incur' here to apply to both actual capital expenditure incurred in 2021-22, 2022-23 and 2023-24, and forecast capital expenditure that we expect to incur in 2024-25 and 2025-26.

³ Consequential network overheads were calculated using the *Capex Forecast Model* adopted by the AER in its 2021–26 determination, which allows for variable overheads as 4.7% of direct capital expenditure.

⁴ For this illustration, we used the AER's approach to projecting average residential and small business customer bills. We started with 2020-21 bills to align with the projections published with the 2021–26 determination. We then updated those projections to add the additional volumes and costs. We also extended the projections out to 2030-31 by extrapolating costs and volumes from the 2021–26 determination out over the 2026–31 period. The bill impacts are estimated in nominal dollars using the inflation forecast assumptions included with the 2021–26 determination.

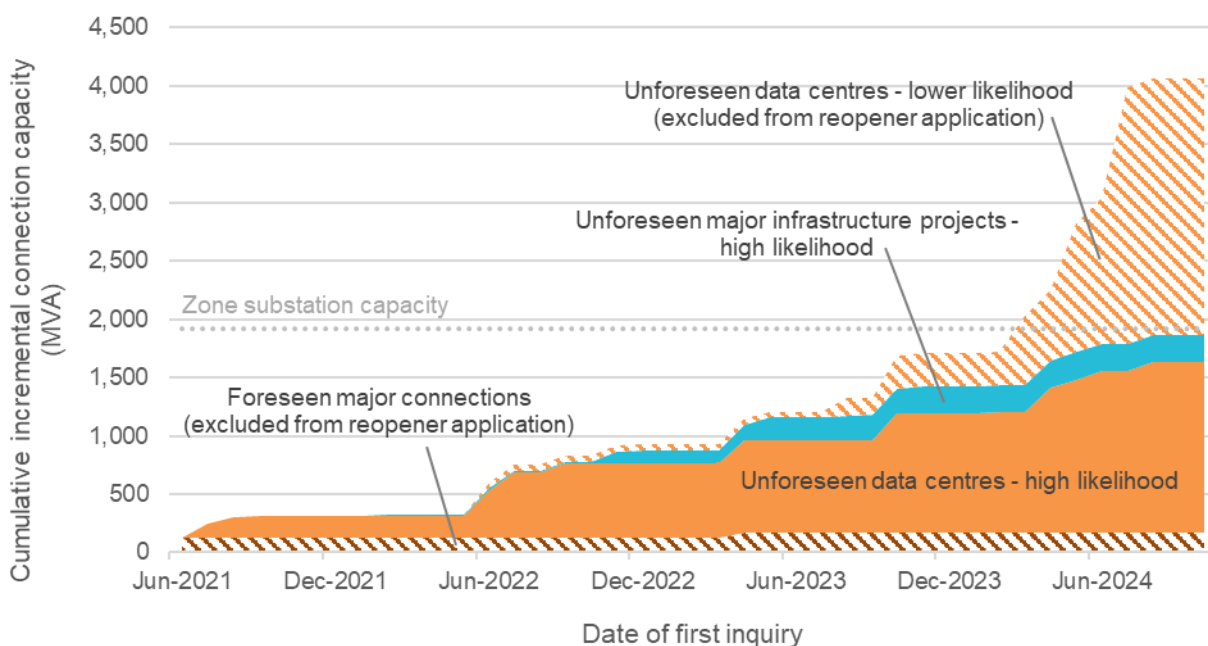
Figure ES.1: Impact of major connections on average residential customer bills (\$ per customer, \$ nominal, vertical axes truncated)



We note upfront that this is the first time the capital expenditure variation event provisions have been used by a distribution network service provider (DNSP). This is unsurprising given the COVID-19 pandemic context in which JEN’s electricity distribution price review occurred, the current context of energy transition, and the relatively small scale of JEN as a DNSP compared to the >3,800MW of capacity that has been collectively sought by customers through new major connections (as at 30 September 2024), mostly comprising new-build data centres.

The timing and scale of these unforeseen connection applications and inquiries by customer type and likelihood is illustrated in Figure ES-2 below. In addition to the firm connection applications and inquiries, this also identifies the capacity associated with connection inquiries that are still active, but JEN judges have a lower likelihood of proceeding in the 2021–26 regulatory period and are therefore excluded from this reopener application. These lower likelihood inquiries and the pace of data centre demand growth mean JEN still faces risk of connection overspend beyond the capex revisions proposed in this reopener application.

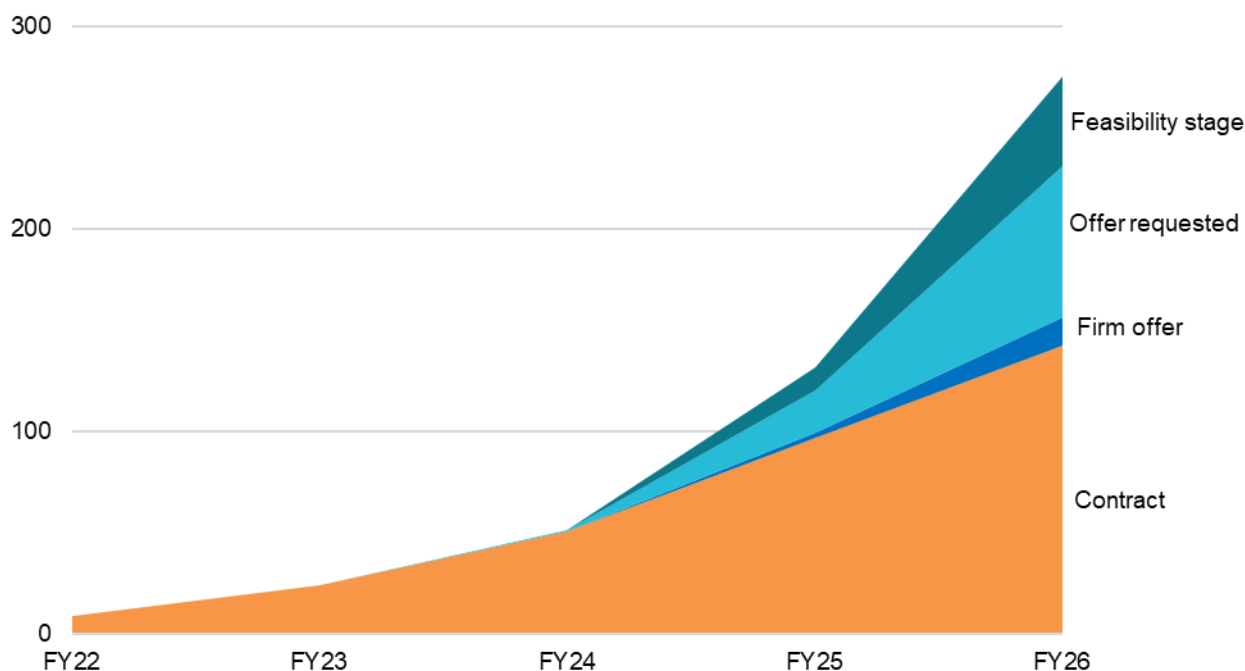
Figure ES.22: Unforeseen major connection applications and inquiries, by date of first inquiry and incremental capacity indicated



The impacts of such significant customer capacity requirements on the security and reliability of our network would be enormous if we did not invest in increasing our capacity in line with these customers' needs. To illustrate this, if we look at just one of the major connections which sought 150MVA and adopt an assumed value of customer reliability of \$48,000 per MWh, the net present value of projected energy at risk for the affected feeder could increase by around \$263 million if the load from the connection customer were added without any augmentation.

The scale of the required incremental capex for the unforeseen series of major connections is shown in Figure ES-3. This figure shows major connection capex above that included JEN's original allowance, categorised by the maturity stage of the connection application within our connection process.

Figure ES.3: Summary of incremental gross connection capex relating to major connections (excluding augex and overheads), by status of inquiry (\$Million, \$2021)



As shown in Figure ES-3, most of our major connections capex reflected in this reopener application relates to a connection agreement, an early works agreement or a firm (and binding) offer from us. The estimates in these agreements cannot be varied unless the formal triggers in our agreements have occurred. This means that adjustment to the capex from the project estimates used in these forecasts would only occur if: 1) there has been a change in scope (e.g. a customer requests additional scope), or 2) an exclusion from our offer has eventuated (e.g. contaminated soil has been encountered on site and there is additional cost to manage it).

This gives a high degree of certainty that these projects will go ahead in this period and that the project estimates included in this application are an accurate reflection of the costs we will incur.

In addition to supporting efficient utilisation for long-term price outcomes and maintaining the security and reliability of our network, the NER uncertainty mechanisms also have a critical role to play in realising our legislated emissions reduction targets. These targets are now reflected in the National Electricity Objective (**NEO**) governing how JEN and the AER must conduct our respective service delivery and regulatory functions. Their use as intended will be critical in ensuring we recover at least our efficient costs as we enable the dynamic pace of energy transition and that our incentive for efficient investment and utilisation are maintained amid more rapid large-scale change than is reasonably foreseeable in our five-year price reviews.

Engagement on this application

JEN has established several groups that it engages with to discuss price review matters; these groups include a broad community-based peoples panel, large customers and the energy-savvy energy reference group, to name but a few. Given the more technical nature of the issues regarding reopening an electricity distribution price review determination, we chose to engage the energy reference group as the audience to present this application.

- On 10 Oct 2024, JEN presented key elements of this re-opener application to inform the energy reference group and to seek their views and reflections. The feedback included:
- There was a general understanding of the situation and the rationale behind why JEN is submitting a reopener application
- There was a strong interest in JEN's purpose of recovering the additional revenue; that is, what incremental costs is JEN incurring to warrant the need for additional revenue
- When setting prices to recover the incremental revenue, the group recommended that JEN place greater weight on energy rates rather than fixed components to allow customers to respond better to the price signal.

Overall, there was general acceptance of the reason for this application and a keen interest in understanding the outcomes.

In addition, JEN has engaged its major connections customers and prospective customers through a survey to gather their views on the need to connect their facilities. In general, these customers have outlined their expectations for connecting to JEN's electricity distribution system and are supportive of making capacity available to them.

1. About this reopener application

1.1 Purpose

This submission provides Jemena Electricity Networks (Vic) Ltd. (**JEN's**) application to the Australian Energy Regulator (**AER**) to recover costs associated with an unprecedented and unforeseen number of major connection requests. This application is provided in accordance with National Electricity Rule (**NER**) clause 6.6.5.

1.2 About the capital expenditure reopener event

What is the event?

An unforeseen series of major connection applications and connection inquiries from customers (where a customer requires a supply for maximum demand above 10 MW) resulting in a greater than anticipated increase in demand for network capacity over the 2021–26 regulatory control period and causing JEN to incur additional capital expenditure.

Overview of the event circumstances

Our 2021–26 proposal had forecast five new major connection projects that fall within the 2021–26 period which were individually forecast on a bottom-up basis given their scale. Our proposal adopted a threshold of maximum demand above 10MW for defining customers requesting major connections. These five projects totalled a gross capital expenditure of \$37.1m (\$ June 2021) in our proposal.⁵

These five projects were the basis of the \$34.1m (\$ June 2021) capital expenditure forecast the AER approved for 2021–26 in the final determination for major connections after accounting for changes like inflation and escalation forecasts.⁶ The five forecast major connections have occurred.

JEN's connection forecasting context was framed by the unprecedented COVID19 pandemic uncertainties. The scale and volume of major connections since then has been equally unprecedented. Our major connection inquiries since then have grown by a further >3,800MVA in required capacity, which is approximately 200% of JEN's existing installed substation capacity. The majority of these applications relate to the data centre boom that has transpired following the range of digitisation strategies and stimulus measures implemented by the Victorian and Federal governments as part of the pandemic economic recovery response and to capitalise on the necessary pivot to online working and trading practices that Victoria's lock-downs necessitated for our society.

As at 30 September 2024, there had been a series of 19 further major connection applications that were not forecast and are considered highly likely to commence or complete delivery in the 2021–26 regulatory period, totalling 1,691MVA of capacity. The rate and size of these connection applications have dramatically increased in the time leading up to lodging this application.

These additional major connection requests could not have been reasonably foreseen and were not foreseen by AEMO in its ISP assumptions.⁷

Connection requests are beyond JEN's reasonable control, and to seek to delay them in any way would go against our customer-focussed values and NER connection obligations.

⁵ JEN, *2021–26 Electricity Distribution Price Review Regulatory Proposal Attachment 05-01 Forecast capital expenditure*, January 2020, p.72.

⁶ The \$34.1 million (June 2021 dollars) is calculated as the sum of the direct escalated capex at cells AX52:BB56, AX267:BB267, and AX269:BB26 of the 'Calc|Capex Flow' sheet in the *Capex Model* included with the AER's 2021–26 determination.

See: AER, *2021–26 - Capex model - April 2021 - updated 11 May 2021*, May 2021. Link: <https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Jemena%20distribution%20determination%20-%202021-26%20-%20Capex%20model%20-%20April%202021%20-%20updated%2011%20May%202021.xlsb>

⁷ See section 3.1.1.

The event is material

JEN expects total (gross) capital expenditure required for the unforeseen event to be >\$300m which will exceed 5% of our 2021 RAB (\$75.9m in \$ June 2021). This expenditure, if undertaken, would contribute to a material five year capital expenditure overspend. The 5% threshold is met even when contributions are factored in, with total (*net*) capital expenditure of \$100.5m.

1.3 Relevant rules and regulatory instruments

The primary rules and regulatory instruments relevant to this application are as follows.

NER rules for the reopening of distribution determination for capital expenditure

NER clause 6.6.5 establishes the requirements and process for DNSPs to apply and the AER to revoke and substitute a distribution determination for material unforeseen capital expenditure events. Relevant to this application, this clause establishes:

- the eligible capital expenditure event requirements
- arrangements for the timing of the AER's decision on an application and extensions to these
- consultation requirements on the AER
- the scope of costs and revenues that can be varied in a substituted determination
- the timing for when a substituted distribution determination must take effect.

Connection rules, AER guidance and approved connection policy

As the unforeseen capital expenditure event is triggered by JEN's unforeseen connection applications and inquiries, the following are also directly relevant to this application:

- NER, Chapter 5A Electricity connection for retail customers
- AER, Connection charge guidelines for electricity customers Under chapter 5A of the NER, version 3.0, from April 2023 and prior to then version 2.0
- JEN, 2021–26 Connection Policy.

1.4 Structure of this application

This application is structured to address the NER clause 6.6.5 requirements:

- Section 2 explains the unforeseen capital expenditure event
- Section 3 details how the unforeseen capital expenditure addresses the capex reopener rule requirements
- Section 4 shows the revenue and bill impacts of this reopener event.

This application is supported by the following appendices:

- Appendix A provides a compliance checklist
- Appendix B details our unforeseen event capital expenditure
- Appendix C provides JEN's additional expenditure build-up model (which we refer to as the *Unforeseen Major Connections Model*)
- Appendix D provides our approach to calculating the redetermined expenditure allowances and revenue amounts

- Appendix E provides a survey of our unforeseen major connection applicants
- Appendix F provides our confidential major connection customer agreements for the customers who have received and or signed a firm connection offer
- Appendix G provides our claims for confidentiality over this submission.

1.5 Next steps

JEN's next steps relating to this reopener event include:

- Reflecting the substituted determination in our 2026-31 initial regulatory proposal for all inputs that require 2021–26 determination amounts by the end of January 2025
- Adjusting our 2025-26 annual pricing proposal tariffs for the outcome of this reopener application by the end of March 2025.

2. What we are seeking to reopen and why

This section explains the eligible capital expenditure event trigger for this reopener application, how JEN is delivering the major connections that triggered this event, and how this expenditure will benefit all our customers.

2.1 Purpose of capital expenditure event reopeners

What is this rule provision for capex uncertainties?

NER clause 6.6.5 'Reopening of distribution determination for capital expenditure' provides for DNSPs to apply to the AER to revoke and substitute a distribution determination if an unforeseen capital expenditure event meets all the criteria in clause 6.6.5(a).

The note to that clause states: 'In this paragraph (a), a reference to an event includes a series of events or a state of affairs, which may include a greater than anticipated increase in demand.'

How does it work?

This provision provides for DNSPs to seek to reopen the capital expenditure allowance aspect of their revenue determination, and adjust the determined revenues for approved unforeseen capex over the regulatory period as well as any consequential opex changes for the remaining years of that period.

Why does it exist?

Uncertainty mechanisms (comprising this capital expenditure reopener, contingent projects and pass through events) are an important feature of the NER regime. They acknowledge that:

- DNSPs make regulatory proposals and the AER makes revenue determinations based on forecast information projecting up to 7 years ahead.
- Some uncertain events will always be beyond a DNSP's reasonable control, and they should be able to respond in an efficient and timely way if those events transpire.
- DNSPs can and do face material uncertain events, the costs of which can affect their financial viability, and that not addressing the funding of those costs can affect distribution system reliability and security, incentives for implementing timely connection processes for unforeseen customer requests, and the energy supply outcomes of customers.

Why is it important in the current energy transition environment?

In Australia's current context of rapid electrification and energy system disaggregation and decarbonisation, these uncertainty mechanisms have a critical role to play in realising our legislated emissions reduction targets. These targets are now reflected in the NEO governing how JEN and the AER conduct our respective service delivery and regulatory functions.

The customer-driven event triggers for this reopener application evidence the fact that the pace, scale and locations of large scale electrification will be driven by customers' decisions not by central planning or DNSP influence. Our available regulatory uncertainty mechanisms must do their job by allowing DNSPs to adapt for this decentralised and customer-centric operating context.

Why it is also important given the context of JEN's 2021–26 price review

JEN prepared for and the AER conducted the 2021–26 determination amid the unprecedented uncertainty of Victoria's COVID response and economic recovery pathway. Just 5 weeks after JEN submitted its regulatory

proposal, Melbourne entered its first of what was to become seven lockdowns totalling 262 days of enforced isolation and suppression of Victoria’s economic activity, the longest cumulative total in the world.⁸

At that time, it was not possible to foresee:

- the economic and digitisation turnarounds that have since transpired, or
- the sheer scale of public and private capital that has since flowed to the major infrastructure and data centre projects that have triggered this reopener application.

2.2 Why JEN needs a reopener to meet customers’ major connection needs

2.2.1 Our major connections are booming

Victoria’s pandemic economic recovery has boomed for our major connections resulting in an unprecedented number and scale of major connection applications and inquiries

Figure 2.1 shows the chronology and scale of the unforeseen major connections. Figure 2.2 then shows how when preparing the assumption underpinning its Integrated System Plan (ISP) the Australian Energy Market Operator (AEMO) also did not foresee the key emerging connections demand of data centres.

Figure 2.1: Chronology of unforeseen active data centre inquiries

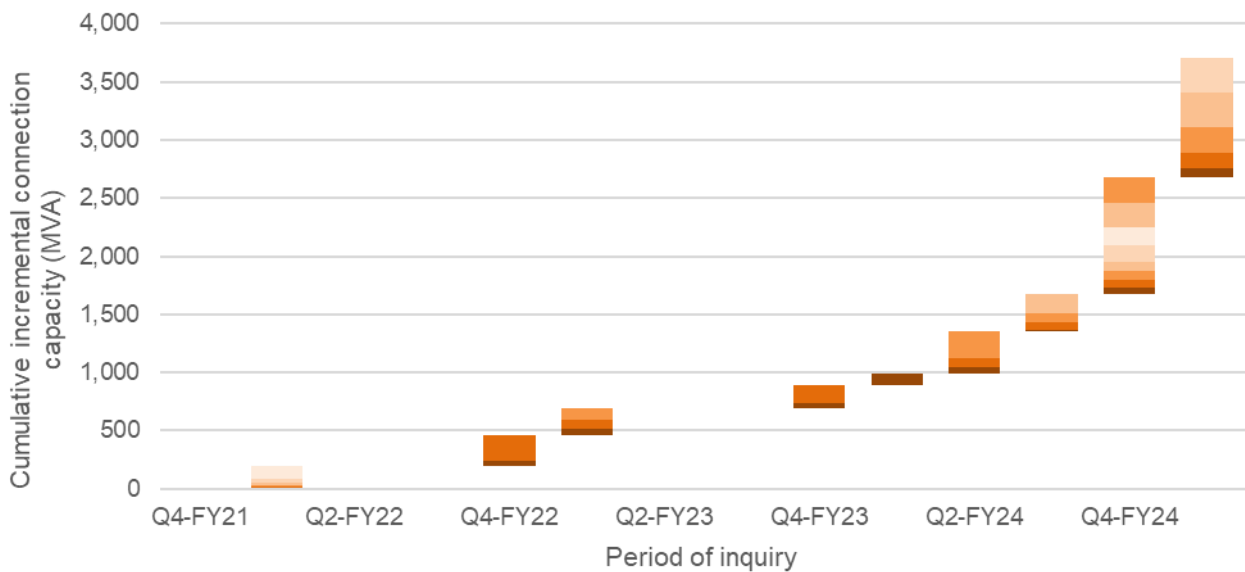


Figure 2.2: Summary of AEMO ISP assumptions about data centre demand



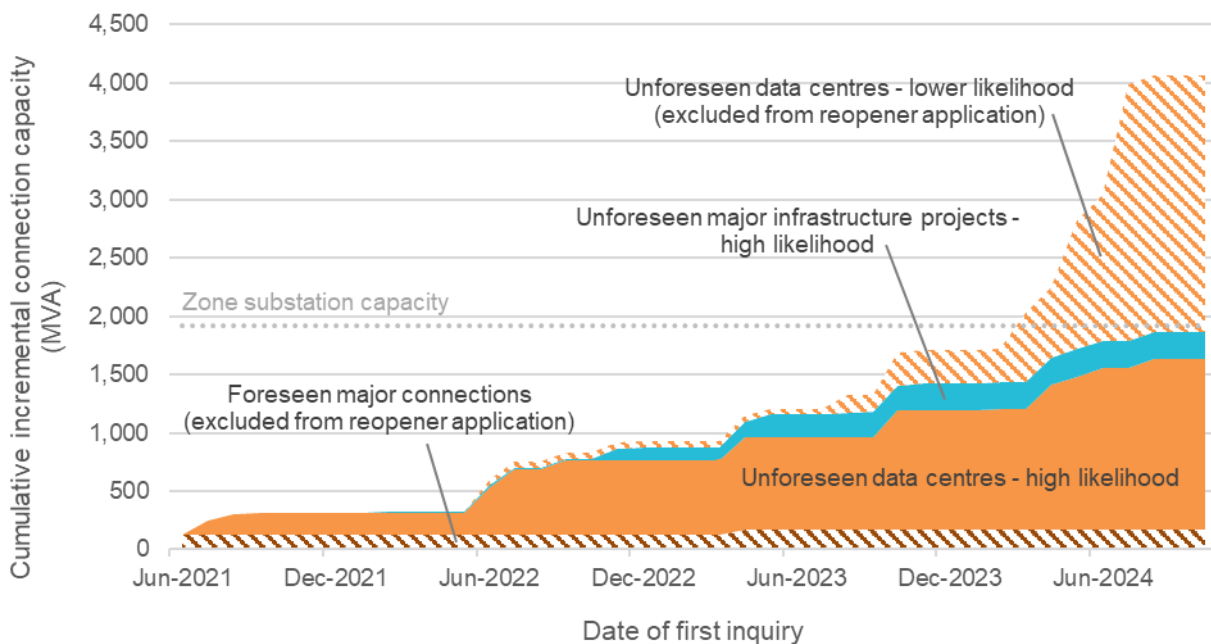
⁸ The New York Times, Melbourne, after 262 days in lockdown, celebrates a reopening, 22 October 2021.

2.2.2 New major connection demand will increase our network demand by more than 1,600 MVA, potentially much more

These energy intensive customers have required an unprecedented increase in our network capacity

JEN's additional 19 unforeseen major connection inquiries that are considered highly likely to complete or commence delivery in the 2021-26 period together total 1,691MVA of capacity (as at September 2024). This increases to over 3,800MVA if lower likelihood active connections inquiries are included. To put this requested connection capacity in context, our total substation capacity, which was built to service JEN's existing customer needs, was 1,914MVA as at June 2024.

Figure 2.3: Unforeseen major connection applications and inquiries, by date of first inquiry and incremental capacity indicated



2.2.3 We have worked to deliver what these customers need

JEN has invested and will continue to invest significant capex to deliver these connections whilst preserving the security and reliability of our network

We have invested material amounts of unforeseen connection capex, augmentation capex (**augex**), and consequential network overheads to plan, design and deliver these connections and reinforce our system to reliability and securely meet their capacity requirements. As data centre demand grew, JEN established a dedicated team to manage these connections.

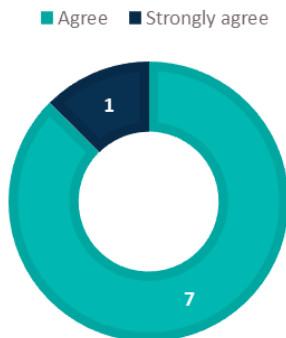
Our success in meeting these customers' needs is evidenced in their feedback

As part of our customer engagement and commitment to continual improvement, we commissioned a survey of our major connection customers. The outcomes of this survey are provided in Appendix E. JEN account managers sent the survey to 10 customers having major connection projects. Eight responses were received (covering eight data centre connections and three other infrastructure project connections).

The survey found that overall, all respondents considered JEN had so far delivered their firms' connection needs consistent with their expectations, and that JEN's performance compared favourable to other networks they had sought connections with.

Figure 2.4: Survey response on JEN's connection outcomes for major connection customers

Q1 | Overall Jemena's delivery of my firm's connection needs has met or is meeting our expectations



"Jemena has dedicated resources for Data Centre applications, which is a great help. We see some other utilities doing this but not all and Jemena is in the forefront and it shows in the quality of engagement, understanding of our business needs and ultimately a big success factor"

"Jemena are equal best with one other utility I've worked with for customer focused support and communication. It takes a customer who understands grid connection to get the best from a relationship with a utility such as Jemena, but given an open dialogue and transparent comms, Jemena is proven to reciprocate and grow effective partnerships"

Source: Farrierswier, Surveying major connection customer | Feedback report, pp.3-4, October 2024.

Meeting these needs is not only the right thing to do for our customers, it's our NER and Electricity Distribution Code of Practice obligation

The NER connections regime establishes customers' right to seek to connect when and where they want a connection, and the scale of connection capacity they want.

JEN's NER chapter 5A connection offer obligations (see 5A.F.4) require us to incur the expenditure arising from customer-accepted connections offers. Upon receipt of a connection application, JEN must make an offer to connect.

The rules permit JEN to invest to the levels requested by connecting customers. The NER are written to acknowledge the important role of major connection customers' needs in determining how much DNSPs can spend and recover. The connection capex costs JEN incurs should rightly reflect its major connection customers' nominated needs rather than necessarily lowest possible costs or only the costs provided for in its applicable revenue determination capex allowances.

Where customers are negotiating their connection terms and paying contributions, they are entitled to seek service levels that reflect their needs (e.g. for reliability or timeliness preferences as well as location and capacity scale). Consistent with this, clause 5A.E.1(c)(4) provides that:

if augmentation of the distribution system is necessary in order to provide a connection service under a negotiated connection contract, connection charges for the service may, subject to any agreement to the contrary, include a reasonable capital contribution towards the cost of augmentation of the distribution system to the extent necessary to provide the service and to any further extent that a prudent service provider would consider necessary to provide efficiently for forecast load growth

Connecting these unforeseen customers also benefits existing customers because connecting new customers allows for increased utilisation and greater sharing of the fixed costs of the network (i.e., improving economies of scale and lowering our average prices).

As a licenced Victorian distribution network, JEN faces further obligations for connection to its network under the Essential Services Commission's Electricity Distribution Code of Practice (**EDCoP**).⁹

2.2.4 Costs we expect to incur

Gross event capital expenditure of \$303m

The expected increase in costs JEN will incur that have driven the capital expenditure event involve total (gross) expenditure of \$303m (\$ June 2021) 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 event expenditure to 30 June 2026 (\$ June 2021, millions)

| Expenditure type | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | Total |
|--|------------|-------------|-------------|-------------|--------------|--------------|
| Connection capital expenditure | 8.4 | 15.6 | 26.9 | 80.3 | 143.9 | 275.1 |
| Augmentation capital expenditure | - | - | 0.1 | 4.4 | 9.5 | 14.0 |
| Incremental overheads | 0.4 | 0.7 | 1.3 | 4.0 | 7.2 | 13.5 |
| Gross event capital expenditure | 8.8 | 16.3 | 28.3 | 88.7 | 160.6 | 302.6 |
| Less contributions | (6.7) | (11.8) | (19.7) | (58.7) | (105.2) | (202.1) |
| Net event capital expenditure | 2.1 | 4.5 | 8.6 | 30.0 | 55.4 | 100.5 |

What our unforeseen capital costs comprise

Our unforeseen major connection capex comprises:

- connection capex for each major connection application or inquiry,
- augmentation capex for those major connections that have triggered network augmentations, and
- consequential network overheads.

This gross capex includes both actual capex incurred in 2021-22 to 2023-24 and estimated capex for 2024-25 and 2025-26.

A breakdown of this expenditure by project, capex category and year is provided in Appendix B and Appendix C.¹⁰

Costs that have been excluded

We have sought to minimise reopener costs by excluding other costs that we have or will incur above those forecast in the original 2021–26 determination for standard control services, or that are recoverable through alternative control services or negotiated services. Our other anticipated overspends excluded from this reopener

⁹ Essential Services Commission, [Electricity Distribution Code of Practice](#), Version 2, 2023.

¹⁰ Appendix C includes the *Unforeseen Major Connections Model* that we developed to combine actual and forecast capital expenditure for each connection and augmentation project covered by this reopener application. It presents that expenditure in direct terms, without overheads, and with labour escalation removed. Incremental overheads and labour escalation are applied subsequently in an updated version of the *Capex Model* published with the AER's 2021–26 determination.

application are shown in Figure 2.5, which compares the capex included in our reopener application to our projected total overspends over the 2021–26 period. Table 2–2 provides a more detailed breakdown.

Figure 2.5: Projected overspend by category with and without the reopener (\$ June 2021, millions)

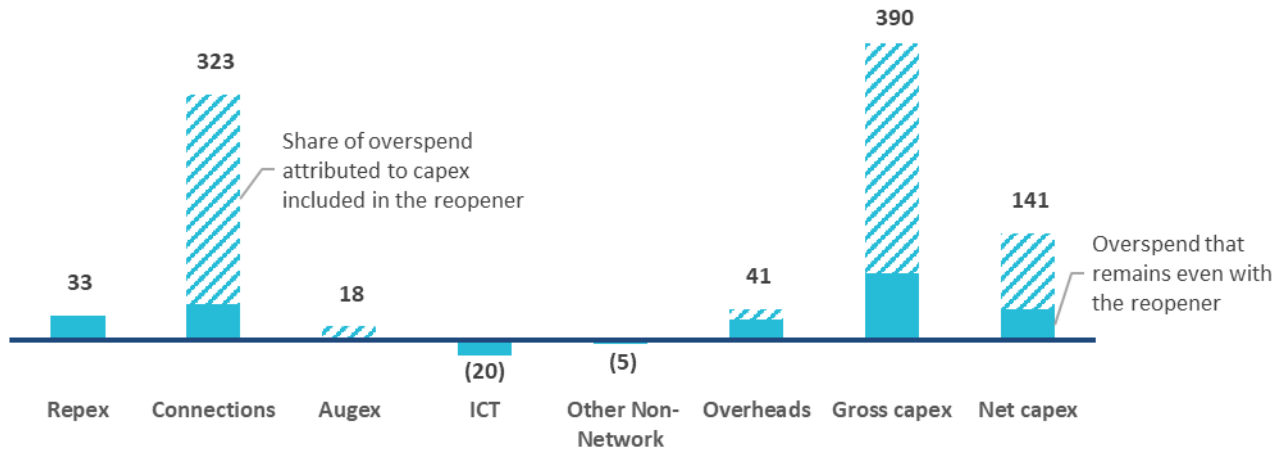


Table 2–2: Comparison of reopener capex to 2021–26 projected overspend (\$ June 2021, millions)

| Category | 2021–26 capital program (including reopener capex) | | | Reopener application |
|---------------------------------|--|--------------------|--------------|----------------------|
| | Actual / forecast | Existing allowance | Overspend | |
| Replacement expenditure | 244.6 | 211.8 | 32.9 | - |
| Connection expenditure | 519.6 | 196.7 | 322.9 | 275.1 |
| Augmentation expenditure | 164.3 | 146.3 | 18.0 | 14.0 |
| Non-network expenditure – ICT | 93.9 | 114.3 | (20.4) | - |
| Non-network expenditure – Other | 13.6 | 18.2 | (4.6) | |
| Network overheads | 132.5 | 91.0 | 41.5 | 13.5 |
| Corporate overheads | - | - | - | - |
| Gross capex | 1,168.5 | 778.4 | 390.1 | 302.6 |
| Less asset disposals | (1.4) | (0.5) | (0.9) | - |
| Less contributions | (382.2) | (133.9) | (248.3) | (202.1) |
| Net capex | 784.9 | 644.0 | 140.8 | 100.5 |

2.2.5 Costs we expect to recover from major connection customers

Consistent with the NER connection rules, and our AER-approved connection policy, we apply the net incremental cost test to individually calculate and charge connection contributions from these unforeseen major connections.

The annual values of contributions forecast to be received from the additional major connections during the 2021–26 period are provided in Table 2–3. Section 4.4 of Appendix B provides the basis of this forecast and how it has been derived from firm connections offers that JEN has issued to the unforeseen major connection customers.

Table 2–3: Total event capital contributions to 30 June 2026 (\$ June 2021, millions)

| Expenditure type | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | Total |
|---|---------|---------|---------|---------|---------|-------|
| Connection capital contributions for unforeseen major connection projects | 6.7 | 11.8 | 19.7 | 58.7 | 105.2 | 202.1 |

2.2.6 Net costs we will recover via this reopener

After accounting for our prudent connection capital contributions, the annual net expenditure we expect to incur for the capital expenditure event is provided in Table 2–4.

Table 2–4: Total event expenditure to 30 June 2026 (\$ June 2021, millions)

| Expenditure type | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | Total |
|-------------------------|---------|---------|---------|---------|---------|-------|
| Net capital expenditure | 2.1 | 4.5 | 8.6 | 30.0 | 55.4 | 100.5 |

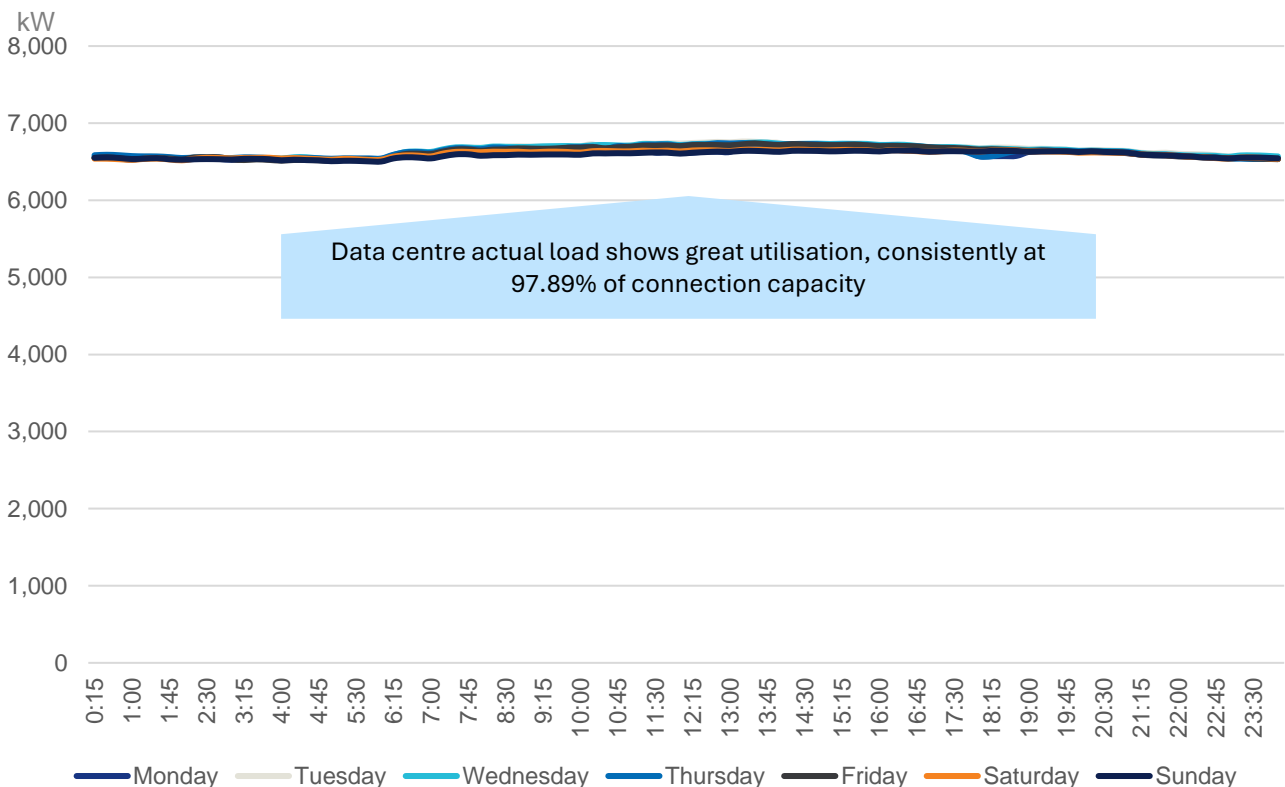
2.3 All our customers benefit from these new major connections

These major connection loads improve our network utilisation

The new data centre loads are addressing the prior decline in HV and ST utilisation.

Load profile data from data centre connections that are already operating on JEN's network shows they have very high and consistent utilisation of their installed capacity, as shown in . These large and consistent major connection customer loads help share on our fixed costs and lower average prices is explained in section 4.3.

Figure 2.6: Sample data centre actual load profile (Average kW by time and day of the week)



The additional investment we will make to deliver these connections ensures system security and reliability is maintained for all customers

As outlined in section 3.6, we have invested significant shared network reinforcement (augex) and built new dedicated customer specific 66kV lines, among other assets. This has been necessary to ensure that when connecting these unforeseen customers we preserve the security and reliability of our network for all our customers. To help illustrate this, we have taken a closer look at DC02 as a case study (see Box 1 below and Attachment B-03).

Box 1: Network impacts case study

[Redacted]

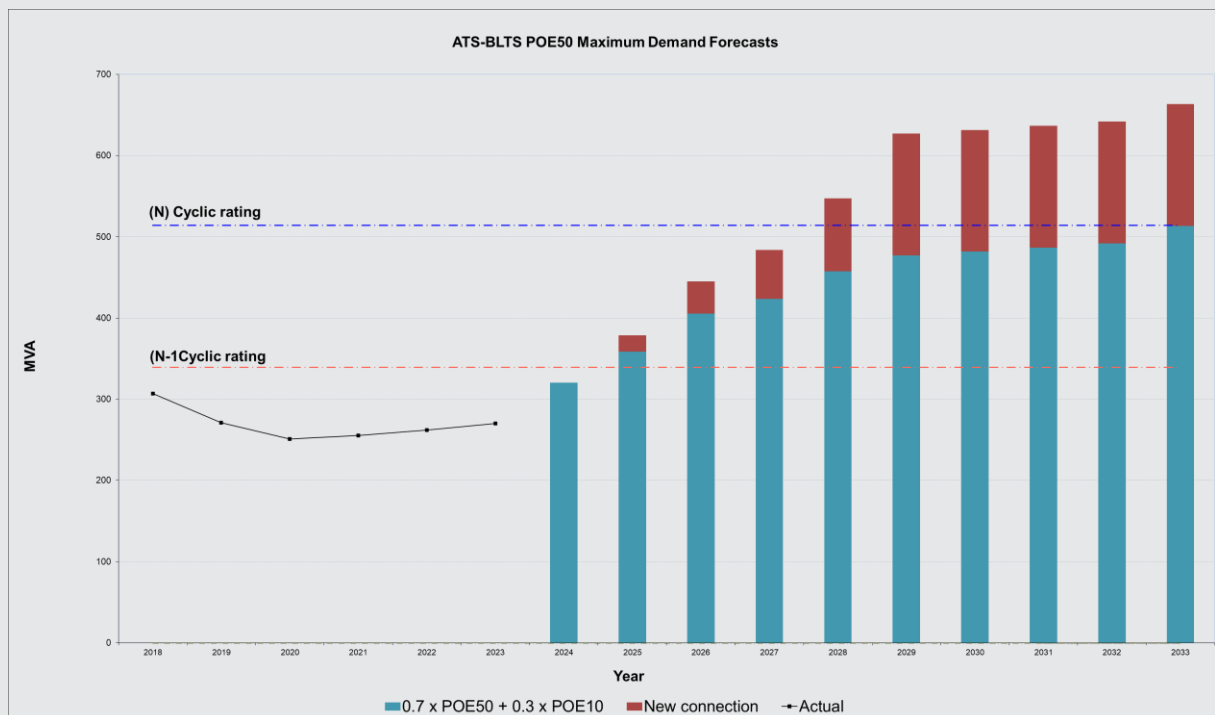
[Redacted]

Adverse consequences

If we were to connect the data centre to our network without augmenting it, then there would likely be insufficient existing capacity to supply the load without materially impacting the reliability and security of our network for existing customers.

[Redacted]

This is shown in the figure below with the blue bars showing the existing projected demand and the red bars the additional load from the data centre. The dotted red and blue horizontal lines show the N-1 and N ratings for the feeder respectively.



[Redacted]

Economic impact

Adopting an assumed value of customer reliability of \$48,000 per MWh, we estimate that NPV of projected energy at risk for the ATS-BLTS feeder could increase by around \$20 million when diversity is factored in and \$263 million when not if the load from the data centre were added without any augmentation. This is significant and underpins the importance of augmenting our network to meet the customer need so that we can avoid that additional economic cost.

Further detail on this case study is included in Attachment B-03.

3. How our requested costs meet the reopener rules

Appendix A provides a compliance checklist for how our application and supporting materials meet the rule requirements. This section addresses rule 6.6.5(a) in particular. In it we set out the material unforeseen capital expenditure event details, how we have minimised those costs and why we could not have otherwise accommodated these costs within our existing expenditure forecasts without compromising system security and reliability.

3.1 An unforeseen event beyond our reasonable control

Cl. 6.6.5(a)(1) refers to an event that is beyond the reasonable control of the Distribution Network Service Provider has occurred during that regulatory control period and the occurrence of that event during that period (or of an event of a similar kind) could not reasonably have been foreseen by the Distribution Network Service Provider at the time of the making of the distribution determination ('the event').

The NER note to 6.6.5(a) says: 'In this paragraph (a), a reference to an event includes a series of events or a state of affairs, which may include a greater than anticipated increase in demand.'

3.1.1 An event has occurred

What is the event?

An **unforeseen series of connection applications and connection inquiries** from customers (where a customer requires a supply for maximum demand above 10 MW) resulting in a greater than anticipated increase in demand for network capacity over the 2021-2026 regulatory control period and causing JEN to incur additional capital expenditure.

Can the unforeseen event be an unforeseen series of events?

Yes. The event is an unforeseen series of connection applications and connection inquiries from customers requesting major connection.

The rules talk about an event in this way in the note to 6.6.5(a)(1). The rules make clear that the event may be a “series of events or a state of affairs, which may include a greater than anticipated increase in demand”. The relevant explanatory materials further emphasise that the event may be an unforeseen demand event, citing the example of the unforeseen commissioning of a desalination plant.¹²

Even if individual connection applications or inquiries within the series may have arguably been reasonably foreseeable at the time of the AER’s determination, it is the series in its entirety that was unforeseen.

What is the series of applications or inquiries?

The table below lists 19 unforeseen major connection applications and inquiries.¹³

¹² AEMC, Rule Determination: National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006, 16 November 2006, p 61.

¹³ As at the date of this application, JEN has identified 19 connection applications or inquiries which form part of the event, being the unforeseen series of applications or inquiries from major customers. However, it is possible that this event may continue to unfold, with either further enquiries / applications being received or existing enquiries becoming more certain to proceed. JEN will notify the AER as soon as possible if the scope of the event expands.

Table 3.1: The unforeseen series of major connection applications and inquires

| Customer and associated projects | Date of inquiry | Contextual drivers since 2020 when JEN submitted its initial and revised 2021–26 regulatory proposals |
|----------------------------------|-----------------|---|
| 11 data centres | | |
| [REDACTED] | [REDACTED] | <p>After JEN's final 2021–26 determination, the state and federal policy makers acted quickly to capitalise on the massive behavioural shift in how we work, shop and learn online.</p> <p>The Victorian and Commonwealth governments announced major digital transformation efforts and funding measures to sustain this momentum, aiming to boost productivity and expand digital participation across both public and private sectors. These measures has spurred a data centre boom in Australia, and in Victoria in particular. The measures include:</p> <p>Commonwealth Government initiatives</p> |
| [REDACTED] | [REDACTED] | <ul style="list-style-type: none"> - Digital Economy Strategy 2030 (2021-22 Budget, 11 May 2021) - Digital Economy Strategy 2030 Update (2022-23 Budget, 29 March 2022) - National Reconstruction Fund (2022-23 Budget, 25 October 2022) - Critical Technologies Support (2023-24 Budget, 9 May 2023) <p>Victorian Government initiatives</p> |
| [REDACTED] | [REDACTED] | <ul style="list-style-type: none"> - Cyber Strategy 2021 (September 2021) - Victorian Digital Strategy 2021-2026 (October 2021) |
| [REDACTED] | [REDACTED] | <p>In addition to these digitisation measures, new domestic security measures have further driven domestic data centre demand. In February 2022 the Commonwealth Government introduced to parliament the Security Legislation Amendment (Critical Infrastructure Protection) Bill 2022 (the Bill)¹⁵. The Bill was to amend the <i>Security of Critical Infrastructure Act 2018</i> to implement additional obligations on owners of critical</p> |
| [REDACTED] | [REDACTED] | <p>infrastructure assets, particularly those assets which are declared to be systems of national significance (SoNS) by the Minister for Home Affairs.</p> |
| [REDACTED] | [REDACTED] | <p>Among other things, the Bill imposed enhanced cyber security obligations on entities responsible for SoNS, including undertaking cyber security exercises and vulnerability assessments, and preparing an incident response plan.</p> |
| [REDACTED] | [REDACTED] | <p>The responses of entities responsible for SoNS to these obligations have seen domestic data retention policies proliferate, contributing significantly to domestic data centre demand.</p> |
| [REDACTED] | [REDACTED] | |

¹⁴ [REDACTED]

¹⁵ [Security Legislation Amendment \(Critical Infrastructure Protection\) Bill 2022](#).

| Customer and associated projects | Date of inquiry | Contextual drivers since 2020 when JEN submitted its initial and revised 2021–26 regulatory proposals |
|---|---------------------------------|--|
| [REDACTED] | [REDACTED] | |
| [REDACTED] | [REDACTED] | |
| [REDACTED] | [REDACTED] | |
| [REDACTED] | [REDACTED] | |
| [REDACTED] | [REDACTED] | |
| 7 major infrastructure projects | | |
| <p>13. Hospital Thomas Embling Hospital (Alphington): [REDACTED] [REDACTED]</p> | <p>February 2022</p> | <p>This existing customer received government funding from the Victorian Health Building Authority (VHBA) for significant upgrades. To facilitate the development, the customer engaged JEN in October 2022 to request an upgrade their existing LV supply to a HV supply. This was requested in two separate applications as the VHBA funding was approved in two phases. The VHBA was named in February 2021 and formally established on 2 March 2021 as part of the Victorian Government’s \$1.9b healthcare system response to COVID19 pandemic.</p> <p>On 21 May 2021, the 2021-22 state budget announced \$1.6b of additional hospital funding of which \$349.6m was to deliver an additional 82 secure mental health beds and supporting infrastructure at Thomas Embling Hospital.¹⁶</p> |
| <p>14. Rail Metro Trains Melbourne: [REDACTED] [REDACTED] [REDACTED] [REDACTED]</p> | <p>August 2021¹⁷</p> | <p>The High Capacity Metro Trains (HCMT) program was announced by government in 2018 with some initial engagement with JEN across and range of minor and major connection and upgrade projects. Metro Trains own feasibility assessments delayed their formal connection requests for these 3 key projects into the 2021–26 period due to their desire to wait for experience with operation of their first HCMT train line to identify whether [REDACTED] energy supply was</p> |

¹⁶ VHBA, [2021-22 Budget delivers \\$1.6 billion infrastructure boost](#), 21 May 2021.

¹⁷ Metro Trains Melbourne first engaged with JEN in 2018 across and range of minor and major connection and upgrade projects. Metro Trains delayed detailed engagement with JEN on these three projects until 2021 and 2022.

| Customer and associated projects | Date of inquiry | Contextual drivers since 2020 when JEN submitted its initial and revised 2021–26 regulatory proposals |
|--|-----------------------|---|
| | | <p>required. This decision was not made by the connection applicant until into the 2021–26 period.</p> <p>The Victorian government subsequently expedited the Sunbury line element of its HCMT project during the pandemic to capitalise on the reduced passenger movements and lesser disruption caused by those works. This project was therefore subsequently rescoped from just Tottenham traction substation upgrade to also include Calder park sidings and Footscray west new traction substation¹⁸</p> |
| <p>15. Rail Intermodal Terminal Company: [REDACTED]</p> | <p>September 2022</p> | <p>In January 2023 Intermodal Terminal Company announced the \$400m Somerton Intermodal Terminal.¹⁹ The terminal builds upon:</p> <ul style="list-style-type: none"> – the Port of Melbourne’s \$125 million Port Rail Transformation Project announced in 2020²⁰ which had a plan for rail infrastructure to displace tracks around the port via rail terminal improvements between 2021 and 2023, and – the subsequent issuing of grants from the Australian and Victorian governments’ \$58m Port Rail Shuttle Network funding and process for hub location selection, designs and vendor awarding across the Somerton, Dandenong South and Altona hubs, intended enable trucks to deliver or pick up containers from these hubs in outer metropolitan Melbourne instead of driving to the Port of Melbourne.²¹ |
| <p>16. Robotic distribution centre Amaroo Drive Business Park: Amazon Distribution Centre - Amaroo - [REDACTED]</p> | <p>[REDACTED]</p> | <p>[REDACTED]</p> <p>The greenfield site will host Amazon Australia’s second Australian Robotics fulfilment centre and will be the largest warehouse ever built in Australia - surpassing Amazon’s Western Sydney robotics site by 9,000sqm.²²</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> |
| <p>17. University Latrobe University: [REDACTED] [REDACTED] [REDACTED]</p> | <p>November 2022</p> | <p>Latrobe University engaged JEN in November 2022 to conduct a feasibility study on their proposed future growth at their site. The future growth includes the university’s University City of the Future plans which only secured a development partner (investor) in May 2022,²³ thereby enabling them to commence discussions about energy upgrades.</p> <p>The university approached JEN exploring options to expand their supply capacity. [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> |

¹⁸ Australasian Railway Association, see [Victorian Budget confirms COVID-19 rail recovery commitment and record pipeline of new trains and trams - Australasian Railway Association \(ara.net.au\)](#), and Victoria’s Big Build, see [Sunbury Line Upgrade - Victoria’s Big Build](#)

¹⁹ Victorian and Commonwealth Governments, see [Huge Investment Means More Jobs, More Freight On Rail | Premier](#). 27 Jan 2023.

²⁰ Port of Melbourne, see [Port Rail Transformation Project - Overview - Port of Melbourne](#)

²¹ Victorian Government, see [Freight projects - Port Rail Shuttle | vic.gov.au \(www.vic.gov.au\)](#)

²² Amazon, see [Construction has begun for the Amazon fulfilment centre in Melbourne - About Amazon Australia](#)

²³ La Trobe University, see [Preferred partner for \\$5 billion plan, News, La Trobe University](#)

| Customer and associated projects | Date of inquiry | Contextual drivers since 2020 when JEN submitted its initial and revised 2021–26 regulatory proposals |
|---|--------------------|--|
| | | <p>A driver of the university’s development needs and capacity upgrades is BioNTech²⁴ planning to develop and commission a state-of-the-art mRNA clinical-scale manufacturing facility at the Bundoora campus. The BioNTech and Latrobe University agreement (commencing with in principle agreement in 2022 followed by a confirmed agreement announcement in Dec 2023) was facilitated by the Victorian Government as part of its post-pandemic policy response to have Victoria become a home of mRNA vaccine manufacturing.²⁵</p> |
| <p>Airport Melbourne Airport: [REDACTED]</p> | <p>May 2023</p> | <p>The Airports Act 1996 requires all federally leased airports to prepare a Master Plan every 5 years to guide the future growth and development of the airport over the next 20 years.</p> <p>The 2022 Melbourne Airport Master Plan was approved by the Federal Minister for Infrastructure, Transport, Regional Development and Local Government in November 2022 (2.5 years after JEN submitted its regulatory proposal and 17 months into the 2021–26 period). That plan identified its plan for MAT-1 upgrade (HV capacity) as ‘Expansion of the electrical network capacity to ensure terminals and properties are not constrained by lack of power supply.’²⁶</p> <p>Following this approval, Australia Pacific Airports (Melbourne) (APAM) engaged JEN in May 2023 to discuss [REDACTED] to support future customer connections at the HV embedded network. JEN is in the process of providing a customer offer to establish [REDACTED] (MAT2).</p> <p>JEN understands that the customer intend to use this connection as a data centre precinct.</p> |
| <p>Airport Essendon Airport: [REDACTED]</p> | <p>August 2023</p> | <p>Notwithstanding the obligation cited above, Essendon Airport has not published a master plan since its 2013-18 plan. It is presently consulting on its 2027 master plan.²⁷</p> <p>The airport engaged JEN in January 2022 to conduct a feasibility study on their proposed future growth at their site. The site is [REDACTED] and the airport was exploring options to expand their supply to [REDACTED]. The feasibility study presented options to [REDACTED] [REDACTED] [REDACTED] to the airport site. [REDACTED] (estimated completion of Q1 FY26).</p> |

²⁴ BioNTech gained world-wide public recognition during the pandemic for the Pfizer-BioNTech COVID-19 vaccine which it developed using its pioneering mRNA technology.

²⁵ Victorian Government, see [Victoria To Become Home Of mRNA Vaccine Manufacturing | Premier](#), [BioNTech Partnership To Deliver Next Generation Cancer Care | Premier](#)

²⁶ Melbourne Airport, [Master Plan 2022](#), November 2022, p.200, and Commonwealth Government, see [Approval of Melbourne Airport Master Plan | Ministers for the Department of Infrastructure](#)

²⁷ Essendon Airport, see [Master Plan | Essendon Fields \(ef.com.au\)](#)

3.1.2 A series of connection applications and inquiries we could not have reasonably foreseen

JEN's connection forecasting context was framed by pandemic uncertainties

JEN prepared for and the AER conducted the 2021–26 determination amid the unprecedented uncertainty of Victoria's COVID response and economic recovery pathway. Just five weeks after JEN submitted its regulatory proposal, Melbourne entered its first of what was to become seven lockdowns totalling 262 days of enforced isolation and suppression of Victoria's economic activity, the longest cumulative total in the world.²⁸

In this context, the AER draft decision reduced JEN's overall connection forecasts on the basis of COVID19-related demand uncertainty relative to JEN's historical connections growth, and also reduced the major connections forecast in 2022. JEN accepted this draft decision in its revised proposal absent the availability of more robust macroeconomic projections available at that time.²⁹

In this forecasting context, it is not surprising that JEN was not being inundated by requests for major connections as it has been since then.

The contextual drivers since 2020 when JEN submitted its initial and revised 2021–26 regulatory proposals column of Table 3.1 explain the key connection applications and inquiries that JEN could not have collectively foreseen at the time of its original forecasting.

The scale and volume of major connections since then has been equally unprecedented

In the prior regulatory period 2016-20 JEN only experienced 3 major connections – Westgate Tunnel project, Melbourne Airport, and CSL, which together have a combined capacity of only 47MVA, far less than the 1,691MVA that is the subject of this application.

This series of major connection applications and inquiries could not have been reasonably foreseen

These connection requests all relate to significant existing or new public or private infrastructure projects in Victoria. These connection requests could not reasonably have been foreseen as they are the result of:

1. Commercial decisions by the burgeoning data centre sector, and decisions by a number of data centre developers to connect to JEN's network rather than to the electricity transmission system.
2. Targeted policy measures within Victorian and Commonwealth government responses to the post-pandemic economic recovery and future pandemic preparedness measures.
3. Major airport, rail and robotic distribution infrastructure works planned after JEN's 2021–26 determination.

Review of JEN's major connections forecasting models, distribution annual planning reports (**DAPRs**) from that time and contemporary public commentary about data centre connection step ups in Victoria all corroborate that these were unforeseen. The supporting materials references in the final column of Table 3.1 evidence this.

Acil Allen Consulting—in its capacity as the provider of independent demand forecasts for the JEN 2021–26 electricity distribution price determination—has prepared an opinion letter that:

- reflects on major connection developments JEN has faced since that time,
- opines on whether these developments could have reasonably been foreseen at the time of preparing those forecasts, and

²⁸ [The New York Times, Melbourne, after 262 days in lockdown, celebrates a reopening, 22 October 2021.](#)

²⁹ JEN, 2021–26 Electricity Distribution Price Review - Revised Proposal: Attachment 04-01 Response to the AER's draft decision - Capital expenditure, 3 December 2020, pp. 4-11.

- identifies relevant major connection demand drivers that have transpired since those forecasts which explain why ACIL Allen did not foresee them at the time.

ACIL Allen Consulting's report is provided as Attachment B-02. In it, ACIL Allen Consulting conclude after due consideration of JEN's circumstances that:

In our view, it was not reasonable to foresee the rapid rise in the demand for data centres or other major infrastructure projects for the following reasons:

- *Data centre demand was not being projected by any of the major DNSPs or the Australian Energy Market Operator at this time. AEMO is the pre-eminent and official forecaster of peak demand and energy consumption for the NEM, yet it failed to identify the surge in data centre demand. Based on our view the demand trajectory has changed dramatically with changes to Government policy and the emergence of AI which has significant energy requirements.*
- *The historical data up to January 2020 failed to show any significant evidence that large loads in excess of 10 MWs had been connecting to JEN's network in the last few years. Connection enquiries since that time indicate a material shift in the underlying energy market trends.*
- *There had been only three requests by major customers for an aggregate of 47 MVA to connect to JEN's distribution network in the period between 2016 and 2020 that progressed to actual connection agreements.*
- *There was massive uncertainty at the time associated with the potential size of the centres, their possible locations and the timing of their construction. Under such uncertainty we could not reasonably make any attempt at forecasting their impact on peak demand and energy within the JEN network. To do so would require a completely different approach to forecasting that would involve a detailed analysis and model of the data centre industry which was out of scope of the assignment and would have added significant time and cost to the project budget.*
- *ACIL Allen's conservative approach to forecasting maximum demand and energy consumption would not allow for forecasts for the demand for data centres to be included given all the reasons provided above.³⁰*

Was the series of connection applications and inquiries within JEN's reasonable control?

Connection requests are beyond JEN's reasonable control. These requests are initiated by our customers and to deny or seek to delay them in any way they would go against our customer-focussed values, the NER and EDCoP obligations.

The NEL and NER establish a third party access regime applicable to regulated electricity networks like JEN. A key principle of such regimes is the provision of non-discriminatory access to customers seeking use of the regulated infrastructure on reasonable terms. Under the "open access" regime, connection inquiries and requests are initiated by customers. The volume and timing of these inquiries is necessarily outside of JEN's control.

The regime, by design, does not afford JEN an opportunity to control who seeks access to its network or where, when and at what scale customers or prospective customers can seek to gain or increase their access. Rather, JEN must respond to the requests that it receives from customers, including by making an offer to connect within the timeframes prescribed by the NER. NER cl.5A.f.4 requires JEN to make an offer to connect to customers that request it. If accepted, we are then obligated by contract law to connect the customer. JEN cannot decline to offer a connection on the basis that the connection was not forecast in its revenue determination for that period.

In recognition of this feature of the regime, the regime also provides for:

1. Clarity around customers' rights to seek connection or connection augmentation

³⁰ ACIL Allen, Large customer demand forecast review (Attachment B-02), 10 October 2024, p.7.

2. Network service providers' to charge customers for contributions to the costs they incur in making the connection possible on a safe, secure and reliable basis irrespective of whether these costs have been forecast in a relevant AER determination or not
3. A capex category called 'connections capex', which prior to more recent category standardisation was often referred to in the past as 'customer-initiated-capex' by some network service providers
4. The process to administer the actual outcomes of customer initiated connection and augmentation costs into network service providers' recoverable cost bases.

As a licenced Victorian DNSP, JEN faces further obligations for connection to its network under the Essential Services Commission's EDCoP. For example, under EDCoP clause 3.5, where JEN cannot meet a customer's (or retailer's) connection request due to an inadequate supply of electricity being available at the required voltage at the boundary of the supply address, JEN must make the connection as soon as reasonably practicable after it has taken measures to provide for sufficient capacity.

Notwithstanding the unforeseen circumstances of these major connections, our teams have worked tirelessly to process and agree these major connection agreements and design, procure and deliver the unprecedentedly investment levels needed to meet these customers' needs.

3.2 An event not funded in our capex allowance

Cl. 6.6.5(a)(2) requires that no forecast capital expenditure was accepted or substituted by the AER for that period under clauses 6.5.7(c) or 6.12.1(3)(ii) (as the case may be) in relation to the event that has occurred.

JEN's connection capex forecast did not include these additional unforeseen major connections. While JEN received a connections capex allowance, this was based on materially lower numbers of identified major connection projects for project capacity scales much lower than has transpired.

Our 2021–26 connections capex forecasting method forecast major connection projects as large, specific 'one-off' projects which customers had advised JEN about. These accounted for 20% of JEN's initial proposal connections capex.

Our major connections (>10MW) forecast for customers were developed using bottom-up cost estimates of the works required for each connection (both connection assets and upstream), consistent with JEN's Cost Estimation Methodology.³¹

These comprised forecasts for 5 major connections known to JEN at that time, which were included in the connections capex forecast as follows:

- *the new Footscray Hospital—this \$1.5 billion facility will contain 504 hospital beds*
- *the YarraBend development (Alphington)—a new mini-suburb of over 1,900 dwellings and multi-level commercial and retail facilities*
- *the Moonee Valley Racecourse redevelopment (Moonee Ponds)—construction of a new grandstand, commercial centre and residential precincts containing 2,000 new dwellings*
- *the North East Link project for tunnel construction and operation—three-lane twin tunnels travelling for six kilometres to connect the M80 and Eastern freeways*
- *one large data centre.*³²

³¹ JEN, 2021–26 Electricity Distribution Price Review Regulatory Proposal Attachment 05-01 Forecast capital expenditure, January 2020, pp.67–68, 72. JEN's Cost Estimation Methodology is available here: <https://www.aer.gov.au/system/files/Evoenergy%20-%20Jemena%20-%20Appendix%203.11%20-%20Infrastructure%20cost%20estimation%20methodology%20-%20June%202020.pdf>.

³² JEN, 2021–26 Electricity Distribution Price Review Regulatory Proposal Attachment 05-01 Forecast capital expenditure, January 2020, p.72

These bottom-up forecast major connections projects totalled net capital expenditure of \$19.2 million (June 2021 dollars, exclusive of overheads, on a gross basis inclusive of capital contributions) in JEN’s determination capital expenditure allowance.³³

No other major connections projects were provided for in the 2021–26 determination.

It is noteworthy that the scale of ‘large data centre’ contemplated in JEN’s connections capex forecast was for a 60MVA data centre. Since then, we have had more than 3,800MVA in new major connections or inquiries, the majority of which are data centres.

The scale of the resulting capex for the unforeseen series of major connections is shown in Figure 3.1. This figure shows major connection capex above that included JEN’s original allowance, categorised by the maturity stage of the connection application within our connection process.

Figure 3.1: Summary of incremental gross connection capex relating to major connections (excluding augex and overheads), by status of inquiry (\$Million, \$2021)

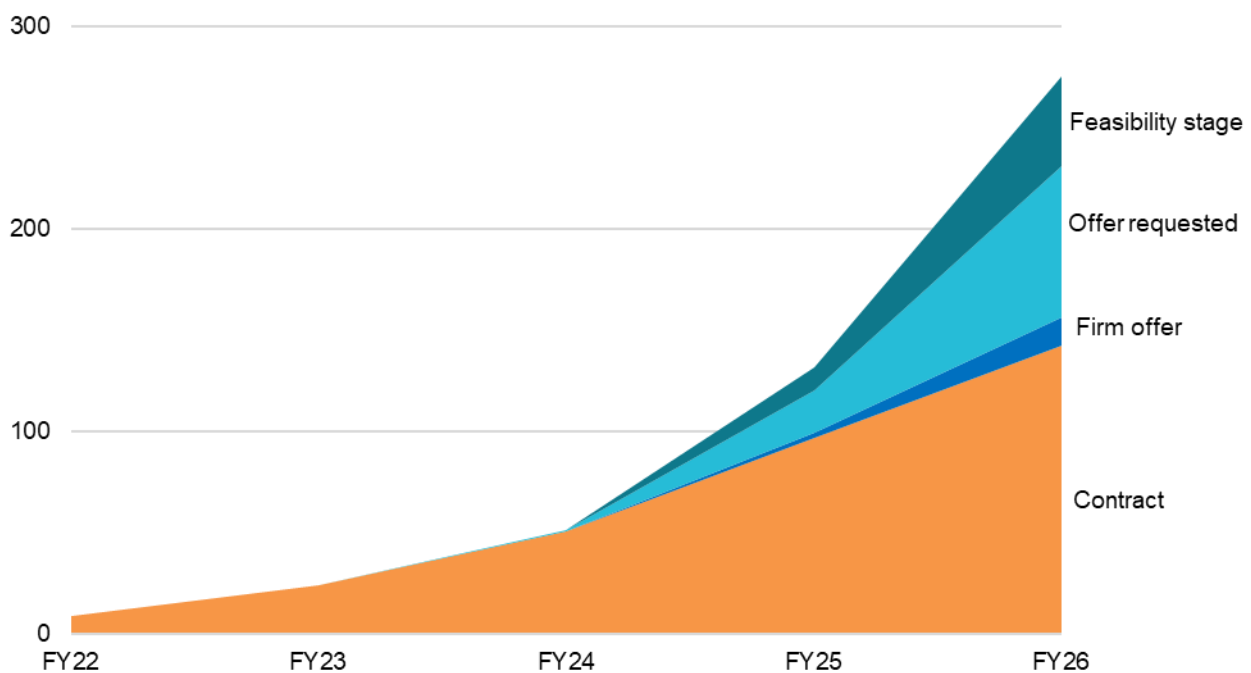


Table 2–2 compares the capex included in our reopener application to our projected total overspends over the 2021–26 period. This shows that in the capex categories affected by this reopener, JEN still expects to incur residual overspends in those categories for costs not relating to the reopener event.

3.3 JEN will incur an additional \$303 million to address this unforeseen capex event

Cl. 6.6.5(a)(3) requires that the Distribution Network Service Provider proposes to undertake capital expenditure to rectify the adverse consequences of the event.

³³ The \$19.2 million (June 2021 dollars) is calculated by subtracting the allowed cash contributions at cells CP52:CT56, CP267:CT267, and CP269:CT269 of the ‘Calc|Capex Flow’ sheet in the *Capex Model* included with the AER’s 2021–26 determination from the direct escalated capital expenditure at cells AX52:BB56, AX267:BB267, and AX269:BB269 of the same sheet.

See: AER, 2021–26 - *Capex model - April 2021 - updated 11 May 2021*, May 2021. Link: <https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Jemena%20distribution%20determination%20-%202021-26%20-%20Capex%20model%20-%20April%202021%20-%20updated%2011%20May%202021.xlsb>

JEN has invested and will continue to invest significant capex to deliver these connections whilst preserving the security and reliability of our network

Table 3–2 sets out the incremental unforeseen capex JEN has or will incur in this regulatory period to deliver these unforeseen major connection projects. This expenditure comprises connection capex, augmentation capex (augex), and consequential network overheads.

Table 3–2: Total event expenditure to 30 June 2026 (\$ June 2021, millions)

| Expenditure type | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | Total |
|--|------------|-------------|-------------|-------------|--------------|--------------|
| Connection capital expenditure | 8.4 | 15.6 | 26.9 | 80.3 | 143.9 | 275.1 |
| Augmentation capital expenditure | - | - | 0.1 | 4.4 | 9.5 | 14.0 |
| Incremental overheads | 0.4 | 0.7 | 1.3 | 4.0 | 7.2 | 13.5 |
| Gross event capital expenditure | 8.8 | 16.3 | 28.3 | 88.7 | 160.6 | 302.6 |
| Less contributions | (6.7) | (11.8) | (19.7) | (58.7) | (105.2) | (202.1) |
| Net event capital expenditure | 2.1 | 4.5 | 8.6 | 30.0 | 55.4 | 100.5 |

Appendix B explains the basis of each of these categories of incremental unforeseen capex.

JEN's NER chapter 5A connection offer obligations (see 5A.F.4) oblige us to incur this expenditure arising from customer-accepted connections offers.

Other costs we are not seeking recovery of include consequential opex, replacement expenditure ('repex') that is or will be brought forward due to major connections that have occurred in the current period, and other connections capex overspends that do not relate to major connections.

3.4 Our additional capex meets the capex reopener event thresholds

Cl. 6.6.5(a)(4) requires that the total of the capital expenditure required during the regulatory control period to rectify the adverse consequences of the event:

(i) exceeds 5% of the value of the regulatory asset base for the relevant Distribution Network Service Provider for the first year of the relevant regulatory control period

(ii) is such that, if undertaken, it is reasonably likely (in the absence of any other reduction in capital expenditure) to result in the total actual capital expenditure for that regulatory control period exceeding the total of the forecast capital expenditure for that regulatory control period as accepted or substituted by the AER in accordance with clauses 6.5.7(c) or 6.12.1(3)(ii) (as the case may be)

Our unforeseen event capex (net of contributions) is 7% of our 2021 RAB and contributes to a 5 year capex overspend of \$141 million in gross terms

NER cl 6.6.5(a)(4) requires JEN to identify the "total of the capital expenditure required during the regulatory control period to rectify the adverse consequences of the event". This requires an assessment of all amounts that have actually been expended, or will need to be expended, by JEN during the current period to rectify the adverse consequences of the 'event' (as defined in this application).

For the purposes of applying NER cl 6.6.5(a)(4), JEN has calculated its net capital expenditure required during this regulatory control period to rectify the adverse consequences of the 'event' as set out in Table 3–3.

Table 3–3 demonstrates how our event capital expenditure meets the RAB and period capex thresholds.

Table 3–3: Total event expenditure and reopener thresholds (\$ June 2021, millions)

| Expenditure type | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | Total |
|---|---------|---------|---------|---------|---------|---------|
| Total period expenditure threshold | | | | | | |
| Unforeseen event capital expenditure (net of contributions) | 2.1 | 4.5 | 8.6 | 30.0 | 55.4 | 100.5 |
| Expected total actual and forecast capital expenditure | 138.9 | 152.6 | 135.9 | 151.9 | 205.5 | 784.9 |
| Capital expenditure allowance | 154.1 | 147.0 | 129.8 | 118.7 | 94.4 | 644.0 |
| Expected capital expenditure overspend | (15.2) | 5.7 | 6.1 | 33.1 | 111.1 | 140.8 |
| Opening RAB threshold | | | | | | |
| 2021-22 RAB | | | | | | 1,517.9 |
| Unforeseen event capital expenditure and share of opening RAB | | | | | | 6.6% |

3.5 We could not have otherwise accommodated the capex

Cl. 6.6.5(a)(5) requires that the Distribution Network Service Provider can demonstrate that it is not able to reduce capital expenditure in other areas to avoid the consequence referred to in subparagraph (a)(4)(ii) without materially adversely affecting the reliability and security of the relevant distribution system.

The scale of the customer-driven overspend could not have been accommodated elsewhere in our capex allowance

The data in Table 3–4 shows that JEN is forecasting overspends in all capex categories other than non-network, with a cumulative total overspend of 21.9% (in net terms).

JEN could not reduce its original forecast capex by 21.9% without adversely affecting the reliability and security of its network.

Table 3–4: Total actual and forecast capital expenditure outcomes by category 2021–26 (\$ June 2021, millions)

| Expenditure type | Allowance | Expected outcome | Variance \$ | Variance % |
|-------------------------------|--------------|------------------|--------------|--------------|
| Replacement | 211.8 | 244.6 | 32.9 | 15.5% |
| Connections | 196.7 | 519.6 | 322.9 | 164.1% |
| Augmentation | 146.3 | 164.3 | 18.0 | 12.3% |
| Non-network – ICT | 114.3 | 93.9 | (20.4) | (17.9%) |
| Non-network – Other | 18.2 | 13.6 | (4.6) | (25.3%) |
| Capitalised network overheads | 91.0 | 132.5 | 41.5 | 45.5% |
| Gross capex | 778.4 | 1,168.5 | 390.1 | 50.1% |
| Asset disposals | (0.5) | (1.4) | (0.9) | 180.2% |
| Contributions | (133.9) | (382.2) | (248.3) | 185.5% |
| Net capex | 644.0 | 784.9 | 140.8 | 21.9% |

These forecasts to the end of the 2025-26 regulatory year are current as at the time of this application, and may be updated over the balance of this regulatory period as additional information becomes available.

3.6 We could not have delivered these connections securely or reliably without this investment

Cl. 6.6.5(a)(6) requires that the failure to rectify the adverse consequences of the event would be likely to materially adversely affect the reliability³⁴ and security of the relevant distribution system.

The unprecedented increase in required network capacity for these unforeseen major connections could not have been met from our existing system reliably and securely

JEN's binding connection policy requires it to calculate the incremental costs required to connect a new major connection of the kind driving the reopener event without adversely affecting the reliability and security of its existing network. By design, failure to incur these costs whilst still connecting the customer would adversely affect the reliability and security of JEN's existing network.

We assessed the reliability and system security consequences of each major connection request when applying our AER-approved connection policy to assess the incremental cost of shared distribution network (ICSN) requirements.³⁵ The ICSN represents the capital cost that we expect to incur in adding capacity to the shared network as a direct result of the new or altered connection, measured in kVA.

The assessment and costing process JEN is required to apply under NER Chapter 5A necessarily means that JEN has only identified incremental expenditure that is essential to rectify the adverse consequences of these unforeseen major connections. JEN has obligations under Chapter 5A to identify and address any adverse consequences for network performance associated with new or modified connections. The need for additional capital expenditure has arisen in the context of JEN complying with these performance obligations as it seeks to deal with major connection inquiries on an unforeseen and unprecedented scale.

Specifically, cl 5A.C.3(a)(5)(iv) requires JEN to determine “any possible material effect of the proposed new connection or connection alteration on the network power transfer capability of the distribution network to which the new connection or connection alteration is proposed to be made”. In other words, in dealing with each connection application and responding as per the rule requirements, JEN needed to consider and address the potential adverse effects on network capability.

Appendix F provides our confidential major connection customer agreements for the customers who have received and or signed a firm connection offer. These agreements identify the works needed to preserve reliability and security of supply for each of these customer connection requests.

Examining these projects, it is evident that a failure to rectify the adverse consequences of the events would be likely to materially adversely affect the reliability and security of the relevant distribution system.

For example, see the network impacts case study provided in Attachment B-03 as summarised in Box 1

3.7 This unforeseen capex event does not qualify for a pass through event or a contingent project

Cl. 6.6.5(a)(7) requires that the event is not a pass through event or a contingent project.

Our 2021–26 determination has no contingent projects

JEN did not propose any contingent projects and therefore the AER did not make a decision under clause 6.12.1(4A) of the NER.³⁶

³⁴ The NER glossary defines 'reliability' as: 'The probability of a system, device, plant or equipment performing its function adequately for the period of time intended, under the operating conditions encountered.'

³⁵ See section 5.5 of JEN 2021–26 Connection Policy.

³⁶ AER, Final Decision Jemena Distribution Determination 2021 to 2026 Overview, April 2021, p.7-43.

The circumstances for the event are not pass through triggers for any of JEN's nominated pass through events

JEN's approved nominated pass through events are: terrorism event, insurance coverage event, natural disaster event, insurer credit risk event, retailer insolvency event.³⁷

None of these event triggers have been met by the major connection circumstances giving rise to JEN's unforeseen capex event.

The circumstances for the event are not pass through triggers for the NER default events

The circumstances for the event are not pass through triggers for the NER default events of: a tax change event, a retailer insolvency event, a service standard event or a regulatory change event.

There have been no legislative changes associated with the event that have created direct obligations on JEN.

The AER has previously decided that government policy decisions, absent associated legislation and a foreseeable major increase in DNSP costs, do not constitute a service standard event or a regulatory change event. Specifically, in the Ausnet Victorian DNSP draft determination it rejected Ausnet's proposal for an electric vehicle uptake event, stating:

*AusNet Services did not give clear reasons why such a major policy initiative could not be planned and managed as foreshadowed. As affected service providers are key stakeholders in this process, they are in an effective position to ensure that policy makers understand major costs impacts and that supporting legislation and processes should be in place to allow for recovery of efficient costs stemming from this new initiative. Further, AusNet Services did not cite any similar past incidents or substantiate with examples of future events where it is conceivable that service providers could incur material cost impacts as a result of potential policy developments.*³⁸

³⁷ AER, Final Decision Jemena Distribution Determination 2021 to 2026 Overview, April 2021, p.7-45.

³⁸ AER, Attachment 15: Pass through events | Draft decision – AusNet Services 2021–26, Sep 2020, p.15-17.

4. Our revenue and bill impacts

This section explains how our unforeseen capital expenditure affects our required revenue adjustment and customer bills in 2025-26. The unforeseen capital expenditure event costs have been transposed into revenue and price impacts using the models provided in Appendix D.

4.1 Revenue determination variation amount

We have calculated the substituted revenue determination amount as the updated required revenues for the 2021–26 regulatory period due to the capital expenditure event.

We used the Standard Control Services (**SCS**) Post Tax Revenue Model (**PTRM**) recently published with the AER’s decision to accept our proposed cost pass-through application for the Victorian Emergency Backstop Mechanism updated to include the incremental capital expenditure—as noted in this application—to determine a new smoothed Annual Revenue Requirement (**ARR**).

This model is provided as Appendix D with this application. Based on this approach, we have calculated the required revenue change to be \$32 million (\$ June 2021, smoothed).

4.2 Indicative price impacts on 2025-26 bills

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 reopener application is \$58 for an average residential customer assuming no change in volumes from having the reopener approved.³⁹ This represents a 10.8% increase in SCS charges for a residential customer, which equates to an increase of approximately 3.6% relative to the Victorian Default Offer prices.

4.3 How additional major connections benefit customer prices

However, if we take a longer term view and factor in the volume benefit from adding the unforeseen major connections, then the average bills reduce for JEN’s existing customers. Although there is a cost increase from those connections, this is more than offset by the associated volume increase.

For instance, Figure 4.1 illustrates how projected average residential and small business bills change if updated to add both the volume and costs associated with the connections the subject of this reopener application.⁴⁰ The charts show how the additional volume puts downward pressure on average bills over the full 2021–31 period. They also show that, although the additional cost recovered in the 2025-26 year reduces that benefit somewhat, average bills are lower than would result if those connections did not go ahead and continue to remain so out to 2030-31.

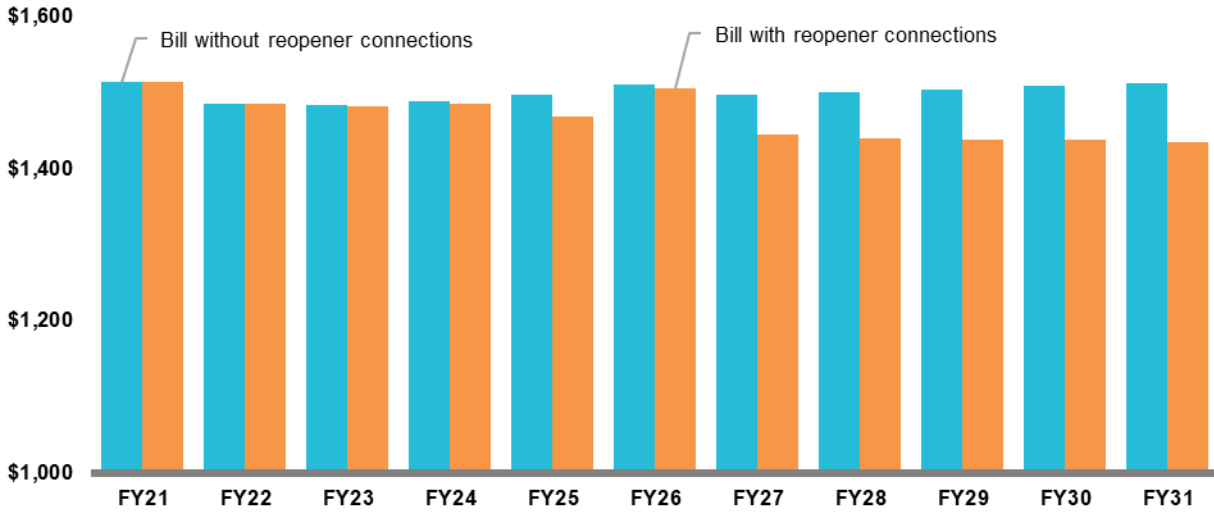
Importantly, this simplified analysis does not factor in our expenditure and other forecasts for the 2026–31 period that we will include in our Regulatory Proposal for that period (due to the AER at the end of January 2025). Care should be taken when comparing these bill projections with those that we will include in that proposal.

³⁹ We estimated this using the Essential Services Commission’s maximum bill for residential consumers published with its 2024-25 default market offer decision, of \$1,602 and the estimated network cost share. We used indicative volumes for 2024-25 and 2025-26 provided by Blunomy that we intend to incorporate into our initial regulatory proposal for the 2026–31 period. For simplicity, this bill impact analysis assumed that whether or not this application was approved had no impact in the volumes used.

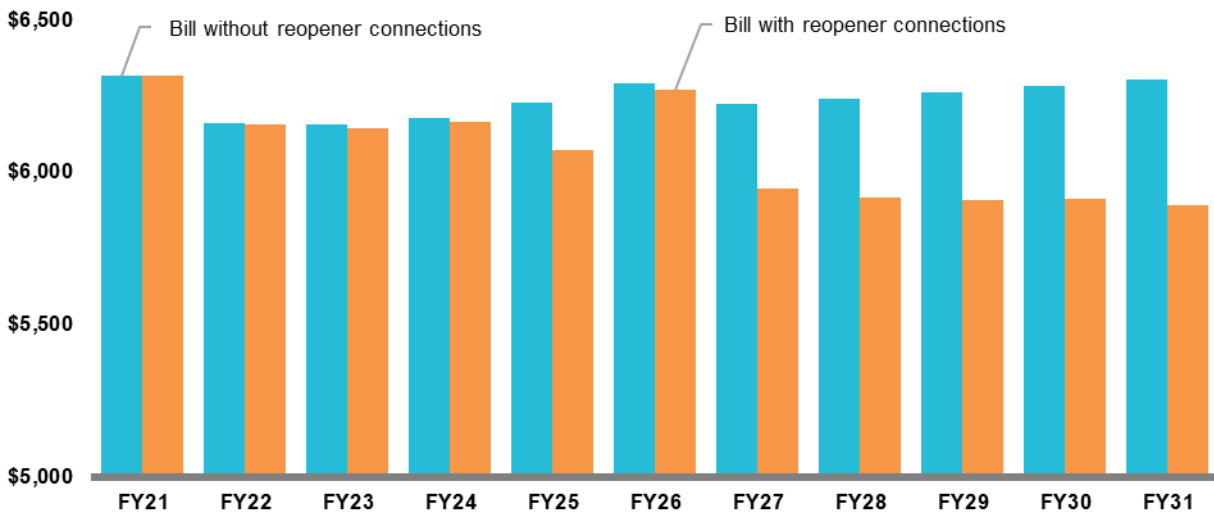
⁴⁰ For this illustration, we used the AER’s approach to projecting average residential and small business customer bills. We started with 2020-21 bills to align with the projections published with the 2021–26 determination. We then updated those projections to add the additional volumes and costs. We also extended the projections out to 2030-31 by extrapolating costs and volumes from the 2021–26 determination out over the 2026–31 period. The bill impacts are estimated in nominal dollars using the inflation forecast assumptions included with the 2021–26 determination.

Figure 4.1: Impact of major connections on average customer bills (\$ per customer, \$ nominal, vertical axes truncated)

Panel A: Residential bills



Panel B: Small business bills



Appendix A

Compliance checklist

A1. How this submission addresses the rules

This appendix provides summary information outlining how this reopener application submission and supporting materials comply with the NER capex reopener provisions (as set out in CI 6.6.5). It references where the relevant information can be found.

Table A1–1: Reopener application compliance checklist

| NER clause | Requirement | Compliance demonstration | See |
|-------------|--|--|-------------|
| 6.6.5(a)(1) | an event that is beyond the reasonable control of the Distribution Network Service Provider has occurred during that regulatory control period and the occurrence of that event during that period (or of an event of a similar kind) could not reasonably have been foreseen by the Distribution Network Service Provider at the time of the making of the distribution determination ('the event'); | <p>JEN's connection forecasting context was framed by pandemic uncertainties.</p> <p>The scale and volume of major connections since then has been equally unprecedented.</p> <p>These major customer connection requests could not have been reasonably foreseen.</p> <p>Connection requests are beyond JEN's reasonable control, and to seek to delay in any way they would go against our customer-focused values and our NER and EDCoP obligations.</p> <p><i>The event</i> is an unforeseen series of connection applications and connection inquiries from customers (where a customer requires a supply for maximum demand above 10 MW) resulting in a greater than anticipated increase in demand for network capacity over the 2021–26 regulatory control period and causing JEN to incur additional capital expenditure.</p> | Section 3.1 |
| 6.6.5(a)(2) | no forecast capital expenditure was accepted or substituted by the AER for that period under clauses 6.5.7(c) or 6.12.1(3)(ii) (as the case may be) in relation to the event that has occurred | JEN's connection capex forecast did not include expenditure related to these additional unforeseen major connections. Its allowance was based on a bottom-up build forecast of the 5 other major connections known at that time. | Section 3.2 |
| 6.6.5(a)(3) | the Distribution Network Service Provider proposes to undertake capital expenditure to rectify the adverse consequences of the event | JEN will incur an additional \$303 million to address this unforeseen capex event, or \$101 million when contributions are netted off. | Section 3.3 |
| 6.6.5(a)(4) | <p>the total of the capital expenditure required during the regulatory control period to rectify the adverse consequences of the event:</p> <p>(i) exceeds 5% of the value of the regulatory asset base for the relevant Distribution Network Service Provider for the first year of the relevant regulatory control period</p> <p>(ii) is such that, if undertaken, it is reasonably likely (in the absence of any other reduction in capital expenditure) to result in the total actual capital expenditure for that regulatory control period exceeding the total of the forecast capital expenditure for that regulatory control period as accepted or substituted by the AER in accordance with clauses</p> | As at July 24, JEN expects total gross and net capital expenditure required for the unforeseen event to be >\$300m and >\$100m, respectively, which will exceed 5% of our 2021 RAB (\$76m in \$ June 2021). This expenditure, if undertaken, would contribute to a material 5 year capital expenditure overspend. | Section 3.4 |

| NER clause | Requirement | Compliance demonstration | See |
|-------------|--|---|-------------|
| | 6.5.7(c) or 6.12.1(3)(ii) (as the case may be) | | |
| 6.6.5(a)(5) | the Distribution Network Service Provider can demonstrate that it is not able to reduce capital expenditure in other areas to avoid the consequence referred to in subparagraph (a)(4)(ii) without materially adversely affecting the reliability and security of the relevant distribution system | <p>The scale of the customer-driven overspend could not have been accommodated elsewhere in our capex allowance which is being overspent in aggregate and in several capital expenditure categories.</p> <p>JEN cannot reduce capex in other categories without materially adversely affecting network reliability and security of supply.</p> | Section 3.5 |
| 6.6.5(a)(6) | a failure to rectify the adverse consequences of the event would be likely to materially adversely affect the reliability and security of the relevant distribution system | <p>The unprecedented increase in required network capacity for these unforeseen major connections could not have been met from our existing system reliably and securely.</p> <p>If JEN were to connect all of the applicants in accordance with the NER while not investing in additional network capacity, this would significantly increase the risk of system failure.</p> <p>The assessment and costing process JEN is required to apply under NER Chapter 5A necessarily means that JEN has only identified incremental expenditure that is essential to rectify the adverse consequences of these unforeseen major connections. JEN has obligations under Chapter 5A to identify and address any adverse consequences for network performance associated with new or modified connections. The need for additional capital expenditure has arisen in the context of JEN complying with these performance obligations as it seeks to deal with connection inquiries from customers on an unforeseen and unprecedented scale.</p> <p>Specifically, cl 5A.C.3(a)(5)(iv) requires JEN to determine “any possible material effect of the proposed new connection or connection alteration on the network power transfer capability of the distribution network to which the new connection or connection alteration is proposed to be made”. In other words, in dealing with each connection application and responding as per the rule requirements, JEN needed to consider and address the potential adverse effects on network capability.</p> | Section 3.6 |
| 6.6.5(a)(7) | the event is not a pass through event or a contingent project. | <p>The AER’s 2021–26 determination did not make a decision under clause 6.12.1(4A) of the NER to include any contingent projects.</p> <p>The circumstances for the event are not pass through triggers for any of JEN’s nominated pass through events or for the NER default events.</p> | Section 3.7 |

| NER clause | Requirement | Compliance demonstration | See |
|------------|--|---|------------|
| 6.6.5(b) | An application referred to in paragraph (a) must not be made within 90 business days prior to the end of a regulatory year. | JEN has made this application prior to mid-February 2025 (being 90 business days prior to 1 July 2025). | n/a |
| 6.6.5(b1) | The capital expenditure that the Distribution Network Service Provider proposes to undertake for the purposes of subparagraph (a)(3) must not include expenditure for a restricted asset, unless that Distribution Network Service Provider has submitted an exemption application with the application referred to in paragraph (a), which requests an asset exemption under clause 6.4B.1(a)(4) for the regulatory control period in respect of that asset or class of asset. | This application does not include expenditure for a restricted asset. | n/a |
| 6.6.5(f) | <p>The substituted distribution determination must only vary from the revoked distribution determination to the extent necessary:</p> <p>(1) to adjust the forecast capital expenditure for that regulatory control period to accommodate the amount of such additional capital expenditure as the AER determines is appropriate (in which case the amount of that adjustment will be taken to be accepted by the AER under clause 6.5.7(c)); and</p> <p>(2) to reflect the effect of any resultant increase in forecast capital expenditure on:</p> <p>(i) the forecast operating expenditure for the remainder of the regulatory control period;</p> <p>(ii) the annual revenue requirement for each regulatory year in the remainder of the regulatory control period; and</p> <p>(iii) the X factor for each of the remaining regulatory years of the regulatory control period.</p> | <p>JEN's application only seeks to vary from the 2021–26 distribution determination for:</p> <ul style="list-style-type: none"> – Additional capital expenditure required over the 2021–26 period to rectify the adverse consequences of the event – The resulting changes in annual revenue requirement and X factor for 2025-26 after re-running the determination PTRM <p>There are two forms of adjustment that are permitted under paragraph (f):</p> <ul style="list-style-type: none"> – Adjustments to the forecast capital expenditure in the determination (i.e. the allowance) for the full 2021–26 regulatory control period. This is not limited to adjusting forecast capex for <i>remaining or future</i> years of the regulatory control period (this limitation applies to a contingent project determination,⁴¹ but it does not apply to a determination under cl 6.6.5). Adjustments are permitted to the forecast capital expenditure set out in the distribution determination for any or all years of the 2021–26 regulatory control period. – Consequential adjustments to operating expenditure, annual revenue requirements and X factors for each <i>remaining</i> year of the regulatory control period. <p>The fact that capex is worded differently to other costs and is different to the equivalent contingent project provision is clearly deliberate. As noted above, where there is a series of events, it is likely that the associated capital expenditure requirements will span multiple</p> | Appendix D |

⁴¹ NER, cl 6.6A.2(e)(1)(i)

| NER clause | Requirement | Compliance demonstration | See |
|------------|---|---|---|
| | | <p>regulatory years. This may include some capital expenditure incurred in years prior to the AER making its determination, as well as some expenditure forecast to be incurred in future years.</p> <p>The AER can make a determination adjusting forecast capital expenditure for multiple years of the 2021-2026 regulatory control period, but with adjustments to the ARR and X factor limited to the remaining (2025-26) regulatory year.</p> | |
| 6.6.5(g) | A Distribution Network Service Provider must provide the AER with such additional information as the AER requires for the purpose of making a decision on an application made by that Distribution Network Service Provider under paragraph (a) within the time specified by the AER in a notice provided to the Distribution Network Service Provider by the AER for that purpose. | <p>JEN is committed to providing the AER the information it needs to assess this application.</p> <p>JEN has engaged with AER staff prior to submitting this application to best ensure the information contained herein is sufficient for this purpose.</p> | Section A2 sets out how this submission addresses the AER's pre-application information request |

A2. How this submission addresses the AER's pre-application information request

On 4 October 2024, the AER sent JEN (via email) a request for information to be included with JEN's application submission in relation to capex. Section A.2 provides an overview of how this application submission and supporting materials address the AER's pre-application questions. It references where the relevant information can be found.

Table A2-1: AER pre-application information request checklist

| | Requirement | See |
|---|--|--|
| 1 | Submit completed tabs in the format of the reset RIN 2021–26 for worksheets 2.3 and 2.5, and complete the augmentation, connections and capital contributions (capcons) cells in worksheet 2.1. Two versions of each should be completed, one including the total value of augmentation, connections and capcons forecast or spent in the 2021–26 period, and a second set that only includes expenditure from the 28 large connection projects that are the subject of the reopener application | <p>Given the timeframes normally available to JEN to respond to a reset RIN are not available to JEN here, and that this application is being made concurrent with JEN finalising its 2023-24 annual RIN response and preparing its response to the draft reset RIN for the 2026-31 period, JEN did not have the resources to prepare this information in the time it has had since 4 October.</p> <p>Once the AER has assessed the information provided with this application, JEN will work with AER staff to meet any further information requirements.</p> |
| 2 | Indicate what capex has been incurred, and what is forecast | <p>Table 3–2 sets out the incremental unforeseen capex JEN has or will incur in this regulatory period to deliver these unforeseen major connection projects. Capex for 2021-22, 2022-23, and 2023-24 has been incurred⁴² and 2024-25 and 2025-26 are forecast.</p> |

⁴² Appendix B section 4.2 explains how incurred expenditure has been reconciled with JEN's RIN responses for those years, and then the revised forecasts adjusted to accord with the basis of the original forecast as regards cost escalation and overheads.

| | Requirement | See |
|---|---|---|
| 3 | Indicate the augmentation, connections and any other capex that you consider is/was required to prevent the reliability and security of the network from being disrupted or compromised due to the connection of the 28 large projects, and your reasons for this | Table 3–2 provides a summary of this. The value corresponding to each project can be found in the <i>Unforeseen Major Connections Model</i> see Attachment C-01. This includes 45 projects associated with 19 major connections. |
| 4 | Provide information on the 28 large connections, including the negotiation process, cost, and current level of commitment | Appendix B |
| 5 | If available, provide information on the cost (connections, augmentation, and any other capex) of similar large projects that have been completed by Jemena in the past, and whether these costs are comparable with the 28 large connections projects | Appendix B section 5.3 demonstrates how we accurately forecast the actual delivery costs for the delivered major connections after accounting for new customer requests. Note: In early discussion with the AER on the topic of reopening the 2021-26 determination, we outlined there were 28 large connections that would potentially be the subject of a re-opener applications. In finalising this application, we have revised the list down to 19 major connections. |
| 6 | Provide information on the derivation of capcons for the 28 large connections, including the revenue test applied to calculate the capcons and the MD and demand estimates provided by the connection applicants including uptake in the years following commissioning. | Appendix B section 4.4 provides the derivation of the revised contributions forecast. This derivation relies upon the contributions, 15 year demand and assigned network tariffs set out in the confidential issued and signed connection agreements provided in Appendix F. In JEN's Negotiated Electricity Connection Works Offers (connection agreements) in Appendix F: <ul style="list-style-type: none"> Annexure A provides the net incremental cost revenue test derivation of the contribution including the incremental revenue (IR), incremental cost of customer specific connection assets (ICCS) and incremental cost of augmentation of shared distribution network (ICSN) Annexure B provides the network tariff assignment for each connection point covered by the agreement, including Contract Demand Schedule that sets out the 15 year forecast of contract demand (kVA) covering the forecast ramp up in customer demand that informs the IR forecast, JEN applies a scaling factor to this contract demand figure to get the forecast energy consumption also used to forecast the IR. A different scaling factor is used for data centres compared to other major connections reflecting the higher level of capacity utilisation that data centres show. |
| 7 | Provide information on whether the energy consumption assumed in the connection application and used to derive the capcon has been realised by the connecting party | Appendix B section 5.3 demonstrates how we accurately forecast the customer's major connection energy needs including the ramp up in these over time. |
| 8 | What steps were taken to explore funding this out of JEN's ex-ante capex forecast, including whether consideration | Section 3.5. |

| Requirement | See |
|---|-----|
| was given to reducing other projects or programs to meet the cost of the connections and augex, and why this did not prove sufficient | |

A3. How JEN’s capex justification addresses the rules

Section A3 provides summary information outlining how this document and supporting materials comply with the NER provisions of clause 6.5.7 Forecast capital expenditure that govern the AER’s ex ante approval of capex allowances. It references where the relevant information can be found.

Table A3–1: Capital expenditure compliance checklist

| NER clause | Requirement | Compliance demonstration | See |
|-------------|---|---|-----------------------------|
| 6.5.7(a) | A <i>building block proposal</i> must include the total forecast capital expenditure for the relevant <i>regulatory control period</i> which the <i>Distribution Network Service Provider</i> considers is required in order to do each of the following (the <i>capital expenditure objectives</i>): | JEN’s total (i.e. gross) revised forecast capex is summarised by driver at rows 15:28 of the ‘Output RIN’ sheet of the <i>Capex Model</i> (see Attachment D-01). It is summarised by asset class at rows 18:73 of the ‘Output PTRM’ sheet of the same model, which are then picked up in the ‘DNSP input’ sheet of the <i>2021–26 PTRM</i> (see Attachment D-02). | Attachments D-01 and D-02 |
| 6.5.7(a)(1) | meet or manage the expected demand for <i>standard control services</i> over that period; | JEN’s revised connection capex and augmentation capex is directly triggered by the need to meet or manage the expected demand for <i>standard control services</i> required by unforeseen major connection customers over the 2021–26 period | Appendix B Section 4 |
| 6.5.7(a)(2) | comply with all applicable <i>regulatory obligations or requirements</i> associated with the provision of <i>standard control services</i> ; | JEN’s revised connection capex, augmentation capex and consequential overheads capex is directly triggered by the need to comply with its: <ul style="list-style-type: none"> • NER chapter 5A connection obligations, whilst • maintaining the reliability and security of the <i>distribution system</i> | |
| 6.5.7(a)(3) | to the extent that there is no applicable <i>regulatory obligation or requirement</i> in relation to: <ol style="list-style-type: none"> the quality, reliability or security of supply of <i>standard control services</i>; or the reliability or security of the <i>distribution system</i> through the supply of <i>standard control services</i>, to the relevant extent: <ol style="list-style-type: none"> maintain the quality, reliability and security of supply of <i>standard control services</i>; and | The assessment and costing process JEN is required to apply under NER Chapter 5A necessarily means that JEN has only identified incremental expenditure that is essential to rectify the adverse consequences of these unforeseen major connections. JEN has obligations under Chapter 5A to identify and address any adverse consequences for network performance associated with new or | Section 3.6 Attachment B-03 |

| NER clause | Requirement | Compliance demonstration | See |
|-------------|---|---|--------------------------------|
| | (iv) maintain the reliability and security of the <i>distribution system</i> through the supply of <i>standard control services</i> ; | modified connections. The need for additional capital expenditure has arisen in the context of JEN complying with these performance obligations as it seeks to deal with major connection inquiries from customers on an unforeseen and unprecedented scale. Specifically, cl 5A.C.3(a)(5)(iv) requires JEN to determine “any possible material effect of the proposed new connection or connection alteration on the network power transfer capability of the distribution network to which the new connection or connection alteration is proposed to be made”. In other words, in dealing with each connection application and responding as per the rule requirements, JEN needed to consider and address the potential adverse effects on network capability. | |
| | (4) maintain the safety of the <i>distribution system</i> through the supply of <i>standard control services</i> ; and | As above | Section 3.6 Attachment B-03 |
| | (5) contribute to achieving <i>emissions reduction targets</i> through the supply of <i>standard control services</i> . | n/a | |
| 6.5.7(b) | The forecast of required capital expenditure of a <i>Distribution Network Service Provider</i> that is included in a <i>building block proposal</i> must: | | |
| 6.5.7(b)(1) | comply with the requirements of any relevant <i>regulatory information instrument</i> ; | The AER has not issued a relevant <i>regulatory information instrument</i> for this reopener application. Where relevant JEN has provided information in the same form required in the reset RIN the AER issued to JEN for the 2021–26 determination process. JEN has addressed the AER’s information requests made with respect to this application. | Section A.2 |
| 6.5.7(b)(2) | be for expenditure that is properly allocated to <i>standard control services</i> in accordance with the principles and policies set out in the <i>Cost Allocation Method for the Distribution Network Service Provider</i> ; | JEN has applied its AER-approved CAM when preparing its revised forecasts and its reported and audited actual SCS capex for FY22, FY23 and FY24. JEN has also commissioned an agreed upon procedures report from our RIN auditors and will provide this to the AER following submission of its FY24 annual RIN response. | Appendix B Section 4.2.2 |

| NER clause | Requirement | Compliance demonstration | See | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|--|--------------------------|-------|-----|----------------|-----|-----|----------------|------|-----|----------------|------|-----|----------------|------|------|----------------|-------|------|--------------|--------------|--------------|------------------------|
| 6.5.7(b)(3) | include both: <ul style="list-style-type: none"> (i) the total of the forecast capital expenditure for the relevant <i>regulatory control period</i>; and (ii) the forecast capital expenditure for each <i>regulatory year</i> of the relevant <i>regulatory control period</i>; and | JEN proposes the following: <table border="1" data-bbox="890 320 1305 616"> <thead> <tr> <th></th> <th>Gross</th> <th>Net</th> </tr> </thead> <tbody> <tr> <td>2021-22</td> <td>8.8</td> <td>2.1</td> </tr> <tr> <td>2022-23</td> <td>16.3</td> <td>4.5</td> </tr> <tr> <td>2023-24</td> <td>28.3</td> <td>8.6</td> </tr> <tr> <td>2024-25</td> <td>88.7</td> <td>30.0</td> </tr> <tr> <td>2025-26</td> <td>160.6</td> <td>55.4</td> </tr> <tr> <td>Total</td> <td>302.6</td> <td>100.5</td> </tr> </tbody> </table> Note: values are in 2021 dollars. | | Gross | Net | 2021-22 | 8.8 | 2.1 | 2022-23 | 16.3 | 4.5 | 2023-24 | 28.3 | 8.6 | 2024-25 | 88.7 | 30.0 | 2025-26 | 160.6 | 55.4 | Total | 302.6 | 100.5 | Appendix B Section 4.5 |
| | Gross | Net | | | | | | | | | | | | | | | | | | | | | | |
| 2021-22 | 8.8 | 2.1 | | | | | | | | | | | | | | | | | | | | | | |
| 2022-23 | 16.3 | 4.5 | | | | | | | | | | | | | | | | | | | | | | |
| 2023-24 | 28.3 | 8.6 | | | | | | | | | | | | | | | | | | | | | | |
| 2024-25 | 88.7 | 30.0 | | | | | | | | | | | | | | | | | | | | | | |
| 2025-26 | 160.6 | 55.4 | | | | | | | | | | | | | | | | | | | | | | |
| Total | 302.6 | 100.5 | | | | | | | | | | | | | | | | | | | | | | |
| 6.5.7(b)(4) | identify any forecast capital expenditure for the relevant <i>regulatory control period</i> that is for an option that has satisfied the <i>regulatory investment test for transmission</i> or the <i>regulatory investment test for distribution</i> (as the case may be); and | JEN has applied the RIT-D to eligible augex projects associated with the reopener event (of which there is only one). JEN notes the RIT-D exemptions listed in cl.5.17.3(a) and (c) apply to the majority of projects within the unforeseen capex event. | Appendix B Section 4.1.5 | | | | | | | | | | | | | | | | | | | | | |
| 6.5.7(b)(5) | not include <i>expenditure for a restricted asset</i> , unless: <ul style="list-style-type: none"> (i) to the extent that any such expenditure includes an amount of unspent capital expenditure for a <i>contingent project</i> in accordance with paragraph (g), an <i>asset exemption</i> has been granted by the <i>AER</i> under clause 6.4B.1(a)(2) in respect of that asset or that class of asset for that <i>contingent project</i>; (ii) to the extent that any such expenditure relates to a <i>positive pass through amount</i>, an <i>asset exemption</i> has been granted by the <i>AER</i> under clause 6.4B.1(a)(3) in respect of that asset or that class of asset for that <i>positive pass through amount</i>; or (iii) otherwise, the <i>Distribution Network Service Provider</i> has submitted an <i>exemption application</i> with the <i>regulatory proposal</i> requesting an <i>asset exemption</i> under clause 6.4B.1(a)(1) for the <i>regulatory control period</i> in respect of that asset or class of asset. | JEN's revised capex forecasts do not include expenditure for any restricted assets | | | | | | | | | | | | | | | | | | | | | | |

Appendix B

Our unforeseen event expenditure

See: *JEN – Att B-01 – Unforeseen event expenditure – 20241015.*

Supporting attachments:

- *JEN – ACIL Allen Att B-02 Briefing Note to Jemena – 20241011*
- *JEN – Att B-03 – Network impacts case study – 20241015*
- *JEN – CBRE Research Att B-04 – 2024 Global Data Center Investor Intentions Survey – 20240630*
- *JEN – Att B-05 – Infrastructure cost estimation methodology – 20190524*
- *JEN – Melbourne Airport Att B-06 - Melbourne Airport Master Plan 2022 – 202211*
- *JEN – Morgan Stanley Research Att B-07 – Data Centre Handbook – 202405.*

Appendix C

Expenditure Model

See: *JEN – Att C-01 – Unforeseen Major Connections Model – 20241015.*



Appendix D

Calculating the redetermined expenditure allowances and revenue amounts

D1. Calculating the reopener amount

JEN has undertaken the following steps to update the final determination models and calculate the incremental capital expenditure and the revenue impact:

- (1) Determined the incremental capital expenditure for the 2021 to 2026 regulatory control period attributed to the unforeseen major connections, including direct connection and augmentation expenditure and incremental capitalised overheads.⁴³
- (2) Determined the incremental capital contributions attributed to the expenditure in (1) using the approach included in the capex forecast method included with the AER's final determination for the 2021–26 period.
- (3) Added the incremental capital expenditure from (1) and capital contributions from (2)—by year—to the latest version of JEN's 2021–26 PTRM and resolved the X-factor for 2025-26 so that the net present value of smoothed revenue for the 2021 to 2026 regulatory control period matched that for forecast building blocks revenue.

The models used to undertake this exercise are:

- *JEN - Att C-01 – Unforeseen Major Connections Model - 20241015*
- *JEN - Att D-01 – 2021–26 Capex Model - 20241015*
- *JEN - Att D-02 – 2021–26 PTRM - 20241015.*

⁴³ Incremental overheads were calculated automatically within the SCS capex model using the assumptions adopted by the AER in its 2021–26 determination.

Appendix E

Major connection customer survey

See: *JEN – farrierswier Att E-01 Survey report – 20241002.*

Appendix F

Major connection customer agreements

See supporting attachments:

- *JEN – Att F-00 – Our major customer connection agreements – 20241015*
- *JEN – Att F-01 – DC02 – 20241015.zip*
- *JEN – Att F-02 – DC04 – 20241015.zip*
- *JEN – Att F-03 – DC06 – 20241015.zip*
- *JEN – Att F-04 – DC07 – 20241015.zip*
- *JEN – Att F-05 – DC09 – 20241015.zip*
- *JEN – Att F-06 – DC10 – 20241015.zip*
- *JEN – Att F-07 – DC11 – 20241015.zip*
- *JEN – Att F-08 – DC12 – 20241015.zip*
- *JEN – Att F-09 – DC17 – 20241015.zip*
- *JEN – Att F-10 – DC18 – 20241015.zip*
- *JEN – Att F-11 – DC20 – 20241015.zip*
- *JEN – Att F-12 – DC24 – 20241015.zip*
- *JEN – Att F-13 – 20241015.zip*
- *JEN – Att F-14 – 20241015.zip*
- *JEN – Att F-15 – 20241015.zip*
- *JEN – Att F-16 – 20241015.zip*
- *JEN – Att F-17 – 20241015.zip*
- *JEN – Att F-18 – 20241015.zip*
- *JEN – Att F-19 – 20241015.zip*

Appendix G

Claims for confidentiality

See: *JEN – Att G-01 Reopener application – Claims for confidentiality – 20241015.*