

7. DEMAND MANAGEMENT INCENTIVE ALLOWANCE MECHANISM

7.1	Identify each demand management eligible project (DMIAM) for which CitiPower seeks approval.	<p>1. Residential demand management program - the purpose of this program is to further our understanding of the effectiveness of residential demand management as an alternative non-network solution across different customer segments</p> <p>2. Trial Tariff project - the purpose of this project is to trial new network tariffs from 1 July 2022 which could shift demand away from peak demand times to minimum demand times</p> <p>These projects are a combined undertaking between CitiPower and Powercor, given we operate the same systems, and the programs will benefit customers across both networks.</p>
7.2	<p>For each demand management eligible project (DMIAM) identified in the response to paragraph 7.1:</p> <p>(a) explain how it complies with project criteria detailed at section 2.2.1 of the demand management innovation allowance mechanism;</p>	<p>1. Residential demand management program The proposed residential demand management program is intended to provide research and analysis on the effectiveness of residential demand management as an alternative non-network solution across different customer segments such as geographies, demographics and load profiles. The research will provide insights to enable us to identify the customer segments where demand response programs are expected to provide efficient alternatives to network augmentation. It will also aim to provide insights on the best approach for implementing demand response programs to enable the most effective customer response.</p> <p>The proposed residential demand management program is innovative because it will enable greater understanding of behavioural response across different customer segments (geographies, demographics, and load profiles). Given the diversity of customers across CitiPower & Powercor, it is critical to learn about different behavioural responses to understand where deploying demand response solutions is expected to be efficient and how to effectively design demand response programs.</p> <p>The trial provides the potential to reduce long term network costs by identifying where demand response is a long term efficient solution for deferring and potentially avoiding network augmentation works. The findings will also enable us to identify the efficient design of demand response programs across customer segments.</p> <p>2. Trial Tariff project The trial tariffs are new for the network and initiated implementation in 2021-22 to commence on 1 July 2022. These tariffs were designed to encourage demand shifting:</p> <ul style="list-style-type: none"> • Daytime Saver tariff which is to encourage demand transfer to 10am-3pm when energy is free

		<ul style="list-style-type: none"> • HV storage tariff which discourages demand from 4-9pm • Community battery tariff which discourages demand from 4-9pm and rewards exports from 4-9pm and imports from 10am-3pm <p>These tariffs target subgroups of customers not previously targeted:</p> <ul style="list-style-type: none"> • Daytime Saver targets residential customers who don't own rooftop solar • HV storage tariff targets HV storage which is a new technology • Community battery tariff targets community batteries which are a new technology <p>Since the trial tariffs are designed to either reduce peak demand or increase minimum demand, they have the potential to reduce long term network costs</p> <p>The costs for our residential demand management program and tariff trial project are not recoverable under any other jurisdictional or other scheme and are not included in our forecast capital or operating expenditure approved for the 2021–2026 regulatory period.</p>
7.2	(b) submit a compliance report in accordance with section 2.3 of the demand management innovation allowance mechanism.	<p>1. Residential demand management program</p> <p>The proposed residential management program is intended to provide research and analysis on the effectiveness of residential demand management as an alternative non-network solution across different customer segments such as geographies, demographics and load profiles. The research will provide insights to enable us to identify the customer segments where demand response programs are expected to provide efficient alternatives to network augmentation. It will also aim to provide insights on the best approach for implementing demand response programs to enable the most effective customer response.</p> <p>The proposed residential demand management program is innovative because it will enable greater understanding of behavioural response across different customer segments (geographies, demographics, and load profiles). Given the diversity of customers across CitiPower & Powercor, it is critical to learn about different behavioural responses to understand where deploying demand response solutions is expected to be efficient and how to effectively design demand response programs.</p> <p>The trial provides the potential to reduce long term network costs by identifying where demand response is a long term efficient solution for deferring and potentially avoiding network augmentation works. The findings will also enable us to identify the efficient design of demand response programs across customer segments.</p>

	<p>In a similar manner to Energy Partners Program (EPP), we targeted customers supplied by distribution substations where peak demand is predicted to exceed their maximum capacity. Eligible customers' only requirement to participate is to have a smart meter, as well as have no sensitive equipment and/or life support devices on premise.</p> <p>The program was implemented through minimal viable solution utilising existing customer notification systems and analytics tool in the business. Using analytics and data from smart meter, we were able to determine each customer's baseline consumption against similar weather days. Customers who successfully reduce their load below their baseline would receive a reward proportionate to the load reduced.</p> <p>The success of the program is measured by kW reduced per event per distribution substation, as well as program uptake and participation rate. There were 392 CitiPower customers registered to the program, representing an uptake rate of 6% from total eligible customer of 5,706. CitiPower dispatched 4 events and yielded 3.1 MWh of total energy reduction. Load reduction ranged up to 15.2 kW across selected distribution substations.</p> <p>The program trial uncovered several learnings for future success. One of the key learnings was the program provided similar outcomes whether it is implemented in regional areas or metro areas, and customers with higher baselines tend to perform better than those otherwise. Further trials is required to provide data evidence on the relationship of baseline and customer demographics, including age, income level, number of people in household, and other demographic points.</p> <p>Crucially, program success requires a program construct that is strongly integrated with educational engagements to customers throughout the year. This requires capturing customer's consent to receive information from us about similar programs, tips on how to manage their costs, and other educational information. The success of the program also depends on selecting constrained assets that are forecasted to have constraint beyond one regulatory period.</p> <p>2. Trial tariff Project</p> <p>The trial tariffs are new for the network and initiated implementation in 2021-22 to commence on 1 July 2022. These tariffs were designed to encourage demand shifting:</p> <ul style="list-style-type: none"> • Daytime Saver tariff which is to encourage demand transfer to 10am-3pm when energy is free • HV storage tariff which discourages demand from 4-9pm
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- Community battery tariff which discourages demand from 4-9pm and rewards exports from 4-9pm and imports from 10am-3pm

These tariffs target subgroups of customers not previously targeted:

- Daytime Saver targets residential customers who don't own rooftop solar
- HV storage tariff targets HV storage which is a new technology
- Community battery tariff targets community batteries which are a new technology

Since the trial tariffs are designed to either reduce peak demand or increase minimum demand, they have the potential to reduce long term network costs

The cost in 2021-22 relate to the design and implementation of the trial tariffs. Implementation of the trial tariffs was not completed by 30 June 2022 and therefore further implementation costs will be incurred in 2022-23. Additionally, any additional trial tariffs planned to be introduced from 1 July 2023 will also incur implementation costs. We anticipate a similar level of expenditure on trial tariffs in 2022-23. All tariff trials are being designed to end on 30 June 2026.

Once more than a year of data becomes available from customers on the trial tariffs, we will analyse the data to see if any demand response could be observed, which will then inform our tariff structure statement and regulatory proposal.

Cost overview

The costs of the (1) Residential demand management program and (2) Trial Tariff project for 2021-22 are shown below:

Residential demand management program	Trial Tariff Project	Total DMIA
\$45,131.92	\$37,795	\$82,926.92

It is estimated that the total expected cost for the tariff trial project will be \$80,000 for CitiPower. For the residential demand management program, \$1.2M is estimated across CitiPower and Powercor, subject to commencing the development of the registration and event management portal.

The costs proposed for our residential demand management program and trial tariff project are not recoverable under any other jurisdictional or other scheme and are not included in our forecast capital or operating expenditure approved for the 2021–2026 regulatory period.

		The total amount of DMIA spent for 2021-22 year by CitiPower for the abovementioned projects was \$82,926.92.
7.3	Provide an overview of developments in relation to projects or programs completed in previous years of the regulatory control period, and of any results to date.	Residential demand management program and Trial Tariff project were not initiated in previous years of the regulatory control period.
7.4	Provide any other required information as specified by the demand management innovation allowance mechanism	Not applicable.