

For the disclosure year  
ending 31 March 2022

# ANNUAL DELIVERY REPORT

Aurora  
ENERGY



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# 1. INTRODUCTION

## 1.1. CONTEXT

Aurora Energy owns and operates the electricity network in Dunedin, Central Otago and Queenstown Lakes. We own the poles, lines and equipment that distribute electricity from Transpower's national grid to more than 93,000 homes, farms and businesses. Aurora Energy is responsible for maintaining and renewing infrastructure, and the safety and reliability of electricity supply is a critical driver across all elements of our business.

In 2021, the Commerce Commission (Commission) approved a customised price-quality path (CPP) for Aurora Energy that enables us to invest \$563 million over five years (1 April 2021 to 31 March 2026 (CPP period)) to address safety and reliability risk across our network.

Aurora Energy is subject to information disclosure regulation made under Part 4 of the Commerce Act 1986. The Commission regulates information that Aurora Energy must disclose to its stakeholders. Clause 2.5.5 of the Electricity Distribution Information Disclosure Determination 2012 (Determination) requires Aurora Energy to disclose an annual delivery report in relation to the delivery of our CPP. This annual delivery report (Annual Delivery Report) has been prepared pursuant to that clause for the period 1 April 2021 to 31 March 2022 (RY22).

## 1.2. CONTENT OF ANNUAL DELIVERY REPORT

The content of this Annual Delivery Report is specified in the Determination. A matrix showing the relationship between the requirements set out in the Determination and the contents of this Annual Delivery Report can be found in Appendix A.

## 1.3. CERTIFICATION

This Annual Delivery Report was certified in accordance with clause 2.9.5 of the Determination on 29 August 2022. A copy of the Director's Certificate can be found in Appendix B.

## 1.4. ASSURANCE REPORT

Audit NZ has prepared an assurance report that meets the requirements of clause 2.8 of the Determination, and which is consistent with the exemptions granted to Aurora Energy by the Commission on:

- 17 May 2021 in relation to the disclosure and auditing of reliability information, and which the Commission amended on 9 June 2022 to apply to Aurora Energy's additional disclosure requirements
- 9 August 2022 in relation to the auditing of information required to be disclosed under clauses 1.6.3 and 1.6.4 of Attachment C of the Determination (Assurance Exemption)

A copy of that report can be found in Appendix C.

## 2. CHAIR AND CHIEF EXECUTIVE'S REPORT

We are pleased to present our Annual Delivery Report for the first year of our CPP, which outlines our progress during RY22 on our plans to deliver upgrades to the electricity network in Dunedin, Central Otago and Queenstown Lakes. Providing a safe and reliable electricity supply is a critical driver across all elements of our business.

### Engaging with customers

We engaged extensively with customers and stakeholders during our CPP application, and we are committed to continuing to engage as we deliver against our CPP. We believe ongoing customer engagement and communication on operational issues (particularly in the regional context) is a fundamental part of doing good business now and into the future, and forms a large part of re-building trust and confidence amongst customers.

We disclosed three plans on 31 March 2022:

- **Development Plan** - how we will improve particular systems and processes
- **Project and Programme Delivery Plan** - projects and programmes that we plan to deliver throughout the CPP period – where, when and how much they will cost
- **Safety Delivery Plan** - how these projects and programmes will reduce network safety risks

Full copies of the plans can be found at: [www.auroraenergy.co.nz/disclosures/delivering-our-cpp/](http://www.auroraenergy.co.nz/disclosures/delivering-our-cpp/)

We have, when approached by community groups, responded by providing them with details of specific plans via both presentation and meeting formats, ensuring that all their questions were answered.

We held public engagement sessions during May in Dunedin, Alexandra, Wānaka and Queenstown so we could share the plans with customers and outline the ongoing and planned work on the electricity network in their area.

Public engagement sessions will be held in the same areas during October so that we can share this Annual Delivery Report. Given the low turnout at the May events despite extensive promotion, we are looking to review how these events are delivered so we can engage with more customers.

### Delivering projects and upgrading our network

We are pleased to report that we have been able to complete a number of projects during RY22 that will improve the safety and reliability of our network and that sees us broadly on track to deliver our overall CPP programme, noting that strong growth in Central Otago is causing some reprioritisation between growth and renewals expenditure.

In the Dunedin area, we completed the Harbour Crossing project, which involved removing six 60-metre-high lattice towers and overhead lines between Port Chalmers and Portobello, and replacing

them with new submarine cables to improve both security of supply and community impact. We are thrilled that this project has received two awards at the New Zealand Energy Excellence Awards: Community Initiative of the Year, and Network Initiative of the Year. We also upgraded around 16 kilometres of overhead lines on the Otago Peninsula, upgraded the Outram zone substation and replaced ageing overhead lines and poles between Outram and Berwick.

To improve security of supply in the Central Otago area, a new 11 kV line between Alexandra and Clyde was installed in July 2021 and 5.3 kilometres of overhead lines and 40 poles were replaced around Clyde. We also installed new switchgear and protection equipment in the Ettrick substation, started work on a new zone substation in Omakau, replaced 1.3 kilometres of overhead lines and 23 poles in Roxburgh, and undergrounded overhead lines in St Bathans.

We also completed a major piece of work in the Lake Hāwea area that required us to cut power supply to over 1500 customers for 10 hours to complete the work safely, which is a larger and longer outage than usual. The work included replacing 35 poles and 25 crossarms, as well as performing maintenance on the Camp Hill and Wānaka zone substations. Bundling the work and coordinating several contractors at one time reduced the overall number of planned interruptions needed during the project and we have since replicated this approach with other large projects to minimise customer disruption.

To enhance security of supply and growth capacity in Arrowtown, work has commenced ahead of schedule on a new 9 kilometre cable from Frankton to Arrowtown.

More detail about these projects can be found in section 1.

Across the whole network, we made significant progress on asset renewal and maintenance work in RY22. In particular:

- Of the 3,843 kilometres of overhead line on our network, we undertook vegetation inspections on 1,953 kilometres and maintained vegetation on 983 kilometres
- We inspected almost 12,000 of 53,674 poles
- We completed scheduled maintenance at nine of our 39 zone substations

In addition to this, we successfully replaced more than 1,400 poles, 74.5 kilometres of overhead lines, replaced 56 distribution transformers and 88 cast iron cable terminations (potheads).

### Delivering efficiently

Undertaking our increased work programme as efficiently and effectively as possible is important to us. To achieve this, we have improved the way in which we plan works being undertaken in the same area by bundling jobs together. This approach still requires planned outages but far fewer than if we had done each job separately. Customer feedback on this new approach has been positive, and we are grateful to all customers for their patience during any planned outages, especially when more people have been working from home due to COVID-19.

We have completed the first phase of our asset management software solution (Maximo) implementation, which will systemise our long-term asset management solution and deliver benefits for both Aurora Energy and customers. Creating a more comprehensive and single source of asset

data will help to ensure that we are making informed and timely asset renewal and maintenance decisions.

We are also taking steps to improve our internal project management capabilities and processes so that we can deliver our projects to schedule with the limited resources available. System improvements have enabled us to better capture any changes to a project scope, schedule and cost, which means each change will be agreed to by both Aurora Energy's technical approver and our contractors without causing unnecessary project delays.

### Improving safety

Safety remains our number one priority. In RY22, we made significant progress toward the removal of cast iron cable terminations (potheads) and red tag poles from our network. We continue to ramp up overhead conductor and crossarm renewal, with more than 70 kilometres of conductor and over 1200 standalone crossarm renewals in RY22. Poor condition assets in these asset portfolios leads to elevated levels of safety risk and we are pleased with our progress in RY22 to address these current and emerging risks.

Removing the backlog of red tag poles has been a major focus since 2017 and we are able to report that approximately 1460 pole renewals in RY22 has resulted in only a handful of 'out of compliance' red tag poles remaining on the network. New red tag poles are quickly programmed into work packs or remediated within our 90-day rapid response programme. This progress has eliminated network pole failures on our network in RY22, providing a high level of confidence that our pole testing and remediation plans are helping to deliver a safe network.

RY22 delivered the highest number of cast iron cable termination replacements in a single year to date, and we remain on track to remove all cast iron cable terminations by RY26. We largely met our planned objectives for conductor replacement in RY22, and in particular we replaced 74 kilometres of high voltage distribution conductor, reducing the safety backlog risk by approximately 20%. We continue to transition toward our target replacement rates of crossarms as we inspect and grade our crossarms for renewal. The elevated replacement rates of our protection and distribution transformer assets continues to reduce the level of safety risk backlog in these fleets.

### Thank you

We have a lot more work to do to refurbish and upgrade the network, but we have made a good start thanks to the dedicated team at Aurora Energy, who put customers first and always remember that there is a person or business at the end of the electricity line.

We would like to take this opportunity to thank our contracting partners, Delta, Unison and Connetics, who are the feet on the ground and the face of Aurora Energy in the community. We appreciate their dedication to work in sometimes difficult conditions, in all weather and at all hours of the day and night. Thank you for keeping the lights on.

A handwritten signature in black ink, appearing to read "Steve Thompson".

**Steve Thompson**

Chair

A handwritten signature in black ink, appearing to read "Richard Fletcher".

**Richard Fletcher**

Chief Executive



### 3. KEY ACHIEVEMENTS — SNAPSHOT OF MAJOR UPGRADES

We have delivered or commenced delivery of a number of major projects in RY22. The drivers for these projects include safety, reliability of assets and capacity to meet future growth.

#### Harbour Crossing project

In September 2021, we completed the Harbour Crossing project, which involved removing six 60-metre high lattice towers and overhead lines between Port Chalmers and Portobello and replacing them with new submarine cables.

This was a once-in-a-lifetime project that benefitted harbour residents by improving security of electricity to the Portobello community and the wider Peninsula. It also has wider benefits for shipping, tourism and wildlife.

We worked closely with iwi, the Marine Studies Centre, the Island Keeper on Quarantine Island / Kamau Taurua, a resident in Port Chalmers who had one of the lattice towers removed from his garden, as well as community groups and other customers, to ensure everyone felt involved in the process. We will work with community groups to replant the areas with native plants and restore the natural beauty where the towers were removed from (this would have been completed during RY22 but COVID-19 disruption caused delays).

This project won two awards at the New Zealand Energy Excellence Awards: Community Initiative of the Year, and Network Initiative of the Year.

#### Otago Peninsula overhead line upgrade

We upgraded around 17 kilometres of lines on the Otago Peninsula, to improve safety and reliability of electricity supply to customers. The new line is designed to withstand adverse weather and salt spray impacts, which this part of the network is exposed to.

The work was completed in stages, with a local hall supported by generation during times when there were multiple outages over a short timeframe, so residents could access water, tea, coffee, fridge and toilet facilities.

#### Outram zone substation upgrade

The Outram zone substation was upgraded during RY22. The existing transformer and associated equipment which had reached end of life, have been replaced with a larger and higher-capacity transformer as well as updated switchgear. The upgrade will strengthen the electricity supply to Outram and the Taieri Plain (including Dunedin Airport) and cater to future growth in the area.

#### Waipori overhead HV line upgrade

In April 2021, we completed the replacement of an ageing line with new high voltage (HV) lines and steel poles along the Waipori line between Outram and Berwick. On average, for every three poles

removed, one taller pole replaced them – increasing the line span and benefitting both safety for motorists and the visual appearance of the area.

#### Clyde overhead line upgrade

There has been significant headway with the alternative supply for Clyde township and surrounding areas. A new 11 kV line between Alexandra and Clyde was installed in July 2021, allowing the Alexandra network to take on Clyde township power during planned and unplanned outages.

We also replaced 5.1 kilometres of power lines and upgraded more than 30 pole structures in June 2021. An upgrade to create a ring supply configuration for the Clyde township and provide a backup supply to the Dairy Creek irrigation scheme has also been completed.

#### Ettrick substation upgrade

New switchgear and protection equipment was installed in the Ettrick substation during September and October 2021. The addition of 33 kV switchgear, replacement of 11 kV switchgear and the upgrade of the substation's pole structures and protection systems has improved the reliability of electricity supply to the community. It was a complex project to coordinate, with small windows for work to be completed and a confined space to work in.

#### New Omakau zone substation

Work started on a new zone substation in Omakau during RY22. It is being built on a new site on State Highway 85 as the current site is not large enough and is in a flood risk area. This project will not only replace ageing equipment, but will increase the reliability of electricity supply for Omakau and double the capacity of the substation, ensuring it is adequate to meet the demand growth of the community.

The new zone substation will be fully automated and provide more options during planned and unplanned outages, with four other ways to configure the network. There will be a new generator for emergency power supply for short periods of time, and a mobile substation parking bay for when the transformer is out of service will also reduce customer impact.

Stage one of this project is underway, with the project scheduled for completion in March 2023.

#### Roxburgh overhead line upgrade

We replaced 1.3 kilometres of power lines and 23 poles, and thank residents and businesses for their patience as the project required up to five planned power outages for some customers to complete this important piece of work.

#### St Bathans undergrounding

Power lines on St Bathans Loop Road were undergrounded during the year, with ageing poles and lines removed. This restored the original look of the town, and some metal poles were retained for their historic value, at the community's request.

### Arrowtown ring upgrade

Work on the \$6 million Arrowtown ring upgrade (a 9 kilometre new cable route) commenced and is ahead of schedule. Currently, Arrowtown, Coronet Peak, Dalefield and Remarkables are supplied by two power lines that share the load between them, with insufficient capacity to meet peak winter electricity requirements if a fault should occur on one of the lines. These planned improvements include a new 33 kV underground cable, which will enhance security and reliability of our electricity service to Arrowtown. This is because the new cable can support the entire Arrowtown area load and allow any faults to be isolated and repaired with minimal power outages. This project will run over several years and is estimated to be completed in 2024.

### Glenorchy

A two-year programme of work commenced in December 2021 in Glenorchy to improve the reliability for the community. This programme will see the replacement of more than 100 power poles, 25 standalone crossarm replacements, re-alignment of power lines in Mid Rivers, installation of a new 11 kV air-break switch in Rees Valley, and an upgraded voltage regulator site. The programme is estimated to be completed in RY23.

### Lake Hāwea overhead line upgrade

In December 2021, we completed a major piece of work on the electricity network that supplies Albert Town, Camp Hill, Hāwea Flat, Lake Hāwea and Makarora. The work included replacing 35 poles and 25 crossarms, as well as performing maintenance on the Camp Hill and Wānaka zone substations. This involved cutting power supply to over 1500 customers for ten hours, which is a larger and longer outage than usual. Bundling the work for this project meant that the overall number of planned interruptions needed during the project were minimised.

## 4. DEVELOPING OUR PRACTICES

In this section, we outline specific areas where we are focusing on improving our business practices.

In this Annual Delivery Report, we provide a summary of the progress that we are making in each of these areas and have assessed ourselves on a scale of 1 to 5 as to how well we are tracking. We will continue to report on these in each of our Annual Delivery Reports going forward.

### What do our ratings mean?

- **1 – Not started:** no planned activities/initiatives have started
- **2 – Not achieved:** no planned activities/initiatives have been achieved
- **3 – Partially achieved:** less than 50% of planned activities/initiatives have been achieved
- **4 – Largely achieved:** 50% or more of planned activities/initiatives have been achieved, but not 100%
- **5 – Achieved / Exceeded plan:** 100% of planned activities/initiatives have been achieved or are progressing ahead of schedule

Our self-assessment rating is measuring delivery of our planned initiatives in each regulatory year. The rating does not assess our position in relation to our final goal at the end of the CPP period, but rather where we are, year-on-year, in delivering what we say we will deliver and therefore whether we are on track for our final goal.

For RY22, our Development Plan, which contains a number of initiatives that we plan to deliver over the CPP period, was not in place and so we are assessing our performance against planned initiatives for RY22 using best information available as required by the Commission.

The Development Plan sets out the planned initiatives for the remaining years of the CPP that will result in Aurora Energy achieving its defined objectives for specific areas by the end of the CPP period. Self-assessments from RY23 onwards will assess delivery of the planned initiatives set out in the Development Plan.

### 4.1. ENSURING THE PUBLIC UNDERSTANDS ELECTRICITY PRICING

The way electricity pricing is set is changing, and we want to help customers understand these changes and what it means for them.

How prices are set for each pricing region (Dunedin, Central Otago and Wānaka, Queenstown Lakes and a small network in Te Anau) is outlined in our pricing methodology. We evolve and update our pricing methodology each year in alignment with our pricing strategy, to make things easier for customers to understand.

We rate ourselves 5/5 for ensuring that the additional information that we disclosed in our pricing methodology on 31 March 2022 enables interested persons to understand how we set prices for each of our pricing regions



We have rated ourselves this score because we disclosed the additional information in our pricing methodology on 31 March 2022, which enables interested persons to understand how we set prices for each of our pricing regions, including by providing a worked example of how an average domestic customer's price would be calculated in each pricing region. In addition, we have published our cost of supply model with supporting explanatory material on our website which shows how costs are allocated to each pricing region.

We published a pricing strategy and roadmap in April 2021. The pricing strategy includes initiatives to make electricity pricing simpler and improve the cost-reflectiveness of prices. We expect our pricing strategy will be fully implemented by 2027.

We made significant progress during RY22 towards implementing more cost-reflective pricing and taking steps to ensure that pricing is easier to understand.

- **Received customer feedback endorsing our direction:** We held an extensive consultation with key stakeholders, our customer advisory panel, customer voice panels in Dunedin, Cromwell and Queenstown, and the public during November and December 2021. Sixty-seven submissions were received. The consultation was promoted in print, online and on the radio, to encourage people to get involved.
- **Refined cost allocations to pricing areas:** Following the above consultation, we have improved the transparency and reliability of our annual price-setting process. We now use our regulatory asset base (RAB) to allocate capital investment-related costs to each pricing area. This ensures that prices reflect the asset renewal and upgrade (for growth) expenditure in each region.
- **Developed a Long-run Marginal Cost methodology:** This will form the basis of our analysis and pricing calculations, which we will use to support the time-of-use prices to be implemented from 1 April 2023. This helps to inform the apportionment in our pricing of ongoing fixed costs versus those costs related to peak demand.
- **Published a cost of supply model:** This provides additional transparency for customers about how we allocate costs to pricing areas and customer load groups.
- **Provided worked examples for customers:** These will help customers understand pricing better as they outline charges for a 'standard' customer in each pricing area.

We have been proactive in engaging with customers about pricing and we are happy with the level of engagement during our pricing consultation, as detailed in section 5.3.

As part of our strategy to help customers understand pricing better, we have developed user-friendly graphics about how electricity pricing works. These were intended to be used at public-facing events, however COVID-19 traffic light restrictions meant we were only able to proceed with one event over the summer event season, as all others were cancelled. The graphics will now be used at future public events and published across our communication channels. We will continue to work on ways to simplify pricing information and be proactive with ongoing dialogue.

## 4.2. LOW VOLTAGE NETWORK PRACTICES

Voltage limits are regulated to ensure satisfactory power quality levels can be achieved for the majority of customers, the majority of the time. We are working on ways to improve how we monitor power quality impacts and doing what we can to minimise them.

This year, we set the foundation for future improvements by streamlining our complaints process, improving our analysis, and revising our power quality strategy. We are currently transitioning from a reactive approach to power quality to one of enhanced monitoring and response. Our aim is to move to a fully predictive approach by RY26.

We rate ourselves 5/5 for developing our low voltage network practices during RY22

We have rated ourselves this score because:

- We documented and disclosed on 31 March 2022 our low voltage network practice improvement initiatives in section 3.3 of the Development Plan
- During RY22 we achieved the initiatives listed below that we had planned and that has started our improvement journey in this area

During RY22, we developed our low voltage network practices in several ways:

- **Improved power quality enquiry process:** We improved the power quality enquiry processes and reporting to enable us to monitor and track response times to customers. This was done by:
  - Developing a report to provide visibility on all power quality complaints and the reasons. This is layered over a network map so we can track trends and access up-to-date information.
  - Preparing detailed power quality reports with customers about specific power disturbances at their property or in their area.
  - Streamlining our enquiries process so it aligns with the Electrical Engineers Association guide.
- **Investment in power quality monitoring equipment:** We invested in power quality monitoring equipment to improve data capture in key locations, to enable better trends analysis. This was done by:
  - Installing a mixture of permanent and mobile digital transformer monitors to record the current, voltage and power. This gives us real-time data that allows us to assist customers faster by pre-empting issues and will enable the benchmarking of our network power quality in the future.
  - The data from the transformer monitors is fed to the computers of our engineers to track/alert power quality problems from the office. If there is a problem, we can be proactive.
  - Increasing the number of mobile power logging monitors to decrease the waiting time for customers.
- **Improved internal documentation:** We overhauled our Voltage Control Standard and have drafted a multi-year change management plan, with targeted initiatives to improve the voltage performance of our zone substations and distribution transformers. This sets out the methodology we will use to improve our low voltage network.

- **Improved analysis tools:** We have developed a geographic representation of the network using Powerfactory modelling software down to the distribution transformers, for network analysis to identify areas of voltage constraint.

### 4.3. ENGAGEMENT ON CUSTOMER CHARTER AND CONSUMER COMPENSATION ARRANGEMENTS

Customers are at the heart of our business, and we are committed to building a more customer-focused organisation that provides genuine benefits for customers.

Our customer charter outlines what we are committed to, and how customers will be compensated when things do not go to plan. It also outlines what we need from customers so we can meet their expectations to deliver a safe, reliable and efficient electricity supply.

Our charter has not been reviewed for some time and we know that parts of our charter have not been fully operationalised, and public knowledge about the charter is low. We want to change that, which is why we are updating our customer charter (which incorporates our consumer compensation arrangement) and will promote it at every opportunity. Our revised customer charter will also help us continue to build a customer-centric culture at Aurora Energy.

We rate ourselves 5/5 for developing our engagement with customers on our customer charter and consumer compensation arrangement

We have rated ourselves this score because:

- We documented and disclosed on 31 March 2022 our customer charter and consumer compensation arrangement engagement improvement initiatives in section 4.3 of the Development Plan
- During RY22 we achieved the initiatives listed below that we had planned and that has started our improvement journey in this area

During RY22 we have developed our engagement on our customer charter in the following ways:

- **Planning for consultation:** We started planning for how we would review our current customer charter, and laid foundation work for consultation during RY23. We also planned how we will involve customers in updating the customer charter, so it reflects the service levels they expect from us. We will consult with the public and will also involve our customer advisory panel, and customer voice panels in Dunedin, Cromwell and Queenstown.
- **Internal review of customer charter:** We looked at what was working in our current customer charter, which parts had not been operationalised, and how we can involve Aurora Energy staff in the review, as they are in an ideal position to know what is realistic to deliver, measure and report on.
- **Benchmark survey:** We carried out a baseline survey of customers to establish customer service value preferences during RY22 and will run surveys every year during the CPP period so we can measure our progress. Feedback from this tells us that customers want a reliable service, and accurate and timely information if they have an outage. We will build these

expectations into our revised customer charter, including specific measures for business customers based on the survey feedback.

#### 4.4. CUSTOMER OUTAGE PLANNING, MANAGEMENT AND COMMUNICATION

We are aware that no time is perfect for the power to go off, so we are committed to improving the way we plan, manage and communicate outages to minimise the impact on customers as much as we reasonably can.

To deliver on our network renewal programme, we know that the current elevated level of planned power outages will need to continue so we can carry out work to upgrade and maintain the electricity network safely.

We rate ourselves 5/5 for developing our planning, management, and communication of planned interruptions to customers

We have rated ourselves this score because:

- We documented and disclosed on 31 March 2022 our planned interruptions improvement initiatives in section 5.3 of the Development Plan
- During RY22 we achieved the initiatives listed below that we had planned and that has started our improvement journey in this area

During RY22 we implemented several initiatives to improve the way we plan, manage, and communicate with customers about interruptions:

- **Improved management of planned outages:**
  - The development of an outage variation reporting framework, so we can analyse any outages that did not go to plan and discuss these with our contractors. We now have a continuous improvement loop so we can avoid the same problems in the future.
  - The adoption of a new cancellation and deferral process. This allows us to identify any corrective actions and improvement opportunities for times when we need to cancel jobs, because we know it is frustrating for customers when they have made plans that allow for their power being out.
  - Regular performance discussions with our contractors.
  - The identification of additional improvement opportunities to further enhance the corrective actions taken to date.
- **Improved availability of out-of-hours information:** In May 2021, we introduced a new contact centre provider (Telnet) for after hours and weekend customer service. This has improved the out-of-hours information we provide customers about outages, as Telnet update our website and social media from 5-9pm on weekdays and 8am-9pm on weekends.
- **Customer outage guidelines:** We know that when scheduling outages, the time of day and the season are among the things that can make all the difference to customers. We have reviewed our current outage planning practices against customer considerations. These new guidelines have been developed and will be finalised and implemented as part of a new stage-gate process in RY23.



- **Stage-gate process:** We have developed a stage-gate process for planned outages so we can identify the potential customer impact earlier, mitigate any impacts more effectively, and notify planned outages well in advance. The stage-gate approach has been developed, tested against industry best practice and is ready for implementation in RY23 as part of our outage management system (OMS) roll-out.
- **Outage management system (OMS):** The implementation of a new OMS began in RY22. Customer lists are now being generated from, and retailer notification of planned outages managed through, the OMS. This is resulting in better quality assurance and a timely and orderly process. It is also improving outage coordination, and, in the future, better information can be provided to customers on our website.
- **Bundled works:** Where practical, we bundled different types of maintenance and replacement work into the same outage. This has helped reduce the number of planned outages that a customer would experience to perform the same work. We also developed zones in our GIS for our high voltage network, to help us identify assets that require maintenance or replacement in the same area. This provides a useful tool when bundling work.

#### 4.5. ASSET DATA COLLECTION AND ASSET DATA QUALITY PRACTICES

Having accurate and reliable data about our assets to inform decision-making is a prerequisite for delivering a reliable and resilient power supply. With good quality data being made available to the business, we will be able to continue improving our risk framework, budgeting and forecasting activities.

We rate ourselves 5/5 for developing our asset data collection and asset data quality practices

We have rated ourselves this score because:

- We documented and disclosed on 31 March 2022 our asset data collection and asset data quality practices improvement initiatives in section 6.3 of the Development Plan; and
- During RY22 we achieved the initiatives listed below that we had planned and that has started our improvement journey in this area.

In RY22, we progressed a number of initiatives that contribute to the improvement of our asset data collection and asset data quality practices. In particular:

- **Data strategy:** We introduced a business-wide data strategy, which is the foundation of our asset data improvement journey. The underlying principle of this strategy is becoming 'digital first', meaning data is captured electronically at the source and shared consistently across the organisation.
- **Improved collation and storage of data:** We implemented a cloud-based asset management software solution, Maximo, and in the last year we have migrated static data (for example, asset installation date, manufacture date and material type) from our GIS system. This allows us to make more informed decisions about our maintenance planning, which is important from a safety perspective.

- **Accurate GIS data:** We developed business intelligence reports to make sure any data we enter into GIS about our assets is correct, be it for new assets or information about maintenance on existing assets. This helps us ensure there is a clear line of sight between our network asset condition data, and our expenditure forecasts and financial reporting.
- **Enhanced data management:** We have enhanced our data management practices by introducing an estimation methodology to better plan for the anticipated workloads of the GIS team, while also increasing staff performance monitoring and amending inconsistencies between data systems. This exercise has improved data quality and therefore decision making, and the introduction of eight new controls has further strengthened the robustness of our process with five more controls under development. This is all improving our data accuracy, aligning systems and providing more timely information to customers, for example, outage information and BeforeUDig.
- **Sharing of outage information:** We have selected a cloud-hosted platform that enables us to share outage information with our call centre, which means we can provide better and more timely information for customers. The first integration between our system and the call centre system is underway.

#### 4.6. ASSET MANAGEMENT PRACTICES AND PROCESSES, INCLUDING SAFETY RISK

Continuous improvement in asset management is critical for Aurora Energy to operate successfully in a changing environment, and keep up with customers' evolving expectations. We want to enable the energy future of our communities.

It is increasingly important that we build on our existing asset management capability so we can enable the right investment on the right assets at the right time.

We rate ourselves 5/5 for developing our asset management practices and processes

We rate ourselves 5/5 for developing our practices for identifying and reducing safety risk

We have rated ourselves these scores because:

- We documented and disclosed on 31 March 2022 our asset management improvement initiatives in section 7.3 of the Development Plan
- We documented and disclosed on 31 March 2022 our Safety Delivery Plan
- During RY22 we achieved the initiatives listed below that we had planned and that has started our improvement journey in this area.

During RY22 we started work on our strategy and frameworks. In particular:

- **Development of risk management framework:** We have developed the first version of our risk management framework for our safety-critical assets based on their exposure to the public. This includes poles, lines, overhead switchgear, transformers and, to a lesser degree, ground mounted switchgear.
- **Improved data analysis:** We have improved our data analysis by linking assets with our reporting to allow better evaluation of our asset criticality. This will help us understand risk

associated with asset performance and increase the effectiveness of our asset management practices.

#### 4.7. COST ESTIMATION PRACTICES

Cost estimation informs Aurora Energy's business case decisions around asset management, and our budgets and forecasts inform our regulated revenue requirements and cashflow projections. This means it is important for cost estimation to be as accurate as possible.

We rate ourselves 5/5 for developing our cost estimation processes

We have rated ourselves this score because:

- We documented and disclosed on 31 March 2022 our cost estimation practice improvement initiatives in section 8.3 of the Development Plan; and
- During RY22 we achieved the initiatives listed below that we had planned and that has started our improvement journey in this area.

During RY22 we started laying the foundation for initiatives we plan to achieve in future years. In particular:

- **Project cost estimation:** Analysis on our current budgeting of major project work is underway, which will prepare us for the next steps in developing a project cost estimation tool. A framework for collecting data on costs and quantities was established, and we can now track asset cost components in our finance system. This will allow us to monitor and adjust project unit rates annually, which will result in more precise delivery budgets and forecasting.
- **Contract unit rate estimation:** The initiatives to enhance our project cost estimations also provide benefits in assessing appropriate contract unit rates. Contract unit rates are being agreed with our contractors for volumetric work, where fixed prices for certain work types can be built into contracts with our contracting partners.

#### 4.8. QUALITY ASSURANCE PRACTICES

It is vital that all work undertaken to upgrade and maintain the electricity network meets both regulatory standards and Aurora Energy's standards, so it is as efficient and effective as possible. Our increased work programme throughout the CPP period means it is even more important to have robust quality assurance processes and resources in place.

We rate ourselves 5/5 for developing our quality assurance processes

We have rated ourselves this score because:

- We documented and disclosed on 31 March 2022 our quality assurance practice improvement initiatives in section 9.3 of the Development Plan
- During RY22 we achieved the initiatives listed below that we had planned and that has started our improvement journey in this area.

We implemented several improvements during RY22:

- **Process improvements:** We improved a number of internal processes relating to our works management capability, including:
  - Establishing a project team to improve project workflow processes. This has benefitted our contractors as we can provide better visibility about upcoming work, which improves planning efficiencies.
  - Standardising our project management processes, including developing templates for approval requests, cost plans, procurement, and variation requests.
  - Reviewing our project management software and completing a gap analysis to determine key functions that needed to be improved. The intention is for our project management system to be the one source of truth, and allow for project variations, contract instructions, technical queries, outage changes and project scope changes.
  - Ensuring that our project management systems are integrated with other business systems.
  - Developing an internal reporting structure.
- **Continuous staff development and training:** A number of our project managers completed relevant industry training (PRINCE2), including refresher courses for some staff. We have also trialled additional training on contract management so we can mature in this area. Looking ahead, we plan to train staff and build the internal capability to perform some of our on-site safety audits ourselves, instead of using an external provider for all of the audits.
- **Reviewed resourcing:** We have reviewed our resource needs and, as a result, created a new Quality Assurance Officer role in our Cromwell office. We have also changed our internal reporting lines so that all quality assurance staff across different areas of the network now report to the same manager, providing more consistency. This consistency also benefits our contracting partners as they now get the same message.



## 5. ENGAGING WITH CUSTOMERS

As mentioned previously, customers are at the heart of Aurora Energy. In this section, we detail how we have performed in relation to communicating to customers in relation to interruptions/outages to their electricity supply, our customer charter and consumer compensation scheme, and the work we have done to consult with customers on pricing.

### 5.1. NOTIFYING AND UPDATING CUSTOMERS ON INTERRUPTIONS AFFECTING THEM

We rate ourselves 3/5 for how we have performed in relation to notifying and updating customers on interruptions affecting them during RY22

We have rated ourselves this score for the following reasons:

- During RY22, we moved our out-of-hours fault calls to a new contact centre, Telnet, to help customers find information about power cuts and planned interruptions after hours and at weekends.
- All our interruptions, planned and unplanned, are now updated on the Aurora Energy website 24/7, with unplanned interruptions also communicated on our Facebook page between 8am and 9pm. Our previous out-of-hours call centre did not provide online updates, so customers now have better access to information across the channels they prefer.
- During RY22 we provided 1,140 updates for planned outages on our website and 195 updates on our Facebook page about interruptions.
- There is a regulatory framework that relates to notifying a planned interruption that is set by the Commission. Within the framework, the Commission enables planned outages that meet a set of criteria to be formally classified as notified. To have an outage qualify as notified, we must have, amongst other things:
  - Provided at least 10 working days' notice of the interruption to the customer's retailer
  - Loaded details of the interruption on to our website at the same time as they were sent to the customer's retailer
  - If cancelled, provided at least 24 hours' notice of the cancellation to the customer's retailer.

In RY22, 86% of planned interruptions met the requirements of the regulatory framework, up from 53% in RY21.

We have applied a different approach to our self-assessment rating for customer notifications of interruptions in this section 5, from that adopted to self-assess the delivery of activities/initiatives in section 4. The ratings scale we have applied in relation to customer notifications of interruptions is: 5 – Outstanding, 4 – Exceeds Expectations, 3 – Usually Meets Expectations, 2 – Needs Improvement, 1 – Unacceptable.

## 5.2. OUR CUSTOMER CHARTER AND CONSUMER COMPENSATION ARRANGEMENTS

Our current customer charter is a voluntary undertaking that has been in place for several years. It is an important part of our commitment to customer service. However, public awareness of it is low and we feel its intent could be more clearly and simply articulated in an engaging way. We also need to make sure it focuses on those customer service attributes that customers value and is clear about the performance targets we are committing to achieve. We will call the new document our “Customer Commitments”.

We have not yet commenced consultation with customers on proposed changes to the customer charter and consumer compensation scheme. We have developed an updated suite of proposed performance metrics and a plan for how we will undertake a robust consultation process, as detailed in section 4.3 above. While some aspects of the charter are not easy to administer, we feel we largely met the intent of our current customer charter commitments. We are aware our current charter is not prescriptive or measurable to the degree we would like it to be and intend for these aspects to be improved with our new Customer Commitments document.

Our current customer charter and voluntary consumer compensation arrangement outlines the service levels we are committed to, and how customers will be compensated if things do not go to plan. It also outlines what we need from customers so we can meet their expectations to deliver a safe, reliable and efficient electricity supply.

Service failure payments are made on a monthly basis for the following (credit values include GST):

- Failing to give at least ten working days’ notice, via a customer’s electricity retailer, of a planned interruption (\$20 credit). In RY22, we paid out this service failure credit for 30 interruptions.
- Failing to restore power after an unplanned interruption within set service level timeframes (if it is safe to do so). This means within 4 hours for urban customers and within 6 hours for customers in all other areas<sup>1</sup>. (\$50 credit for residential customers or one month’s line charges for non-residential). In RY22, we paid out this service failure credit for 55 interruptions.
- Failing to respond to any power quality complaints within 7 working days of receipt (\$50 credit). In RY22, we paid out this service failure credit once.

We failed to meet our customer charter commitments in these instances because:

- Our internal processes around notifying customers of interruptions at least 10 working days in advance were not as robust as we would have liked. However, we anticipate this to improve now that we have implemented the stage-gate process (see section 4.4), which improves the timeframes within which we plan and notify customers of planned interruptions.

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<sup>1</sup> Urban areas are defined as Dunedin, Mosgiel, Queenstown, Wānaka, Cromwell and Alexandra. The urban areas are defined as being generally within the 50km/h speed zone boundaries. Rural and remote-rural customers are all customers who live outside the urban areas

- It is not always possible to restore power within the service level timeframes for an unplanned interruption, however, we strive to do so in all instances and our service failure credit reflects the impacts on customers where we are unable to restore within those timeframes.
- Our internal processes around responding to power quality complaints within 7 working days were not as robust as we would have liked. The single failure occurred before we introduced improvements to the process for handling complaints and monitoring response times.

### 5.3. CONSULTING WITH CUSTOMERS ON OUR PRICING METHODOLOGY

During November and December 2021, Aurora Energy undertook public consultation on proposed changes to our distribution pricing methodology. We wanted public feedback on our proposals before any decisions and changes were finalised to how we set electricity prices for customers.

The consultation was in two parts:

- Our pricing methodology, which outlines the steps we proposed to improve how we allocate costs to each of our pricing areas, for recovery in prices, and to simplify how we present our prices.
- Our pricing strategy, which outlines our long-term approach to pricing and the steps we think are needed to make our pricing more cost reflective and simpler for customers to understand.

Public consultation was held with Aurora Energy's customer advisory panel, customer voice panels in Dunedin, Cromwell and Queenstown, key stakeholders, and the broader public. The public consultation was promoted via print, radio and online advertising over two weeks.

Advertising pointed people to an online consultation page where they could get either high-level or detailed information, depending on the level of detail they wanted, plus a survey they could take with or without reading the supporting information. We took this approach to cater for people who wanted different levels of engagement in the consultation.

In the online survey, we asked how people had heard about the consultation as this information is helpful for future campaigns. The majority of respondents heard about the consultation through Facebook, with a high proportion seeing our advertising in the Otago Daily Times and their community newspaper. Radio advertising also had an impact. This indicates that promotion of future campaigns needs to follow a similar approach, using a variety of channels.

We received the following feedback via both our online survey from 66 customers and one electricity retailer, and during workshops with our customer advisory panel and three customer voice panels:

- 56% of survey respondents agreed that the pricing strategy and underlying rationale were clear
- 55% of respondents supported time-of-use pricing
- 53% of respondents felt they would change their electricity consumption behaviour, and use electricity at different times of the day, as a result of price signals

- 56% of respondents considered that the reasons for increasing the proportion of fixed charges in our residential pricing were clear
- 79% of all respondents support the retention of discounted pricing for controlled services
- 52% of respondents agreed with our proposal to maintain the existing pricing area construct, while one-third did not agree
- 39% of respondents indicated that they did not agree with the proposal to move from allocating capital investment-related costs based on an estimate of network replacement costs, to allocating those costs based on a disaggregation of our RAB
- 38% of respondents indicated that the pricing methodology provides a clear explanation of how Aurora Energy sets prices

Full details of the survey results, including a breakdown of responses from each pricing area, can be found at: [www.auroraenergy.co.nz/assets/Files/Disclosures/Pricing/Pricing-Consultation-Report.pdf](http://www.auroraenergy.co.nz/assets/Files/Disclosures/Pricing/Pricing-Consultation-Report.pdf)

The public feedback helped our decision-making and because of the consultation we decided to:

- Continue with our pricing strategy
- Maintain our pricing areas
- Adopt disaggregated values of our RAB to allocate capital investment-related costs to regional pricing areas, as proposed
- Abandon our proposal to consolidate distribution and pass-through prices into a single delivery price, when publishing our annual price change

Our pricing strategy and pricing methodology are published on our website and, as outlined in section 4.1 above, we intend to help customers understand electricity pricing better. This will be done through easy-to-understand graphics we can use at events and through a series of videos that will be filmed and rolled out in RY23 (delayed from RY22 due to COVID-19).



## 6. THE RY22 NUMBERS

### 6.1. EXPENDITURE

Table 1 and Table 2 set out our capital and operational expenditure during RY22. Further detail about our expenditure during RY22 can be found in our Annual Information Disclosures for RY22, which are available at <https://www.auroraenergy.co.nz/disclosures/>.

**Table 1: Capital expenditure**

	(\$000)
Consumer connection	17,178
System growth	5,032
Asset replacement and renewal	55,426
Asset relocations	1,256
Quality of supply	351
Legislative and regulatory	—
Other reliability, safety and environment	2,195

**Table 2: Operational expenditure**

	(\$000)
Service interruptions and emergencies	3,152
Vegetation management	5,462
Routine and corrective maintenance and inspection	11,051
Asset replacement and renewal	—
System operations and network support	12,969
Business support	13,626

### 6.2. NUMBER OF ASSETS REPLACED

Table 3 sets out the number of assets that we have replaced during RY22 as a part of our asset replacement and renewal expenditure. The numbers in this table may vary from figures that we specify elsewhere in this Annual Delivery Report because they are limited only to that expenditure category and are disclosed using a primary-driver approach, which we explain further in the accompanying note.

Table 3: Number of assets replaced

ASSET CATEGORY	NUMBER OF ASSETS REPLACED
Poles	1040
Crossarms	887
Subtransmission conductor	11 km
Distribution conductor	54 km
Low voltage conductor	--
Subtransmission cables	--
Distribution cables	--
Low voltage cables	--
Zone substations	
Power transformers	1
Indoor switchgear	--
Outdoor switchgear	9
Ancillary zone substation equipment	4
Buildings and equipment	1
Ground mount switchgear	25
Pole mounted fuses	39
Pole mounted switches	7
Reclosers and sectionalisers	3
Low voltage enclosures	59
Ancillary distribution substation	25
Ground mounted distribution transformers	4
Pole mounted distribution transformers	21
Protection	18
DC systems	10
Remote terminal units	--

**Note:** For RY22, we are required to disclose the number of assets we have replaced within our asset replacement and renewal expenditure category. From RY23 onwards, we are required to disclose:

- The number of assets we have replaced within our asset replacement and renewal expenditure category compared to the corresponding forecasts in our Project and Programme Delivery Plan
- The average total cost of replacing an asset of that type compared to the corresponding forecasts in our Project and Programme Delivery Plan.

In our Project and Programme Delivery Plan, we have forecast the number of assets to be replaced, and the average total cost of replacing an asset of that type based on the primary asset being

replaced. When replacing primary assets, we also replace other assets in and around the primary asset where it is either necessary or efficient to do so at that time. For example, when replacing poles under the pole portfolio, poles are the primary asset being replaced. However, when replacing these poles we may also replace an ageing pole-mounted transformer attached to a pole that is not required to be replaced but it is efficient to do so at that time. In this instance, the pole is the primary asset being replaced and the pole-mounted transformer is not.

For consistency, we have applied this same primary-driver approach to the way in which we are disclosing the number of assets replaced in Table 3 above and plan to do so in future Annual Delivery Reports where we report against the forecasts contained in the Project and Programme Delivery Plan. Further asset-related information for RY22 can be found in Schedules 9a and 9b of our Annual Information Disclosures at <https://www.auroraenergy.co.nz/disclosures/>.

### 6.3. VEGETATION MANAGEMENT

Table 4 sets out the the percentage of the network that we have either inspected or felled, trimmed, removed or sprayed in RY22 as part of our five-year vegetation management plan. RY22 was the final year of that five-year plan and from RY23 onwards, we will transition to a three-year plan. Both the five-year and three-year plan are set so that 100% of the network is, across that period, inspected and maintained.

**Table 4: Vegetation management**

Percentage of network inspected	51%
Percentage of network felled, trimmed, removed or sprayed	26%

## 6.4. RELIABILITY

Table 5 sets our reliability performance for each pricing region on our network (Dunedin, Queenstown, and Central Otago and Wānaka). The figures in this table are also disclosed in Schedule 10 of our Annual Information Disclosures for the relevant year, available at <https://www.auroraenergy.co.nz/disclosures/>. These figures are our raw SAIDI and SAIFI for those pricing regions.

Table 6 sets out our reliability performance in relation to the quality compliance limits that are set out in the Aurora Energy Limited Electricity Distribution Customised Price-Quality Path Determination 2021 (CPP Determination). These are calculated:

- on a total network basis; and
- in accordance with the CPP Determination, which allows for the normalisation of unplanned SAIDI and SAIFI for major events, and the de-weighting of planned SAIDI where it meets additional notification requirements.

**Table 5: Reliability – 5-year time series by pricing region**

	RY22	RY21	RY20	RY19	RY18 <sup>2</sup>
Dunedin					
Planned SAIDI	134.62	87.10	70.62	139.45	310.28
Planned SAIFI	0.79	0.59	0.42	0.71	1.99
Unplanned SAIDI	51.47	59.30	91.41	66.41	89.87
Unplanned SAIFI	0.72	1.01	1.20	.98	1.92

<sup>2</sup> In RY19, we discovered an error in the way in which we calculated SAIFI. This was corrected at the time; however, we were not required to re-disclose prior disclosed figures. The figures disclosed in Table 5 for RY18 are the corrected figures, and therefore differ from those previously disclosed.

Central Otago and Wānaka					
Planned SAIDI	290.46	218.60	210.56	205.43	307.32
Planned SAIFI	0.92	0.99	3.53	0.85	1.33
Unplanned SAIDI	224.61	238.50	333.89	254.42	163.93
Unplanned SAIFI	3.33	2.72	1.16	3.61	3.79
Queenstown					
Planned SAIDI	298.17	193.70	116.52	138.73	183.29
Planned SAIFI	0.83	0.55	2.47	0.64	1.11
Unplanned SAIDI	248.36	137.60	171.77	449.20	165.98
Unplanned SAIFI	3.90	1.85	0.53	3.01	2.43

**Table 6: Reliability – performance against the CPP Determination quality limits**

Total network	
Planned SAIDI assessed value	124.50
Planned SAIFI assessed value	0.82
Unplanned SAIDI assessed value	98.45
Unplanned SAIFI assessed value	1.50
Planned accumulated SAIDI limit	979.80
Planned accumulated SAIFI limit	5.5385
Unplanned SAIDI limit	124.94
Unplanned SAIFI limit	2.071



## APPENDIX A. COMPLIANCE MATRIX

The following table demonstrates how this Annual Delivery Report complies with Attachment C of the Determination.

Determination Requirement	Attachment C of the Determination Reference	Statement Reference
Aurora must include the following in an annual delivery report:	Clause 1	
<i>Overall progress update from board of directors</i>		
an overview from Aurora's board of directors setting out—	Clause 1.1	
Aurora's overall progress in the following areas:	Clause 1.1.1	
for disclosure year 2022, Aurora's progress in completing capital expenditure and operational expenditure projects and programmes;	Clause 1.1.1(a)	Section 2
any actions Aurora is taking to ensure its capital expenditure and operational expenditure projects and programmes are completed as effectively and efficiently as possible;	Clause 1.1.2	Section 2
a summary of the network safety risks Aurora has successfully reduced;	Clause 1.1.4	Section 2
<i>Progress in developing key processes and practices – disclosure year 2022</i>		
for disclosure year 2022, a summary, a self-assessment rating, and reason(s) for the self-assessment rating, of Aurora's progress in developing in each of the following areas:	Clause 1.3	Section 4
ensuring the information Aurora publicly discloses under clause 2.4.5A(1) enables interested persons to understand how Aurora sets prices for each Aurora pricing region;	Clause 1.3.1	Section 4.1
low voltage network practices referred to in clause 2.5.4(1)(a);	Clause 1.3.2	Section 4.2

## COMPLIANCE MATRIX

Determination Requirement	Attachment C of the Determination Reference	Statement Reference
engagement with consumers on Aurora's customer charter, and consumer compensation arrangement;	Clause 1.3.3	Section 4.3
planning, management, and communication to consumers of planned interruptions;	Clause 1.3.4	Section 4.4
asset data collection and asset data quality practices referred to in clause 2.5.4(1)(d);	Clause 1.3.5	Section 4.5
asset management practices and processes referred to in clause 2.5.4(1)(e)(i) to (iii);	Clause 1.3.6	Section 4.6
practices for identifying and reducing safety risks referred to in clause 2.5.4(1)(e)(iv);	Clause 1.3.7	Section 2 Section 4.6
cost estimation practices referred to in clause 2.5.4(1)(f); and	Clause 1.3.8	Section 4.7
quality assurance processes referred to in clause 2.5.4(1)(g);	Clause 1.3.9	Section 4.8
for disclosure year 2022, the following information relating to capital expenditure and operational expenditure projects and programmes that Aurora has undertaken in the disclosure year:	Clause 1.6	
Aurora's actual capital expenditure on each of:	Clause 1.6.1	
consumer connection;	Clause 1.6.1(a)	Section 6, Table 1
system growth;	Clause 1.6.1(b)	Section 6, Table 1
asset replacement and renewal;	Clause 1.6.1(c)	Section 6, Table 1
asset relocations;	Clause 1.6.1(d)	Section 6, Table 1
quality of supply;	Clause 1.6.1(e)	Section 6, Table 1
legislative and regulatory; and	Clause 1.6.1(f)	Section 6, Table 1

Determination Requirement	Attachment C of the Determination Reference	Statement Reference
other reliability, safety and environment;	Clause 1.6.1(g)	Section 6, Table 1
Aurora's actual operational expenditure on each of:	Clause 1.6.2	
service interruptions and emergencies;	Clause 1.6.2(a)	Section 6, Table 2
vegetation management;	Clause 1.6.2(b)	Section 6, Table 2
routine and corrective maintenance and inspection;	Clause 1.6.2(c)	Section 6, Table 2
asset replacement and renewal;	Clause 1.6.2(d)	Section 6, Table 2
system operations and network support; and	Clause 1.6.2(e)	Section 6, Table 2
business support;	Clause 1.6.2(f)	Section 6, Table 2
asset replacement and renewal, including the number of assets replaced;	Clause 1.6.3	Section 6, Table 1, Table 2 and Table 3
for the purpose of vegetation management, the percentage of the network that Aurora has—	Clause 1.6.4	
inspected; and	Clause 1.6.4(a)	Section 6, Table 4
felled, trimmed, removed, or sprayed;	Clause 1.6.4(b)	Section 6, Table 4
<i>Quality information – for the network and Aurora pricing regions</i>		
for each Aurora pricing region, in a time series form for each of the most recent five disclosure years, the—	Clause 1.8	
planned SAIDI values;	Clause 1.8.1	Section 6, Table 5
planned SAIFI values;	Clause 1.8.2	Section 6, Table 5

## COMPLIANCE MATRIX



Determination Requirement	Attachment C of the Determination Reference	Statement Reference
unplanned SAIDI values; and	Clause 1.8.3	Section 6, Table 5
unplanned SAIFI values;	Clause 1.8.4	Section 6, Table 5
for Aurora's network, in respect of the most recent disclosure year, the—	Clause 1.10	
planned SAIDI assessed value, unplanned SAIDI assessed value, planned accumulated SAIDI limit, and unplanned SAIDI limit; and	Clause 1.10.1	Section 6, Table 5
planned SAIFI assessed value, unplanned SAIFI assessed value, planned accumulated SAIFI limit, and unplanned SAIFI limit;	Clause 1.10.2	Section 6, Table 5
<i>Performance and engagement with consumers</i>		
regarding Aurora's performance in supplying electricity distribution services to its consumers,—	Clause 1.12	
a self-assessment rating, and reason(s) for the self-assessment rating, regarding each of the following:	Clause 1.12.1	
for disclosure year 2022, Aurora's performance in notifying and updating consumers on interruptions affecting them; and	Clause 1.12.1(a)	Section 5.1
summary of,—	Clause 1.12.2	
for each disclosure year,—	Clause 1.12.2(a)	
whether, and if so how, Aurora has consulted with consumers on any proposed changes to its customer charter, consumer compensation arrangement, or additional pricing methodology disclosures under clause 2.4.5A;	Clause 1.12.2(a)(i)	Section 5.2 Section 5.3
any feedback from consumers on Aurora's additional pricing methodology disclosures under clause 2.4.5A; and	Clause 1.12.2(a)(ii)	Section 5.3

## COMPLIANCE MATRIX



Determination Requirement	Attachment C of the Determination Reference	Statement Reference
whether Aurora met its commitments under its customer charter and consumer compensation arrangement, and if not, the respects in which Aurora failed to do so, and the reasons for such failure; and	Clause 1.12.2(a)(iii)	Section 5.2

## APPENDIX B. DIRECTOR CERTIFICATION

### SCHEDULE 18

#### Certification for Disclosures

##### Clause 2.9.5

We, [two Directors' full names], being directors of Aurora Energy Limited, certify that, having made all reasonable enquiry, to the best of our knowledge, the information prepared for the purposes of clause 2.5.5(1) of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.

A handwritten signature in black ink, appearing to read "Steve Thompson".

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Steve Thompson

A handwritten signature in black ink, appearing to read "Janice Fredric".

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Janice Fredric

29 August 2022

## APPENDIX C. ASSURANCE REPORT

AUDIT NEW ZEALAND  
Mana Arotake Aotearoa

### Independent Assurance Report

**To the directors of Aurora Energy Limited and to the Commerce Commission  
on the Annual Delivery Report  
for the disclosure year ended 31 March 2022 as required by  
the Electricity Distribution Information Disclosure Determination 2012  
(consolidated 9 December 2021)**

Aurora Energy Limited (the company) is required to disclose certain information in an Annual Delivery Report under the Electricity Distribution Information Disclosure Determination 2012 (consolidated 9 December 2021) (the Determination) and to procure an assurance report by an independent auditor in terms of section 2.8.1 of the Determination.

The Auditor-General is the auditor of the company.

The Auditor-General has appointed me, Julian Tan, using the staff and resources of Audit New Zealand, to undertake a reasonable assurance engagement, on his behalf, on whether certain information in the Annual Delivery Report prepared by the company for the disclosure year ended 31 March 2022 (the Disclosure Information) complies, in all material respects, with the Determination.

The following Disclosure Information in the Annual Delivery Report for the 2022 disclosure year falls within the scope of the assurance engagement is:

- Clauses 1.6.1, 1.6.2, 1.8 and 1.10 in Attachment C of the Determination.

This assurance report should be read in conjunction with:

- The Commerce Commission's exemption issued on 17 May 2021 (consolidated June 2022) from the requirement that the assurance report, in respect of the information disclosed in terms of clauses 1.8 and 1.10 in Attachment C of the Determination, must take into account any issues arising out of the company's recording of SAIDI, SAIFI, and number of interruptions due to successive interruptions for the 2022 disclosure year.
- The Commerce Commission's exemption issued on 9 August 2022 under clause 2.11.1(1) of the Determination from the requirement for clauses 1.6.3 and 1.6.4 in Attachment C of the Determination to be included in the assurance report for the 2022 disclosure year.

### Opinion

In our opinion, in all material respects:

- as far as appears from an examination, proper records to enable the complete and accurate compilation of the Annual Delivery Report have been kept by the company;



- as far as appears from an examination, the information used in the preparation of the Annual Delivery Report has been properly extracted from the company's accounting and other records, sourced from the company's financial and non-financial systems; and
- the Disclosure Information complies, in all material respects, with the Determination.

### Basis for opinion

We conducted our engagement in accordance with the Standard on Assurance Engagements (SAE) 3100 (Revised) *Assurance Engagements on Compliance*, issued by the New Zealand Auditing and Assurance Standards Board. An engagement conducted in accordance with SAE (NZ) 3100 (Revised) requires that we comply with the International Standard on Assurance Engagements (New Zealand) 3000 (Revised) *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information*, issued by the New Zealand Auditing and Assurance Standards Board.

We have obtained sufficient recorded evidence and explanations that we required to provide a basis for our opinion.

### Key assurance matters

Key assurance matters are those matters that, in our professional judgement, required significant attention when carrying out the assurance engagement during the current disclosure year. These matters were addressed in the context of our compliance engagement, and in forming our opinion. We do not provide a separate opinion on these matters.

Key assurance matter	How our procedures addressed the key assurance matter
<p><b>Capital expenditure and assets commissioned into the regulatory asset base (the RAB)</b></p> <p>The RAB, as set out in Schedule 4, reflects the value of the company's electricity distribution assets. During the disclosure year, the company has carried out a large number of individual network system projects that are either operational (network maintenance) or capital (asset replacement or network growth) in nature. Capital expenditure in the current disclosure year totalled \$72 million and assets commissioned into the RAB amounted to \$93 million, compared to total network operating expenditure of \$20 million. The amount of capital expenditure is also significant relative to the RAB opening value of \$540 million.</p>	<p>We have obtained an understanding of the compliance requirements relevant to the RAB as set out in the Determination.</p> <p>The procedures we carried out to satisfy ourselves that the capital expenditure and assets commissioned meet the definition under the Determination, included:</p> <ul style="list-style-type: none"> <li>• assessing the company's capitalisation policy was in line with NZ IAS 16, <i>Property, Plant and Equipment</i>;</li> <li>• evaluating the design and implementation of controls over the classification of the network expenditure;</li> <li>• testing a sample of capital expenditure to invoices or other supporting information to determine whether the expenditure met the capitalisation criteria in the Determination and capitalised to the appropriate asset category;</li> <li>• reconciling the assets commissioned from the regulatory fixed asset register to the additions</li> </ul>

Key assurance matter	How our procedures addressed the key assurance matter
<p>Capital expenditure and assets commissioned into the RAB are a key assurance matter due to the significant judgement used by the auditor to assess whether the capital expenditure and assets commissioned into the RAB meets the definition set out in the Determination.</p>	<p>disclosed in the audited financial statements and investigated any reconciling items;</p> <ul style="list-style-type: none"> <li>• comparing the standard asset lives by asset category to those set out in the IM Determination and verified the spreadsheet formula used to calculate regulatory depreciation expenses is in line with the IM Determination;</li> <li>• testing the mathematical accuracy of the revaluation calculation performed by the company by recalculating the revaluation rate set out in the IM Determination using the relevant Consumer Price Index indices taken from Statistics New Zealand's website; and</li> <li>• testing a sample of disposals from the RAB that they meet the definition of a disposal in accordance with the IM Determination.</li> </ul> <p>Having completed these procedures, we have no matters to report.</p>
<p><b>Accuracy of the number and duration of electricity outages</b></p> <p>The company has a combination of manual and automated systems to identify outages and to record the duration of outages. This outage information is used to report the company's quality information for the network and for each of the company's pricing region, in a time series form for each of the most recent five disclosure years. If this information is inaccurate then the measures of the reliability of the network could be materially misstated.</p> <p>This is a key assurance matter because information on the frequency and duration of outages is an important measure of the reliability of electricity supply. Relatively small inaccuracies can have a significant impact on the reliability thresholds against which the company's performance is assessed.</p> <p>There can also be significant consequences if the company breaches the reliability thresholds.</p>	<p>We obtained an understanding of the company's system to record electricity outages, and their duration. This included a review of the company's definition of interruptions, planned interruptions and major event days.</p> <p>The procedures we carried out to assess the adequacy of the company's methods to identify and record electricity outages and their duration included:</p> <ul style="list-style-type: none"> <li>• performing an assessment of the reliability of the manual and automated processes to record the details of interruptions to supply;</li> <li>• checking the SAIDI and SAIFI ratios in respect of each of the company's pricing region to ensure these are disclosed correctly;</li> <li>• obtaining internal and external information on interruptions to supply to gain assurance that interruptions to supply were recorded. Internal and external information sources included works orders for contractors, media reports, and Board minutes;</li> <li>• testing a sample of interruptions to supply to source records to conclude on their accuracy of calculation, and the appropriateness of the categorisation of the cause of the interruption and whether it was planned or unplanned, and that the cause of the interruptions is correctly categorised;</li> </ul>

Key assurance matter	How our procedures addressed the key assurance matter
<p>The Commerce Commission has issued an exemption notice which excludes the assurance report from coverage of the information in the Annual Delivery Report for any issues arising out of the company's recording of SAIDI, SAIFI and number of interruptions due to successive interruptions.</p> <p>The company is required to comply with the condition of the exemption, including making the necessary disclosures in the Annual Delivery Report.</p>	<ul style="list-style-type: none"> <li>checked the SAIDI and SAIFI ratios were correctly calculated in accordance with the Determination, and the IM Determination;</li> <li>obtained explanations for all significant variances to forecast; and</li> <li>testing the accuracy of the number of connections to the Electricity Authority's register.</li> </ul> <p>With respect to the exemption, we:</p> <ul style="list-style-type: none"> <li>obtained and documented our understanding of the company's methods by which electricity outages and their duration are recorded where an outage event results in successive interruptions of supply;</li> <li>compared this to the documented process that the company followed in the previous year; and</li> <li>identified potential incidences of successive interruptions of supply to ensure that the company's methods, by which electricity outages and their duration are recorded where an outage event results in successive interruptions of supply, were the same for both years.</li> </ul> <p>Having carried out these procedures, and assessed the likelihood of reported electricity outages and their duration being materially misstated in the Disclosure Information, we have no matters to report.</p>

### Directors' responsibilities

The directors of the company are responsible in accordance with the Determination for the preparation of the Disclosure Information in the Annual Delivery Report.

The directors of the company are also responsible for the identification of risks that may threaten compliance with the clauses identified above and controls which will mitigate those risks and monitor ongoing compliance.

### Auditor's responsibilities

Our responsibilities in terms of clauses 2.8.1(1)(b)(vi) and (vii), and 2.8.1(1)(c) are to express an opinion on whether:

- as far as appears from an examination, the information used in the preparation of the audited Disclosure Information in the Annual Delivery Report has been properly extracted from the company's accounting and other records, sourced from its financial and non-financial systems;

- as far as appears from an examination, proper records to enable the complete and accurate compilation of the audited Disclosure Information in the Annual Delivery Report required by the Determination have been kept by the company and, if not, the records not so kept; and
- the company complied, in all material respects, with the Determination in preparing the audited Disclosure Information in the Annual Delivery Report.

To meet these responsibilities, we planned and performed procedures in accordance with SAE (NZ) 3100 (Revised), to obtain reasonable assurance about whether the company has complied, in all material respects, with the Disclosure Information in the Annual Delivery Report required to be audited by the Determination.

An assurance engagement to report on the company's compliance with the Determination involves performing procedures to obtain evidence about the compliance activity and controls implemented to meet the requirements. The procedures selected depend on our judgement, including the identification and assessment of the risks of material non-compliance with the requirements.

### **Inherent limitations**

Because of the inherent limitations of an assurance engagement, together with the internal control structure, it is possible that fraud, error or non-compliance with the Determination may occur and not be detected. A reasonable assurance engagement throughout the disclosure year does not provide assurance on whether compliance with the Determination will continue in the future.

### **Restricted use**

This report has been prepared for use by the directors of the company and the Commerce Commission in accordance with clause 2.8.1(1)(a) of the Determination and is provided solely for the purpose of establishing whether the compliance requirements have been met. We disclaim any assumption of responsibility for any reliance on this report to any person other than the directors of the company and the Commerce Commission, or for any other purpose than that for which it was prepared.

### **Independence and quality control**

We complied with the Auditor-General's:

- independence and other ethical requirements, which incorporate the independence and ethical requirements of Professional and Ethical Standard 1 issued by the New Zealand Auditing and Assurance Standards Board; and
- quality control requirements, which incorporate the quality control requirements of Professional and Ethical Standard 3 (Amended) issued by the New Zealand Auditing and Assurance Standards Board.

The Auditor-General, and his employees, and Audit New Zealand and its employees may deal with the company on normal terms within the ordinary course of trading activities of the company. Other than any dealings on normal terms within the ordinary course of trading activities of the company, this engagement, and other legally required engagements, we have no relationship with or interests in the company.



Julian Tan  
Audit New Zealand  
On behalf of the Auditor-General  
Dunedin, New Zealand  
30 August 2022



## APPENDIX D. VOLUNTARY EXPLANATORY NOTES

The Commission specified in the Exemption, which relates to the auditing of information disclosed under clauses 1.6.3 and 1.6.4 of Attachment C of the Determination, that it has been granted subject to us publishing the reasons for disclosing the unaudited information using the form set out in Schedule 15 Voluntary Explanatory Notes of the Determination, in our information disclosure submission for the 2022 disclosure year.

Below is a copy of Schedule 15 that accompanies our 2022 Annual Information Disclosure, and which we have duplicated here for ease of reference.

Company Name	Aurora Energy Limited
For Year Ended	31 March 2022

### Schedule 15 Voluntary Explanatory Notes

(In this Schedule, clause references are to the Electricity Distribution Information Disclosure Determination 2012 – as amended and consolidated 3 April 2018.)

1. This schedule enables EDBs to provide, should they wish to-
  - 1.1 1.1 additional explanatory comment to reports prepared in accordance with clauses 2.3.1, 2.4.21, 2.4.22, 2.5.1 and 2.5.2;
  - 1.2 information on any substantial changes to information disclosed in relation to a prior disclosure year, as a result of final wash-ups.
2. Information in this schedule is not part of the audited disclosure information, and so is not subject to the assurance requirements specified in section 2.8.
3. Provide additional explanatory comment in the box below.

#### Box 1: Voluntary explanatory comment on disclosed information

##### Successive interruptions

Aurora Energy, along with all other EDBs, received an exemption from the Commerce Commission, issued on 17 May 2021, regarding the disclosure and auditing of reliability information within Schedule 10. The information in this box is disclosed in accordance with paragraphs 6 and 7 of that exemption.

Treatment of successive interruptions between disclosure years 2021 and 2022: We have treated successive interruptions in the same way for the 2022 disclosure year as we did for the 2021 disclosure year.

Process applied in recognising successive interruptions following an initial outage: We have recognised any stage of an outage event that interrupts consumers for a second time, or interrupts 'new' consumers as a result of fault finding, as an additional interruption, strictly in line with the definition of "interruption" included in the Electricity Distribution Information Disclosure Determination 2012.

### **Annual Delivery Report**

On 9 August 2022, Aurora Energy was granted an exemption by the Commerce Commission from procuring an assurance report for clauses 1.6.3 (asset replacement and renewal) and 1.6.4 (vegetation management) of Attachment C of the Determination for the 2022 disclosure year, subject to Aurora Energy publishing the reasons for disclosing the unaudited information using the form set out in Schedule 15 Voluntary Explanatory Notes of the Determination, in its information disclosure submission for the 2022 disclosure year.

The information disclosed in this Box 1 is to meet that condition.

The reasons for disclosing unaudited information with respect to clauses 1.6.3 and 1.6.4 in tables 3 and 4 of the Annual Delivery Report, are as follows:

- The enhanced information disclosures required by clauses 1.6.3 and 1.6.4 of Attachment C of the Determination were implemented five months after RY22 had commenced and include new requirements to produce information that we had not previously had to collect and report. As a result, we had to establish, part way through the year, new processes and controls for collecting and reporting the required information;
- The processes and controls we have used to compile certain quantitative information for the 2022 Annual Delivery Report, owing to the timing of publication of the Determination, were not as able to be evidenced to Audit NZ as those we have been able to develop for the quantitative information we will disclose in the Annual Delivery Report in subsequent disclosure years; and
- There was a risk that, because of the timing of the Determination, we could not reasonably meet the assurance standard set out in clause 2.8 of the Determination. Our inability to meet that assurance standard would not have been the result of any failure on the part of our data capture or reporting of information, but simply because the information now required was not part of our reporting processes prior to the implementation of the enhanced disclosure obligations.



