Jemena Electricity Networks (Vic) Ltd

Response to the Price Reset Regulatory Information Notice

Written Response

Information for the 2021-2026 Regulatory RIN

Jemena
bringing energy to life

4. Capital Expenditure

4.1 Provide justification for Jemena's total forecast capex, including the following information:

(a) why the total forecast capex is required for Jemena to achieve each of the objectives in clause 6.5.7(a) of the NER;

(b) how Jemena's total forecast capex reasonably reflects each of the criteria in clause 6.5.7(c) of the NER;

(c) how Jemena's total forecast capex accounts for the factors in clause 6.5.7(e) of the NER;

(d) an explanation of how the plans, policies, procedures and regulatory obligations or requirements identified in Workbook 1 – Regulatory determination, regulatory templates 7.1 and 7.3 have been used to develop forecast capex; and

(e) an explanation of how each response provided to paragraph 4.1(a) to (d) is reflected in any increase or decrease in expenditures or volumes, particularly between the current and forthcoming regulatory control periods, provided in Workbook 1 – Regulatory determination, regulatory templates 2.1 to 2.11.

We have considered whether our planning and forecasting processes, and our resultant capital expenditure forecast, are consistent with the capital expenditure objectives[1] and capital expenditure criteria,[2] as well as considering the capital expenditure factors[3] set out in the National Electricity Rules (**NER**).

Our forecasting processes explicitly considers the drivers of capital expenditure set out by in capital expenditure objectives, and through our international best practice governance framework we have addressed the matters raised in the criteria. In relation to the resultant capital expenditure forecasts, our forecast capital expenditure is consistent with the requirements of the NER in that it reflects expenditure which is both prudent and efficient.

Capital expenditure objectives (NER cl 6.5.7(a))

Refer to Appendix B section B1 of Attachment 05-01 to our Regulatory Proposal.

Capital expenditure criteria (NER cl 6.5.7(c))

Refer to Appendix B section B2 of Attachment 05-01 to our Regulatory Proposal.

Capital expenditure factors (NER cl 6.5.7(e))

Refer to Appendix B section B3 of Attachment 05-01 to our Regulatory Proposal.

Use of plans, policies, procedures and regulatory obligations or requirements

Section 2 and Appendix C of Attachment 05-01 to our Regulatory Proposal explains our asset management system, through which we ensure that all relevant plans, policies and procedures are used in our asset management planning (including capital expenditure forecasting) process. Relevant regulatory instruments we must have regard to are referred throughout Attachment 05-01 in relation to specific parts of our capital expenditure forecast.

Impacts on capital expenditures or volumes

Attachment 05-01 to our Regulatory Proposal explains our forecast capital expenditure by category, including movements between the current and forthcoming regulatory control periods. Further supporting detail is

1 NER cl 6.5.7(a)

2 NER cl 6.5.7(c)(1)

3 NER cl 6.5.7(e)

provided in Attachments 05-02 to 05-09 to our Regulatory Proposal and in the supporting information provided in our response to the Reset RIN, including the documents listed in our response to paragraph 4.2 below.

> 4.2 Provide the model(s) and methodology Jemena used to develop its total forecast capex, including:
>
> (a) A description of how Jemena prepared the forecast capex, including:
>
> (i) how its preparation differed or related to budgetary, planning and governance processes used in the normal operation of Jemena's business;
>
> (ii) the processes for ensuring amounts are free of error and other quality assurance steps; and
>
> (iii) if and how Jemena considered the resulting amounts, when translated into price impacts, were in the long term interest of consumers.
>
> (b) any source material used (including models, documentation or any other items containing quantitative data); and
>
> (c) calculations that demonstrate how data from the source material has been manipulated or transformed to generate data provided in the regulatory templates in Workbook 1 – Regulatory determination.

How JEN prepared its forecast capex

JEN's Capex Forecast Model is provided as Attachment 05-11 to our Regulatory Proposal. This model was used to develop JEN's total forecast capex, and the methodology used to develop our total forecast capex is outlined logically and transparently within this model. Further information about our forecasting methodologies is provided in JEN's Expenditure Forecasting Methodology[4] submitted to the AER on 20 December 2018, and in Attachment 05-01 to our Regulatory Proposal.

JEN's preparation of its capital expenditure forecast has not differed from our budgetary, planning and governance processes used in the normal running of our business.

Sections 2 and 3 and appendices C and D of Attachment 05-01 to our Regulatory Proposal describe our asset management system governance and capital planning governance and forecasting. Our capex forecast model undergoes multiple levels of peer review for quality assurance purposes.

JEN considered in great detail the effect that our proposed expenditure would have on our customers. Figure X-1 in our *2021-26 Regulatory Proposal* summarises the indicative customer price impacts of our proposal. We engaged with our customers at length on the price (and service) implications of our forecast capital expenditure, including consulting on multiple expenditure scenarios with our People's Panel and publishing our draft plan for consultation in January 2019 (which contained draft price impacts) and presenting our draft plan to our People's Panel.

Provide source material

JEN has provided the following source material as part of its Regulatory Proposal and response to the Reset RIN:

Document name	Filename
Regulatory Proposal attachments	
Forecast capital expenditure report	JEN - Att 05-01 Forecast capital expenditure report – 20200131 - Confidential
Historical capital expenditure report	JEN - Att 05-02 Historical capital expenditure report - 20200131 - Public

[4] Available at https://www.aer.gov.au/system/files/JEN%20expenditure%20forecasting%20methodology%20-%202021-25%20-%2020%20December%202018.pdf

Document name	Filename
Electricity demand forecasts report	JEN - ACIL Allen Att 05-03 Electricity demand forecasts report - 20200131 - Public
Future grid investment proposal	JEN - Att 05-04 Future grid investment proposal - 20200131 - Public
AER repex modelling	JEN - Nuttal Consulting Att 05-05 AER repex modelling - 20200131 - Public
REFCL solution report	JEN - WSP Att 05-06 REFCL solution report – 20200131 - Confidential
Real cost escalation report	JEN - BIS Oxford Economics Att 05-07 Real cost escalation report - 20200131 - Public
Directors' certification of reasonableness of assumptions	JEN - Att 05-08 Directors certification of reasonableness of assumptions - 20200131 - Public
Connection policy	JEN - Att 05-09 Connection policy - 20200131 - Public
Update to Jemena's MCR rates	JEN - ENEA Att 05-10 Update to Jemenas MCR rates - 20200131 - Public
Capex model	JEN - Att 05-11 Capex model - 20200131 - Public
Reset RIN supporting documents	
Technology plan	JEN - RIN - Support - Technology plan - 20200131 - Public
IT Capex Forecast Model	JEN - RIN - Support - IT Capex Forecast Model - 20200131 - Public
IT Investment Brief - 5-Minute Settlement	JEN - RIN - Support - IT Investment Brief - 5-Minute Settlement - 20200131 - Public
IT Business Case - 5-Minute Settlement	JEN - RIN - Support - IT Business Case - 5-Minute Settlement - 20200131 - Public
IT Investment Brief - Future Grid Program	JEN - RIN - Support - IT Investment Brief - Future Grid Program - 20200131 - Public
IT Investment Brief - SAP Migration	JEN - RIN - Support - IT Investment Brief - SAP Migration - 20200131 - Public
IT Business Case - SAP Migration	JEN - RIN - Support - IT Business Case - SAP Migration - 20200131 - Confidential
IT Investment Brief - Customer Experience	JEN - RIN - Support - IT Investment Brief - Customer Experience - 20200131 - Public
IT Investment Brief - System Management	JEN - RIN - Support - IT Investment Brief - System Management - 20200131 - Public
IT Investment Brief - Mobility step change	JEN - RIN - Support - IT Investment Brief - Mobility step change - 20200131 - Public
IT Investment Brief - Cyber Security Enhancements	JEN - RIN - Support - IT Investment Brief - Cyber Security Enhancements - 20200131 - Public
IT Investment Brief - Customer Data Right	JEN - RIN - Support - IT Investment Brief - Customer Data Right - 20200131 - Public
IT Investment Brief - Asset Mgt and GIS	JEN - RIN - Support - IT Investment Brief - Asset Mgt and GIS - 20200131 - Public
IT Investment Brief - Wholesale Demand Response	JEN - RIN - Support - IT Investment Brief - Wholesale Demand Response - 20200131 - Public

Document name	Filename
IT Investment Brief - Operational Technology Step change	JEN - RIN - Support - IT Investment Brief - Operational Technology Step change - 20200131 - Public
IT Investment Brief - DW and BI Step change	JEN - RIN - Support - IT Investment Brief - DW and BI Step change - 20200131 - Public
IT Investment Brief - Operational Technology Enhancements	JEN - RIN - Support - IT Investment Brief - Operational Technology Enhancements - 20200131 - Public
IT Long Term Forecasting Guide	JEN - RIN - Support - IT Long Term Forecasting Guide - 20200131 - Public
JEN Fleet Model	JEN - RIN - Support - JEN Fleet Model - 20200131 - Confidential
CIC Model	JEN - RIN - Support - CIC Model - 20200131 – Confidential
JEN spatial level maximum demand forecasts model 2019	JEN - RIN - Support - JEN spatial level maximum demand forecasts model 2019 - 20200131 - Confidential
JEN Internal Demand Forecast Report 2019	JEN - RIN - Support - JEN Internal Demand Forecast Report 2019 - 20200131 - Confidential
Customer Initiated Capital Summary Report	JEN - RIN - Support - Customer Initiated Capital Summary Report - 20200131 - Confidential
2019 Distribution Annual Planning Report	JEN - RIN - Support - 2019 Distribution Annual Planning Report - 20200131 - Public
Jemena Asset Management Policy	JEN - RIN - Support - Jemena Asset Management Policy - 20200131 - Public
Jemena Cost Estimation Methodology	JEN - RIN - Support - Jemena Cost Estimation Methodology - 20200131 - Public
JEN PR0507 Internal Load Demand Forecast Procedure	JEN - RIN - Support - JEN PR0507 Internal Load Demand Forecast Procedure- 20200131 - Public
Customer Connections Forecast Methodology	JEN - RIN - Support - Customer Connections Forecast Methodology - 20200131 - Confidential
JEN - Network Augmentation Planning criteria paper	JEN - RIN - Support - JEN - Network Augmentation Planning criteria paper - 20200131 - Public
Secondary Plant Asset Class Strategy	JEN - RIN - Support - Secondary Plant Asset Class Strategy - 20200131 - Public
Primary Plant Asset Class Strategy	JEN - RIN - Support - Primary Plant Asset Class Strategy - 20200131 - Confidential
Distribution Asset Class Strategy	JEN - RIN - Support - Distribution Asset Class Strategy - 20200131 - Public
Measurement Asset Class Strategy	JEN - RIN - Support - Measurement Asset Class Strategy - 20200131 - Confidential
JEN General Tools & Equipment Asset Class Strategy	JEN - RIN - Support - JEN General Tools & Equipment Asset Class Strategy - 20200131 - Public
JEN Fleet Asset Class Strategy	JEN - RIN - Support - JEN Fleet Asset Class Strategy - 20200131 - Public
JEN Property Asset Class Strategy	JEN - RIN - Support - JEN Property Asset Class Strategy - 20200131 - Public
JEN SCADA & RTS Asset Class Strategy	JEN - RIN - Support - JEN SCADA&RTS Asset Class Strategy - 20200131 - Public

Document name	Filename
Distribution Feeders Network Development Strategy	JEN - RIN - Support - Distribution Feeders Network Development Strategy - 20200131 - Public
Preston Area Network Development Strategy	JEN - RIN - Support - Preston Area Network Development Strategy - 20200131 - Confidential
BTS-NS Subtransmission Network Development Strategy	JEN - RIN - Support - BTS-NS Subtransmission Network Development Strategy - 20200131 - Confidential
FW Zone Substation Switchgear and Relay Condition Risk- Draft Project Assessment Report	JEN - RIN - Support - FW Zone Substation Switchgear and Relay Condition Risk- Draft Project Assessment Report- 20200131 - Public
Footscray East (FE) Switchgear Condition Risk Report	JEN - RIN - Support - Footscray East (FE) Switchgear Condition Risk Report - 20200131 - Public
Heidelberg (HB) Transformer Condition Risk Report	JEN - RIN - Support - Heidelberg (HB) Transformer Condition Risk Report - 20200131 - Public
Bushfire Mitigation Plan	JEN - RIN - Support - Bushfire Mitigation Plan - 20200131 - Public
Electric Line Clearance Plan	JEN - RIN - Support - Electric Line Clearance Plan - 20200131 - Public
Network Performance Plan	JEN - RIN - Support - Network Performance Plan - 20200131 - Public
CN Relay Replacement Business Case	JEN - RIN - Support - CN Relay Replacement Business Case - 20200131 - Public
CS Relay Replacement Business Case	JEN - RIN - Support - CS Relay Replacement Business Case - 20200131 - Public
ZSS Batteries & Chargers Replacements 2021-2025 Business Case	JEN - RIN - Support - ZSS Batteries & Chargers Replacements 2021-2025 Business Case - 20200131 - Public
NH/NEI Relay Replacement Business Case	JEN - RIN - Support - NH/NEI Relay Replacement Business Case - 20200131 - Public
NS Relay Replacement Business Case	JEN - RIN - Support - NS Relay Replacement Business Case - 20200131 - Public
BY Relay Replacement Business Case	JEN - RIN - Support - BY Relay Replacement Business Case - 20200131 - Public
End of Feeder Power Quality Meter Replacement Business Case	JEN - RIN - Support - End of Feeder Power Quality Meter Replacement Business Case - 20200131 - Public
CS Switchgear Replacement Business Case	JEN - RIN - Support - CS Switchgear Replacement Business Case - 20200131 - Public
CN Switchgear Replacement Business Case	JEN - RIN - Support - CN Switchgear Replacement Business Case - 20200131 - Public
BD Transformer Replacement Business Case	JEN - RIN - Support - BD Transformer Replacement Business Case - 20200131 - Public
HB Transformer Replacement Business Case	JEN - RIN - Support - HB Transformer Replacement Business Case - 20200131 - Public
FE Switchgear Replacement Business Case	JEN - RIN - Support - FE Switchgear Replacement Business Case - 20200131 - Public
Demand Management Options Analysis report	JEN - RIN - Support - Demand management options analysis report - 20200131 - Confidential

Document name	Filename
AECOM ZSS asset replacement programs benchmark report	JEN - AECOM - RIN - Support - ZSS asset replacement programs benchmark report - 20200131 - Public
Guidance - Property, Plant and Equipment	JEN - RIN - Support - Guidance - Property, Plant and Equipment - 20200131 - Public
Guidance - Intangible Assets	JEN - RIN - Support - Guidance - Intangible Assets - 20200131 - Public

Provide calculations

In addition to the material provided above, JEN's Capex Forecast Model (Attachment 05-11 to our Regulatory Proposal) sets out the methodology used to develop our total forecast capex.

> 4.3 Identify which items of *Jemena*'s *forecast capex* are:
>
> (a) derived directly from competitive tender processes;
>
> (b) based upon competitive tender processes for similar *projects*;
>
> (c) based upon estimates obtained from *contractors* or manufacturers;
>
> (d) based upon independent benchmarks;
>
> (e) based upon actual historical costs for similar *projects*; and
>
> (f) reflective of any amounts for risk, uncertainty or other unspecified contingency factors, and if so, how these amounts were calculated and deemed reasonable and prudent.

All items within JEN's forecast capex are based on actual historical costs for similar projects—noting that our actual historical costs for similar projects are a function of competitive tender processes and estimates obtained from contractors or manufacturers—with the exception of the following items:

- Our cost estimates for our REFCL installation at Coolaroo zone substation (and associated HV feeder works), the development of a new REFCL-protected Greenvale zone substation (and associated HV feeder works) and the procurement of a REFCL testing truck are based on information sourced from external suppliers and other DNSPs
- Our cost estimates for parts of our Future Grid program are based on an estimated effort of internal labour and information sourced from external suppliers
- Our cost estimate for the Five Minute and Global Settlement project reflects estimates obtained from external suppliers and include a contingency amount which reflects our experience with similarly sized complex non-network IT projects.

> 4.4 Provide all *documents* which were *materially* relied upon and relate to the *deliverability* of *forecast capex* and explain the proposed *deliverability*

JEN has not materially relied on any documents that relate to the deliverability of its forecast capex, other than those outlined in our response to section 28 of the Reset RIN. JEN has moved to a fully-outsourced model for the delivery of field based capital and operating works, meaning that JEN will rely on contractors to deliver our forecast capex program. Refer to section 3.7 of Attachment 05-01 to our Regulatory Proposal for further information about our capital works program delivery.

4.5 Describe each *capex category* and expenditures relating to these categories identified in the *regulatory templates*, including:

(a) key drivers for expenditure;

(b) an explanation of how expenditure is distinguished between:

(i) greenfield driven and *reinforcement driven augmentation capex*;

(ii) *connections expenditure* and *augmentation capex*;

(iii) *replacement capex* driven by condition and *asset* replacements driven by other drivers (e.g. the need for greenfield or *reinforcement driven augmentation capex*); and

(iv) any other *capex category* or *opex category* where *Jemena* considers that there is reasonable scope for ambiguity in categorisation.

Description of capex categories and key drivers

Attachment 05-01 to our Regulatory Proposal sets out JEN's forecast capital expenditure by category, and provides explanations of the key drivers of our forecast capital expenditure as outlined in the table below.

Capex category	Description and key drivers
Augmentation capital expenditure	Refer to Attachment 05-01, section 6
Capitalised overheads	Refer to Attachment 05-01, section 3.3.3
Connections capital expenditure	Refer to Attachment 05-01, section 5
Non-Network—IT & communications expenditure	Refer to Attachment 05-01, section 7.2
Non-Network—Buildings and property expenditure	Refer to Attachment 05-01, section 7.4
Non-Network—Motor vehicles expenditure	Refer to Attachment 05-01, section 7.3
Non-Network—other expenditure	Refer to Attachment 05-01, section 7.5
Replacement capital expenditure	Refer to Attachment 05-01, section 4
SCADA and network control expenditure	Refer to Attachment 05-01, section 4.10

Explanation of category distinctions

Category distinctions	JEN's response
Greenfield driven and reinforcement driven augmentation capex	Greenfield augmentation capex relates to the addition/extension of network assets in areas where existing assets do not exist. Reinforcement driven augmentation capex relates to expenditure associated with increasing the capacity of existing assets.
Connections expenditure and augmentation capex	Connections expenditure relates to a project to connect/modify a single customer's connection, whereas augmentation capex relates to the addition or modification of assets which are shared by more than one customer.
Replacement capex driven by condition and asset replacements driven by other drivers (e.g. the need for greenfield or reinforcement driven augmentation capex)	Replacement capex driven by condition occurs when an asset is replaced due to its inability to perform its function, whereas replacements driven by other drivers occur due to other obligations (e.g. compliance with safety obligations).

Category distinctions	JEN's response
Any other capex category or opex category where Jemena considers that there is reasonable scope for ambiguity in categorisation	Not applicable.