



Jemena Electricity Networks (Vic) Ltd

Response to the Annual Reporting Regulatory Information Notice issued 7 November 2019 and as varied on 8 September 2021 for the 2023-24 regulatory year



7. Demand Management Innovation Allowance Mechanism

Paragraph 7.1 of Schedule 1 of the Notice requires JEN to identify each demand management eligible project for which JEN seeks approval. JEN seeks approval for two projects for the relevant regulatory year, which are outlined below. Section 2.3(3)(f) of the demand management innovation allowance mechanism (DMIAM)⁴ requires a statutory declaration signed by an officer of JEN. This is provided in Attachment A7.

- Victorian Government Neighbourhood Battery Initiative (NBI)
- Australian Government Community Batteries for Household Solar Program

7.1 Community Battery Initiatives

These projects were initiated during FY2023/24 and will continue into FY2024/25. The DMIAM funding request for FY2023/24 includes actual spend. Future DMIAM request in FY2024/25 will consider actual spend in FY2024/25 and any grant funding received in FY2023/24 and FY2024/25. There will be no funding request duplication across these regulatory years.

7.1.1 Project Criteria

Paragraph 7.2(a) of Schedule 1 of the Notice requires JEN to explain how JEN's initiatives comply with the project criteria detailed in Section 2.2.1 of the DMIAM. JEN's eligibility is outlined below.

7.1.1.1 Victorian Government Neighbourhood Battery Initiative (NBI)

JEN were successful in attaining Round 3, Stream 1 funding for the delivery and development of a business case related to works for one or more neighbourhood batteries located behind or in front of the meter as part of the Victorian Government's Neighbourhood Battery Initiative (NBI), administered by the Department of Energy, Environment and Climate Action (DEECA).

The scope of this project will deliver a business case to consider installation of network owned Neighbourhood Batteries in two or more new Underground Residential Distribution (URD) developments in JEN including project scope, project costs, project benefits and project economics. The business case project encompasses a number of desktop assessments: Engineering, Financial, Regulatory, Commercial & Legal, and Community.

7.1.1.2 Australian Government Community Batteries for Household Solar Program

JEN were successful in attaining Stream 1 funding for the design, delivery and maintenance of four Community Batteries installed in-front of the meter in different suburbs as part of the Australian Government's Community Batteries for Household Solar programs, run by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) and administered through the Department of Industry, Science and Resources.

The scope of this project will install a Community Battery in Alphington, Bellfield, Coburg and Flemington, enabling solar soak, peak load shaving as well as facilitating an aggregator or retail partner to leverage market benefits associated with wholesale market arbitrage and the Frequency Control Ancillary Services (FCAS) market.

7.1.1.3 Eligibility

JEN considers that works undertaken in the relevant regulatory year for the projects in Section 7.1.1.1 and 7.1.1.2 comply with the DMIAM criteria in the following ways:

⁴ AER, *Demand Management Innovation Allowance Mechanism, Electricity distribution network service providers*, December 2017.

- These projects will demonstrate demand management capabilities as a primary network benefit enabling solar soak during peak solar minimum demand periods and peak shaving during peak demand periods. Other benefits and use cases investigated are emissions reductions, enable more solar connections and third party access to leverage market benefits associated with wholesale market arbitrage and FCAS markets.
- These projects are innovative as they explore how an in-front of the meter Community Battery can be integrated into the electricity market. This has not been investigated in detail by JEN and the projects aim to explore the feasibility and approach to meeting network needs by using a non-network community storage solution to address the interests of networks, markets and customers whilst navigating the regulatory, commercial, customer and engineering considerations within the framework of the National Electricity Market and the National Electricity Rules.
- These projects will investigate the feasibility to reduce long term network costs by utilising technology to avoid and defer traditional network augmentation. They also explore a solution that is an alternative to traditional behind the meter storage providing access to customers who are unable to invest in storage at home.
- The costs recovered under the DMIAM are not recoverable under any other jurisdictional incentive scheme.

7.1.2 Project Compliance Reporting

Paragraph 7.2(b) of Schedule 1 of the Notice requires JEN to submit a compliance report in accordance with Section 2.3 of the demand management innovation allowance mechanism. JEN's compliance report is outlined below.

Section 2.3 Compliance reporting	Relevant Section
(1) For each regulatory year, a distributor must submit a compliance report to the AER no later than 4 months after the end of the regulatory year to which the compliance report relates.	7.1.2
(2) The distributor must submit each compliance report in a form suitable for publication.	7.1.2
(3) Each compliance report must include, for the regulatory year to which the compliance report relates:	
(a) the amount of the allowance spent by the distributor	7.1.2.6
(b) a list and description of each eligible project on which the allowance was spent	7.1.2.1
(c) a summary of how and why each eligible project complies with the project criteria	7.1.2.3
(d) For each eligible project on which the allowance was spent, and in a form that is capable of being published separately for each individual eligible project, a project specific report that identifies and describes:	
(i) The nature and scope of the eligible project;	7.1.2.1
(ii) The aims and expectations of the eligible project;	7.1.2.2
(iii) How and why the eligible project complies with the project criteria;	7.1.2.3
(iv) The distributor's implementation approach for the eligible project;	7.1.2.4
(v) The distributor's outcome measurement and evaluation approach for the eligible project;	7.1.2.5
(vi) The costs of the eligible project: <ul style="list-style-type: none"> a. incurred by the distributor to date as at the end of that regulatory year; b. incurred by the distributor in that regulatory year; and c. expected to be incurred by the distributor in total over the duration of the eligible project. 	7.1.2.6
(vii) For ongoing eligible projects:	7.1.2.7 & 7.1.2.8

Section 2.3 Compliance reporting	Relevant Section
<ul style="list-style-type: none"> a. a summary of project activity to date; b. an update of any material changes to the project in that regulatory year; and c. reporting of collected results (where available). 	
<ul style="list-style-type: none"> (viii) for eligible projects completed in that regulatory year <ul style="list-style-type: none"> a. reporting of the quantitative results of the project; b. an analysis of the results; and c. description of how the results of the eligible project will inform future demand management projects, including any lessons learnt about what demand management projects or techniques (either generally or in specific circumstances) are unlikely to form technically or economically viable non-network options. 	N/A
<ul style="list-style-type: none"> (ix) any other information required to enable an informed reader to understand, evaluate, and potentially reproduce the demand management approach of the eligible project. 	N/A
<ul style="list-style-type: none"> (e) Where an eligible project has extended across more than one regulatory year of the regulatory control period, details of the actual expenditure on each such project or program in each regulatory year of the regulatory control period to date. 	N/A
<ul style="list-style-type: none"> (f) A statutory declaration signed by an officer of the distributor delegated by the chief executive officer of the distributor, certifying that the costs being claimed for each demand management project: <ul style="list-style-type: none"> a. are not recoverable under any other jurisdictional incentive scheme; b. are not be recoverable under any state or Australian Government scheme; and c. are not otherwise included in forecast capital expenditure or operating expenditure approved in the AER's distribution determination for the regulatory control period under which the mechanism applies, or under any other incentive scheme in that distribution determination. 	Attachment A7
<p>(4) The confidentiality guidelines apply to the information contained in compliance reports. If the distributor's compliance report contains confidential information, the distributor must also provide a non-confidential version of the report in a form suitable for publication. The AER may publish the compliance report (or the non-confidential version of the compliance report, if applicable) on its website, including by publishing a separate report for each eligible project as contemplated by clause 2.3.3(d) above.</p>	N/A
<p>(5) For avoidance of doubt, to the extent that a distributor's compliance reporting requirements can be more effectively and economically achieved by, or in collaboration with, another party or parties, the mechanism does not preclude distributors from doing this.</p>	No response required.

7.1.2.1 Nature and scope of projects

See section 7.1.1.1 and 7.1.1.2.

7.1.2.2 Aims and expectations of the projects

Victorian Government Neighbourhood Battery Initiative (NBI)

The project will deliver a business case to consider installation of network owned Neighbourhood Batteries in two or more new URD developments in JEN including project scope, project costs, project benefits and project economics. The business case project encompasses a number of desktop assessments: Engineering, Financial, Regulatory, Commercial & Legal, and Community.

Australian Government Community Batteries for Household Solar Program

The scope of this project will install a Community Battery in Alphington, Bellfield, Coburg and Flemington, enabling solar soak, peak load shaving as well as facilitating an aggregator or retail partner to leverage market benefits associated with wholesale market arbitrage and the FCAS market.

7.1.2.3 Compliance with the project criteria

- See section 7.1.1.3.

7.1.2.4 Project implementation

Victorian Government Neighbourhood Battery Initiative (NBI)

This project will be delivered in key milestones as below:

- Project commencement
 - Tender documentation, evaluation, assessment and consultant service award.
- Engineering assessment
 - Engineering assessment report
 - Community research and engagement
- Financial, regulatory and commercial assessment reports
- Draft business case
- Final business case and project close out

Australian Government Community Batteries for Household Solar Program

This project will be delivered in key milestones as below:

- Procurement
 - Tender documentation, evaluation, assessment, manufacturer agreement and order, retail partner agreement
- Lease agreement and installation contract
 - Site assessment, stakeholder engagement and lease agreement
- Battery installed and operational
 - Delivery of battery to site, civil and underground works, connection to infrastructure
 - Commissioning
- Battery operation and demonstration of developed use cases
 - Solar soak, peak load shaving, leveraging market benefits

7.1.2.5 Project outcome measurement and evaluation approach

Victorian Government Neighbourhood Battery Initiative (NBI)

This project will develop reports covering the areas of engineering assessment, financial assessment, regulatory assessment and commercial assessment. The final outcome of this project is the delivery of a project plan and business case for a number of URD developments.

The outcomes from the overall assessments and business case will provide JEN knowledge on the benefits of Community Batteries comparing the investment to the traditional network augmentation for URD developments.

Australian Government's Community Batteries for Household Solar Program

This project will deliver:

- A specification and tender documentation for the procurement of the battery
- Lease agreement for the site and contract award for the installation of the Battery
- Installation design, site preparation, site survey, civil and underground works
- Battery installation and connection to infrastructure
- Battery commissioning

The outcomes will enable JEN to develop equipment specifications and standards that can be used for future Battery initiatives.

7.1.2.6 Project costs

The actual expenditure for this project in the relevant regulatory year is \$384,722 and reflects the following:

Spend	Neighbourhood Battery Initiative (NBI)	Community Batteries for Household Solar Program
Program management	20%	10%
External consultation support	80%	50%
Equipment procurement	0%	40%
Design, installation and commissioning	0%	0%
Others	0%	0%
Total	\$152,460	\$232,262

- The eligible projects will receive funding from State and Federal Government grants as follows:

Year	Neighbourhood Battery Initiative (NBI)	Community Batteries for Household Solar Program
FY2023/24	\$159,822	\$820,000
FY2024/25 (forecast)	\$21,996	\$1,180,000
Total	\$181,818	\$2,000,000

The forecasted cost of the eligible projects to completion is approximately \$2,597,000 with a total of \$2,181,818 of this being funded by State and Federal Government Grant money.

We are claiming \$384,722 for this financial year. Subsequent DMIAM requests will account for any grant money received in FY2023/24 and FY2024/25. The associated **\$384,722** costs we have claimed under DMIAM for the project this regulatory year have not been:

- recovered under any other jurisdictional incentive scheme;
- recovered under any other Commonwealth or State Government scheme or funding; and
- included in the forecast capital or operating expenditure approved in the 2021-26 distribution determination or recovered under any other incentive scheme in that determination.

7.1.2.7 Ongoing project activity

Victorian Government Neighbourhood Battery Initiative (NBI)

This project has delivered the following milestones:

- Project commencement
- Engineering assessment
- Financial, regulatory and commercial assessment reports
- Draft business case

Australian Government Community Batteries fo Household Solar Program

This project has delivered the following milestones:

- Procurement

7.1.2.8 Results of the project

Victorian Government Neighbourhood Battery Initiative (NBI)

The business case assessment report builds upon the previous assessments that have been conducted on deployment of Neighbourhood Batteries (NBs) in residential and mixed-use greenfield developments. Its main purpose is to answer the question: is there sufficient benefits for Jemena to invest in NBs as a regulated Distribution Network Service Provider (DNSP)?

The analysis shows that there is benefit to invest in NBs as a DNSP compared to traditional network augmentation, however at the current costs and value stack available, there are currently commercial challenges with widescale rollout of NBs within greenfield developments.

The assessments have found that there are significant network benefits that NBs can provide for Underground Residential Distribution (URD) developments that occur in the northern growth corridor of Jemena, where the increase in electricity consumption and roof-top photovoltaic (PV) installations have created reliability risks and export curtailment on the high voltage distribution network. NBs can also reduce the number of distribution substations that need to be installed on the URD site, providing benefit to the URD developers. In addition, co-locating the NB with distribution substation infrastructure on URD site overcomes a key issue of NB – that of finding suitable land to locate the NB which is acceptable to the nearby residents and businesses.

Although the NBs are primarily there to support the network and new URD developments, possible revenue streams from leasing the NBs to Market Participants for energy market related service is important to maximise the benefits that NB brings. In the benefit modelling nominal values of energy arbitrage and Frequency Control Ancillary Service (FCAS) were included.

It was found that the business case for NB deployment in the two URD use cases is contingent on the availability of the network reliability benefits for at least five years. Currently, Jemena addresses network reliability risks and export curtailment through implementing network augmentation projects. Two network augmentation projects have already been approved to increase the capacity of the high voltage feeders supplying into the two URD developments. Network reliability and PV export curtailment benefits will no longer exist once these projects are completed.

Due to the current high costs of NBs, it is not expected that NBs can take over the role of network augmentation projects in addressing network risks in the short to medium term. The hypothesis that sufficient number of NBs can be installed to address the network risks so network augmentation can be deferred, while the NBs can also provide local and market-related benefits, was tested. JEN undertook the financial assessment of deferring the planned network augmentation projects by two or five years using NBs, and compared the change in the project Net Present Value (NPV) against the planned network augmentation projects occurring in 2024.

The assessment also explored pathways where costs can be reduced and benefits improved. As NB benefits are spread between various industry players, collaborative effort between various stakeholders will be required to advance the cause of NBs and fast-track the development of a sustainable model for deployment.

Australian Government Community Batteries for Household Solar Program

JEN has encountered some delays in finalising technical agreements with the chosen battery supplier and as such quantitative results will be reported in subsequent DMIAM funding requests.

Jemena have acquired learnings and capabilities in the following key areas:

- Development of equipment technical specification
- Evaluation of tender proposals
- Network studies and site determination
- Community and stakeholder engagement plans
- Safety and risk assessment
- Development of commercial, legal and land agreement requirements
- Challenges with securing appropriate land and land tenure agreements

7.1.3 Project Developments and Results

Paragraph 7.3 of Schedule 1 of the Notice requires JEN to provide an overview of developments in relation to the project and of any results to date. The project developments and results to date are outlined in Section **Error! Reference source not found.**

7.1.4 Total amount of DMIAM spent

Paragraph 7.4 of Schedule 1 of the Notice requires JEN to provide any other information as specified by the demand management innovation allowance mechanism. Section 2.3(3)(a) of the demand management innovation allowance mechanism requires JEN to state the total amount of DMIAM spent in the relevant regulatory period. The total amount of DMIAM spent in this regulatory year is **\$384,722** and excludes any funds that will be recovered from external bodies.