

IMPROVING YOUR POWER QUALITY



A SNAPSHOT OF OUR VOLTAGE QUALITY DEVELOPMENT PLAN

We know the quality of power received by our customers is important. We are committed to improving the way we monitor and manage power quality on our network so that wherever you are, you can count on a consistent and predictable supply.

We define good power quality as a steady supply of power, which stays within the normal operating voltage range.

Like all electricity networks, sometimes things happen that can cause the voltage to operate under or over the normal range, causing disturbances in the electricity supply. These could be a result of something happening on the distribution network, the transmission network, on a customer's premise, or they could simply be a result of the weather.

While it is not possible to eliminate disturbances completely, we have put in place a Power Quality Roadmap as part of our Development Plan to ensure that power quality issues do not become too frequent or severe.

For a full copy of our **Development Plan** go to www.auroraenergy.co.nz/disclosures/delivering-our-cpp

Customer benefits

- Quickly address power quality problems
- Observe any power quality problems with monitoring devices
- Provide better information to our customer experience team from improved analysis and reporting
- Predict power quality issues on the network
- Overall, improve our ability to consistently supply customers within regulated voltage range

HOW WE PLAN TO IMPROVE YOUR POWER QUALITY

*Regulatory Year (RY) runs from 1 April - 31 March

Initiative	How we'll do it	By when*
Reacting to monitoring quality	<p>Improve power quality enquiry processes and reporting to monitor and track response and remediation times to customers.</p> <p>Initial investment in power quality monitoring equipment to improve data capture in key locations to enable better trends analysis.</p> <p>Overhaul Voltage Control Standard and develop a multi-year change management plan with targeted initiatives to improve the voltage performance of our 6.6/11 kV electricity network.</p> <p>Develop a Geographic Information System (GIS) extract to populate a power-flow tool, to help with network analysis and begin to identify areas of voltage constraint.</p>	RY22 (complete)
Monitoring to anticipating quality	<p>Undertake a network hosting capacity study and enhance our Congestion Policy so we can manage the uptake of distributed energy resources (e.g., solar panels, electric vehicles, battery storage) and any related power quality issues.</p> <p>Refine our network growth scenarios identified in our 2022 Asset Management Plan (AMP).</p> <p>Carry out further hotspot modelling by utilising the RY23 hosting capacity studies to inform areas requiring potential remediation.</p> <p>Continued roll out of our distribution transformer monitoring (DTM) capability in strategically selected locations.</p> <p>Implement our voltage change management plan, including associated field work to implement the new Voltage Control Standard.</p>	<p>RY23</p> <p>RY24</p> <p>RY23 - RY26</p> <p>RY23 - RY26+</p>
Anticipating to predicting quality	<p>Refine scenarios further by tracking growth against our forecast scenarios.</p> <p>Carry out modelling to forecast constraints by incorporating our growth scenarios into our hotspot and hosting capacity analysis.</p> <p>Review our strategies for managing the low voltage network to capture our field experience, modelling and forecast learnings.</p> <p>Further implementation of a range of preventive solutions to forecast areas of constraint.</p>	<p>RY24</p> <p>RY25</p> <p>RY26</p>

