

## Item 3: QLDC Energy Roadmap

**SESSION TYPE:** Briefing

### **PURPOSE/DESIRED OUTCOME:**

This session will brief elected members on progress of the QLDC Energy Steering Group and the development of a QLDC Energy Roadmap. The roadmap is being developed as a strategic tool to help shift Council's energy system from a passive utility cost to a source of strategic value for the organisation and broader community.

The accompanying memo outlines the key energy projects now underway, including the 2026 electricity contract renewal, aquatics LPG conversion, and pilot initiatives. Together, these projects are helping shape a more integrated Council energy system in response to a rapidly changing electricity market.

The briefing seeks to build elected member understanding of the proposed strategic direction and to obtain feedback on the roadmap's overall approach, priorities, and level of ambition.

### **DATE/START TIME:**

Thursday, 16 April 2026 at 3.15pm

### **TIME BREAKDOWN:**

Presentation: 20 minutes

Questions or Debate/Discussion: 10 minutes

### **PRESENTERS:**

Bill Nicoll – Resilience & Climate Action Manager

#### **Prepared by:**



**Name:** Bill Nicoll

**Title:** Resilience & Climate Action Manager  
8 April 2026

#### **Reviewed and Authorised by:**



**Name:** Pennie Pearce

**Title:** Acting Strategy & Policy Manager  
8 April 2026

### **ATTACHMENTS:**

A	Councillor Memo – Energy Roadmap
B	Energy Roadmap presentation

# Memo

<b>To:</b>	Elected Members
<b>From:</b>	Bill Nicoll
<b>Date:</b>	<b>Thursday, 9 April 2026</b>
<b>cc:</b>	Pennie Pearce, Michelle Morss
<b>Subject:</b>	QLDC Energy Roadmap

## 1 PURPOSE

This memo provides elected members with an update on the work of the QLDC Energy Steering Group and the development of the QLDC Energy Roadmap. The roadmap is being developed as a strategic tool to help shift Council’s energy system from a passive utility cost to a source of strategic value for both the organisation and the wider community.

The memo outlines the key energy projects now underway, including the 2026 electricity contract renewal, aquatics LPG conversion, and a range of pilot initiatives. Together, these projects are helping shape a more integrated Council energy system in response to a rapidly changing electricity market.

## 2 BACKGROUND

### 2.1 ENERGY STEERING GROUP

In October 2025, QLDC established an internal Energy Steering Group to provide oversight, coordination and strategic direction across the Council’s growing portfolio of energy-related initiatives. The steering group brings together representatives from Property & Infrastructure, Community Services, Finance, and Resilience & Climate Action. Its purpose is to:

- Implement the recommendations from the strategic report *Review of QLDC Energy Consumption Report* (Sapere, 2025)
- Provide direction and recommendations for projects that reduce energy costs and carbon emissions and improve energy resilience.
- Support the organisation to demonstrate leadership in energy innovation to the wider community, consistent with Councils strategic commitments<sup>1</sup>.

As the group began reviewing the current portfolio of energy initiatives (see Table 1), it became clear that, rather than being independent projects, they are all interconnected components of a broader Council energy system. Without deliberate alignment and sequencing, there is a real risk the system remains fragmented and poorly positioned to capitalise on a rapidly evolving energy market.

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<sup>1</sup> Climate & Biodiversity Plan 2025–2028, Regional Deal, Destination Management Plan, Energising Queenstown Project, and Economic Diversification Plan.

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Project Category	Specific Initiatives
Commercial	2026 Electricity Contract Review
Facility Upgrades	Aquatic LPG conversion; QEC Stadium upgrades
Solar & Battery Trials	WRC Battery Energy Storage System (BESS) Pilot; Solar feasibility investigations for Luggate Memorial Centre, Glenorchy Hall, and Wanaka Library.
Transport & Innovation	Public EV Charging Network RFP; V2G Trial at Arrowtown Community Centre.
Systems Improvement	Energy Data & Reporting systems improvement; 3W Assets energy demand modelling.

*Table 1: Current QLDC Energy Projects*

## 2.2 ELECTRICITY SECTOR CHANGES

The steering group have also been assessing the significant changes that are occurring in the wider electricity sector, which hold important implications for Council energy costs and future investment decisions.

Electricity costs are increasingly being shaped not just by how much power is used, but by when it is used and the level of demand placed on constrained parts of the network. In growth areas such as Queenstown Lakes, this is driving higher line charges for large-load sites. Aurora's 2026 pricing changes demonstrate this shift, with some Council facilities, such as Wānaka Recreation Centre, projected to see line charge increases of around 50 percent, from approximately \$120,000 to \$180,000 per year.

At the same time, emerging flexibility markets are creating new opportunities for organisations to reduce costs and generate value by managing demand, storing energy, and discharging electricity during peak periods. This increases the potential value of Distributed Energy Resource (DER) technologies such as batteries, solar, smart controls, and Vehicle to Grid systems.

There is also a wider strategic opportunity. Major electricity network investments, including the Frankton to Cromwell transmission upgrade, are being planned to respond to forecast demand growth. However, accelerated uptake of DER technology across the district may help defer or reduce the need for some of this investment over the next three years. This creates an opportunity for Council to better align its own energy investments with broader system needs and to take a more active role in the district's energy transition.

## 2.3 NAVIGATING THE TRANSITION

Historically, Council's approach to energy has focused on managing operational costs through standard electricity procurement and asset level improvements. While this approach has delivered

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incremental savings, it still treats energy as a utility expense rather than an interconnected strategic system.

The emerging electricity market environment is changing this dynamic. Network operators such as Aurora are introducing flexibility markets that reward organisations capable of actively managing demand, storing energy, and dispatching electricity when required. This creates an opportunity for Council, as one of the largest energy consumers in the district (~20Gwh per annum) to transition from passive consumer to active energy system participant.

Current State	Future State
Energy as a utility cost	Energy as a strategic asset
AoG price-driven procurement	Contract enables investment and flexibility
Passive demand	Active load management
Standalone projects	Integrated energy system

**Table 2: The Potential Strategic Shift**

Delivering this transition will require investment and resource allocation. The 2024–2034 LTP includes funding for aquatics LPG conversion which is currently in progress. The LTP also allocated \$6M for investment in solar and batteries however, this is not budgeted until FY2032/33. This timing of this funding does not align with the immediate window of opportunity for Council to take a more active leadership role in distributed energy investment and flexibility market participation.

Given the complexity of this strategic landscape, the Energy Steering Group has identified the need for an Energy Roadmap to help guide the planning for Council energy system investment and explore new funding mechanism to support its delivery. The Roadmap will help provide strategic context to the development and sequencing of key energy projects so they are not isolated investments but components of a broader system. When sequenced correctly they could create a “flywheel effect” where each project unlocks opportunity to support the next stage of investment.

## 3 THE QLDC ENERGY ROADMAP

A QLDC Energy Roadmap slide deck (Attachment A) has been developed as a communication tool to explain the strategic context of the Council energy system and how the sequencing of projects can help progress its development. The roadmap is also illustrated in a one-page infographic- Attachment B.

Key elements of the roadmap include:

1. **Pilot projects:** Vehicle 2 Grid charging and Battery Energy Storage System (BESS). These will provide a foundation for Council to learn how to manage DER assets, test the participation of Council in the Aurora Flexibility Market and build improved energy resilience across key Community facilities.

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2. **2026 electricity contract renewal:** This will enable negotiation with electricity retailers who can commit to flexibility aligned tariffs and potential co-investment in DER projects.
3. **Aquatics LPG conversion:** This increased electrical load will become a strategic input into the new electricity contract and future distributed energy planning.
4. **Scale up DER Investments-** learnings from the pilot projects and Aquatics LPG conversion will be incorporated into a business case for further Council investment in DER projects. This will also explore the various funding mechanisms e.g debt funding, electricity retailer co-investment, power purchase agreements, energy as a service etc that may be utilised to support investment.
5. **Scale up Flexibility Market participation-** A broader distributed energy investment programme will then enable Council to participate more actively in flexibility markets, generating revenue that can offset increased network costs and support further investment in future projects.
6. **Community Opportunities-** Once Council has developed a suitable level of energy system maturity it can explore opportunities for deployment of community scale DER projects through strategic partnerships such as the Community Energy Trust.

Through this approach Council's energy system shifts from a cost centre to a strategic asset that generates financial, environmental and resilience benefits.

## 4 PILOT PROJECTS

To accelerate learning and reduce financial risk, the roadmap describes the following pilot projects that can be delivered through strategic partnerships.

### 4.1 WĀNAKA RECREATION CENTRE - BATTERY ENERGY STORAGE SYSTEM

The proposed Wānaka Recreation Centre BESS pilot would be delivered through a strategic partnership with Simply Energy. Under the proposed model, Simply Energy would fund, install, and operate a 260 kWh battery at the site. Council would receive a share of the commercial value generated by the battery, including:

- **Flexibility payments-** Aurora pays for energy storage to be available and for discharging when called upon.
- **Avoided Cost-** Reduced network Coincident Peak Demand (CPD) charges from smart energy management.
- **Energy Arbitrage-** The battery can charge when TOU electricity is cheap (overnight) and discharge when electricity is expensive.

The battery could also provide backup power during grid outages. To enable this, electrical upgrades would be required so the site can operate in an isolated "islanded" mode. These upgrades are

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estimated at approximately \$67,000. QLDC is preparing an application to the [Ara Ake National Flex Discovery Fund](#) to help support this cost.

A procurement plan is now being developed, with a preferred start date before winter 2026 to capture the greatest value from Aurora's flexibility market.

## 4.2 VEHICLE TO GRID CHARGING

Council is also partnering with the Queenstown Electrification Accelerator on a Vehicle to Grid trial at Arrowtown Community Centre.

This project will test the ability for electric vehicles to power a building and export electricity back to the grid. Over time, this could help position Council's EV fleet not only as transport assets, but also as distributed energy assets.

The trial will also build organisational capability in managing decentralised and dynamic energy systems, including real-time control, building integration, and market participation. It may also enhance backup power resilience for facilities that serve as Community Emergency Hubs.

## 5 2026 ELECTRICITY CONTRACT RENEWAL

The September 2026 electricity contract renewal represents a key strategic opportunity with over \$6M in annual spend. Historically, electricity contracts have been procured through standard All of Government (AoG) arrangements focused primarily on achieving the lowest unit price. While this approach minimises short term costs, it does not support the negotiation of strategic opportunities that are emerging within the electricity market.

The 2026 contract renewal will be managed as a custom contract outside this AoG model, enabling an opportunity to negotiate a bespoke agreement for the with a major retailer that is more strategic partnership than account management. Due to past timing of AoG tranches, Council currently has contracts with three separate retailers, Contact, Meridian and Genesis, so this new contract provides an opportunity for consolidation.

Key areas of focus for the contract negotiation will likely include:

- Achieving lowest "whole of life" cost for the contract
- Extend term of contract from 3 to 5-7years to provide increased leverage for negotiation
- Leverage the "energy density" of our electricity profile- 25 sites make up 80% of our demand
- Enabling retailer financed solar and battery deployment
- Negotiating export tariffs for onsite generation
- Structuring tariffs that reward demand flexibility and peak reduction
- Establishing the commercial platform for distributed energy investment

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A project team has been assembled to support this procurement which includes staff from Property, Procurement and Resilience & Climate Action, and expert advisory services from Sapere. The procurement will have a value between \$18-42M depending on term of contract, so the procurement plan will require Governance approval.

## 6 AQUATICS CLEAN HEAT PROJECT

Council has committed to replacing LPG boilers at its aquatic facilities due to the high emissions and operating costs associated with this fuel source. The Queenstown Events Centre and Wānaka Recreation Centre account for approximately 98 percent of Council's total LPG consumption, making this one of Council's most significant operational decarbonisation opportunities. The project is being led through the Community Services programme, with BECA supporting technical evaluation and design development.

The project is in the delivery phase, with officers preparing for briefings on the options considered, the preferred technology pathways, and how these projects fit within Council's wider energy and carbon reduction direction. Arrowtown has confirmed an air source heat pump solution and is moving toward procurement for summer 2026 delivery. For QEC and Wānaka, options assessment and pre-design work are underway, with briefings to ELT and Elected Members to occur in April.

The development of the energy roadmap has helped to provide strategic context to the project to help explain which technology options align with the broader strategic objectives of Council. The new electrical load created at the aquatic facilities will become a key input into Council's 2026 electricity contract renewal and future distributed energy planning.

## 7 COMMUNITY SCALE INVESTMENT

While the Energy Roadmap primarily focuses on investment to support Council's internal energy use, it also frames the opportunity for investment into larger scale projects that could support the community energy use.

A proposed delivery vehicle for this could be a Community Energy Trust. The Queenstown Electrification Accelerator (QEA) team have provided briefings to Councillors on a potential model, that they are rolling out nationally. Under this model, Council could act as an anchor participant by providing rooftops, land, governance support and project credibility. The Trust would enable community co-investment in shared energy infrastructure, improving energy equity and strengthening district-wide resilience. This model will need to be evaluated against other options for use of Council land and assets before any recommendations on participating in the trust model can be made.

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## 8 CONCLUSION

QLDC is entering a period where energy must be managed not just as an operational cost, but as a strategic system that can deliver financial, resilience, and environmental benefits. The Energy Roadmap provides a practical framework for bringing Council's current projects into a more coordinated programme of work and for positioning future investment to capture emerging opportunities in the electricity market.

With the 2026 electricity contract renewal, aquatics electrification, and pilot DER projects now underway, Council has a timely opportunity to set a clearer strategic direction for its energy future. Elected member feedback will help confirm whether the proposed approach, priorities, and level of ambition are appropriate as this work continues.



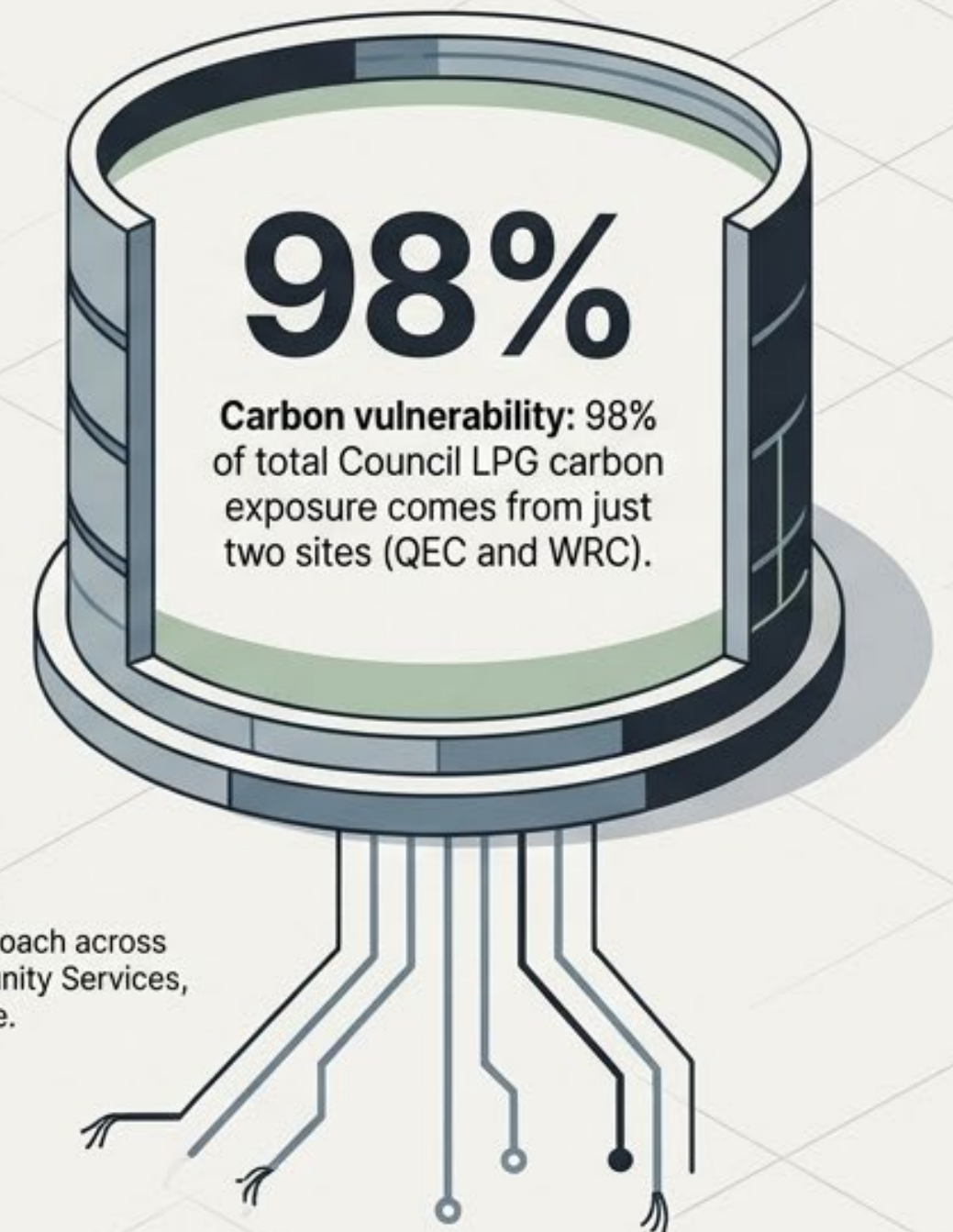
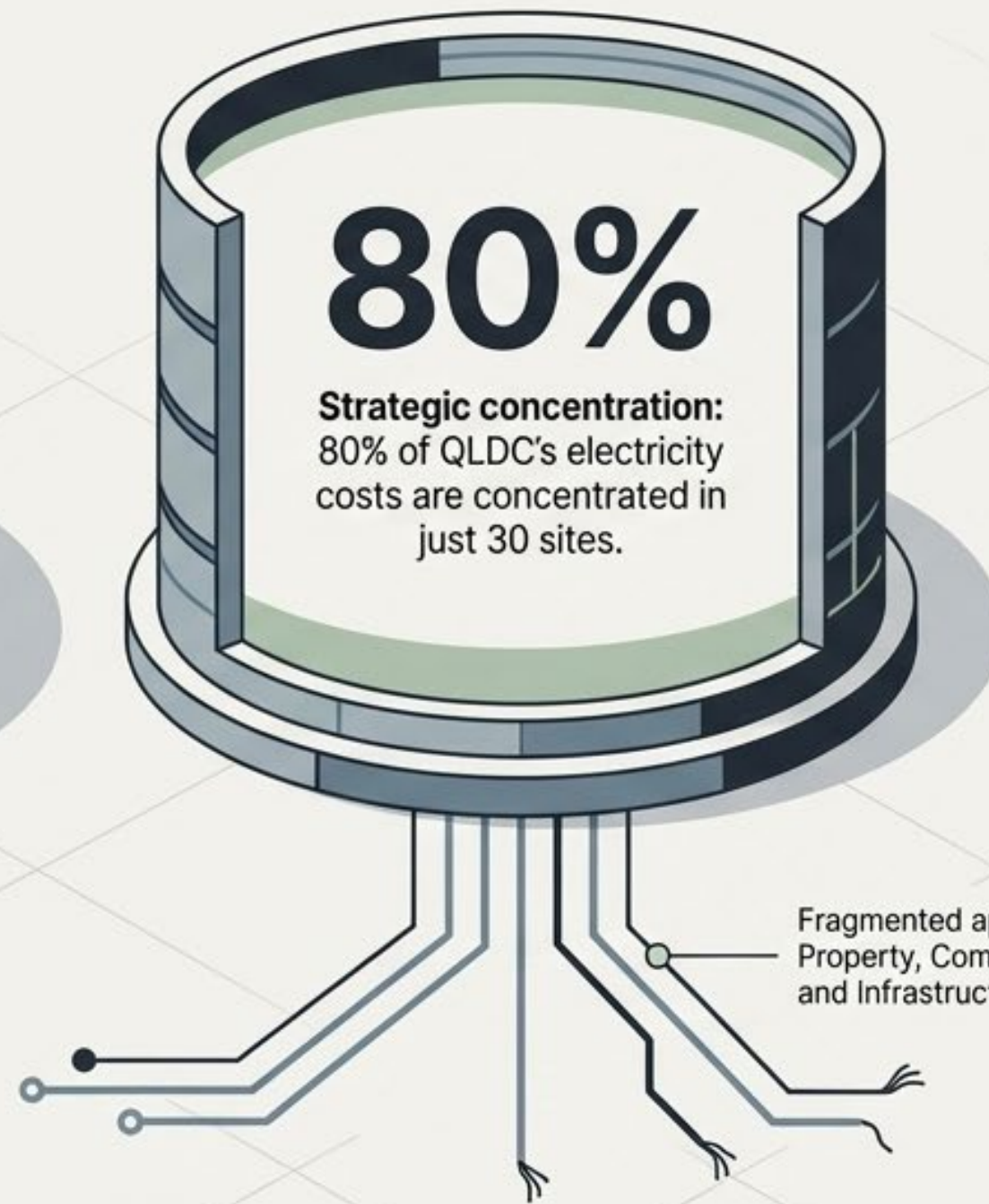
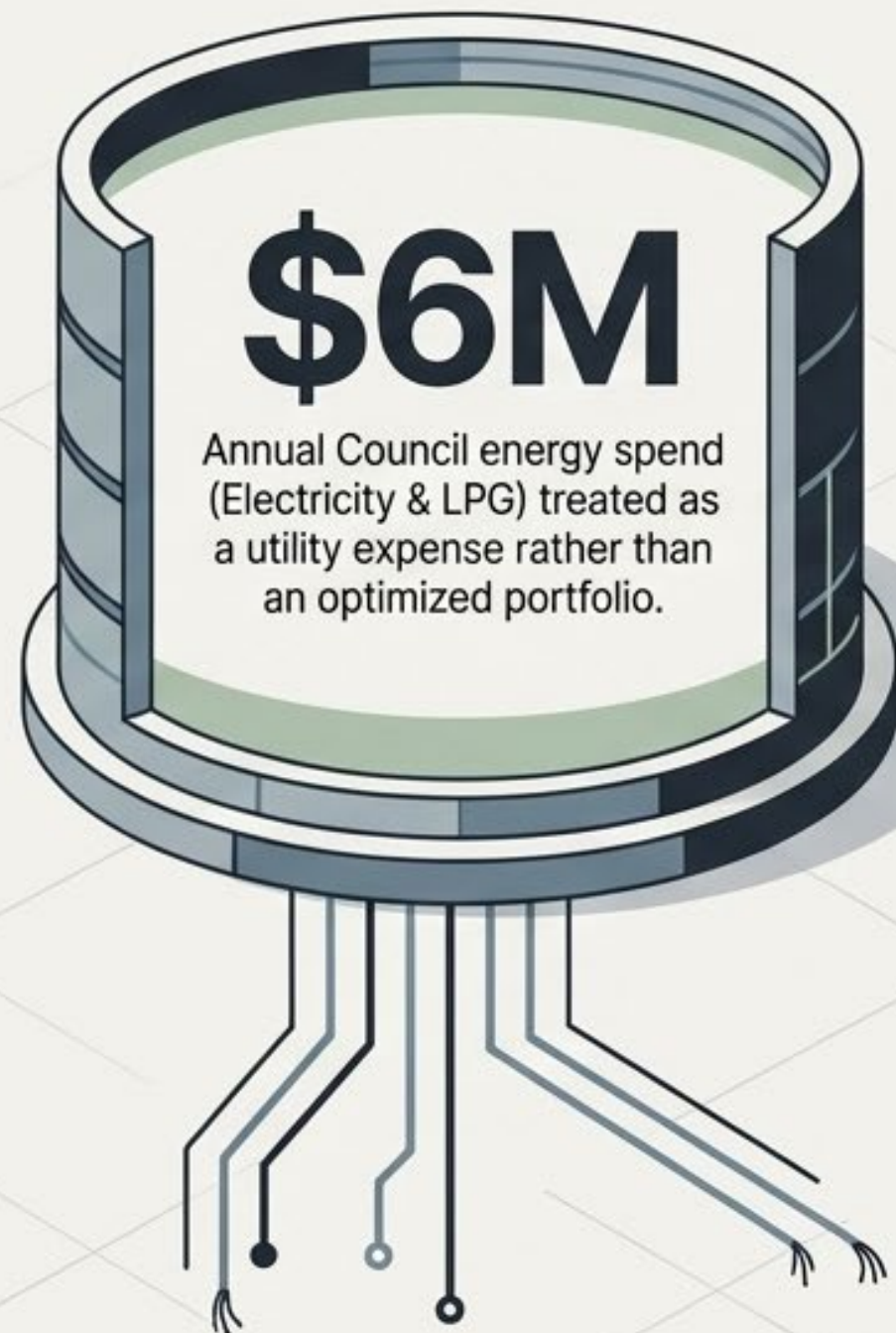
# QLDC Energy Roadmap 2026–2029

From Cost Exposure to  
Energy System Leadership





# Passive management exposes QLDC to escalating costs and unmanaged volatility.





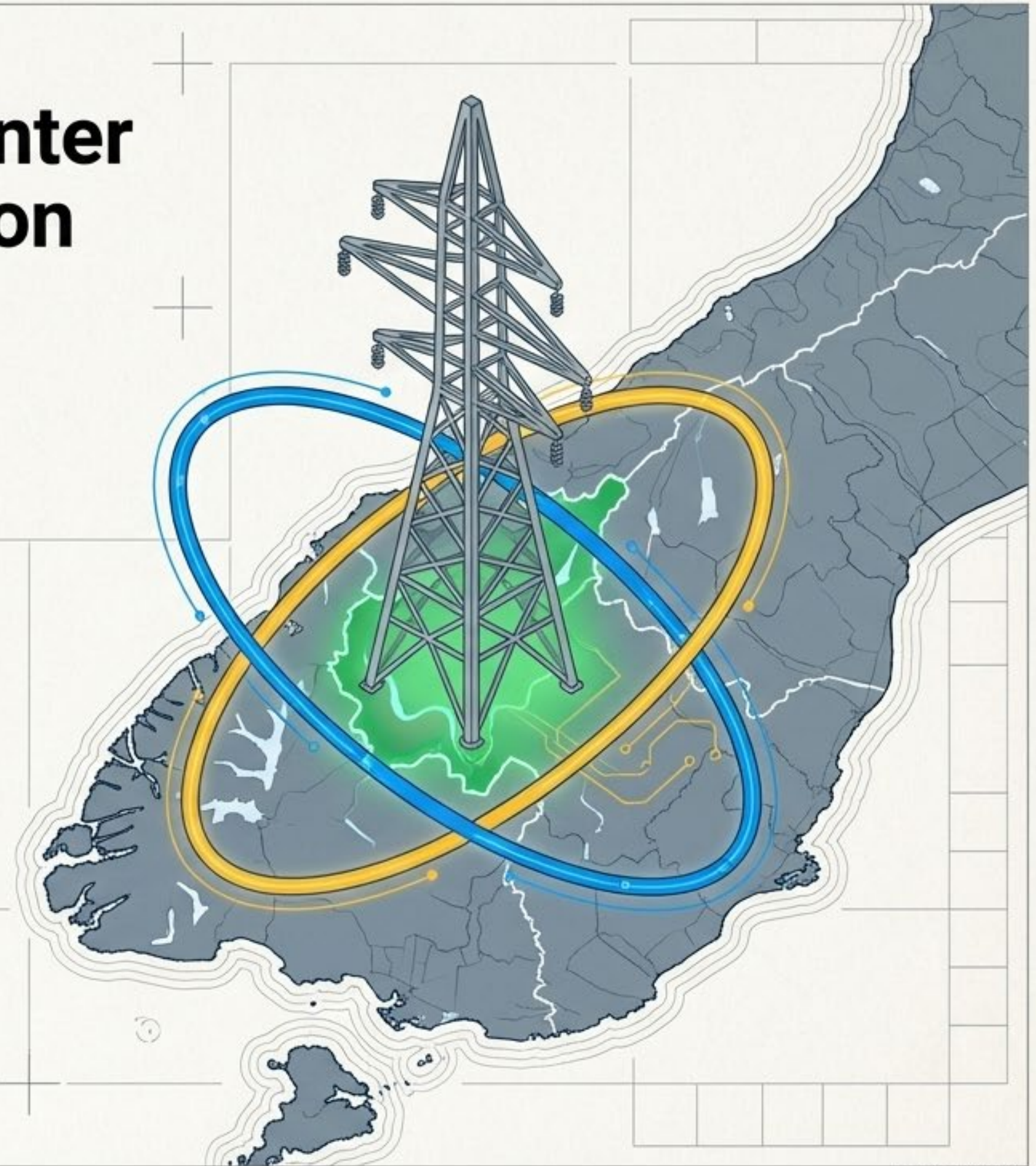
# The District sits at the epicenter of an energy system transition

## Energising Queenstown

The critical Frankton-to-Cromwell Transmission Line upgrade provides grid capacity, but the high costs of this major investment can be deferred through the accelerated adoption of Distributed Energy Resources (DER).

## Regional Deal

The 'Electrify Otago Central Lakes' investment package aims to create a special economic zone for electricity innovation, supercharging the rollout of solar, battery storage, and local energy projects to build regional resilience.

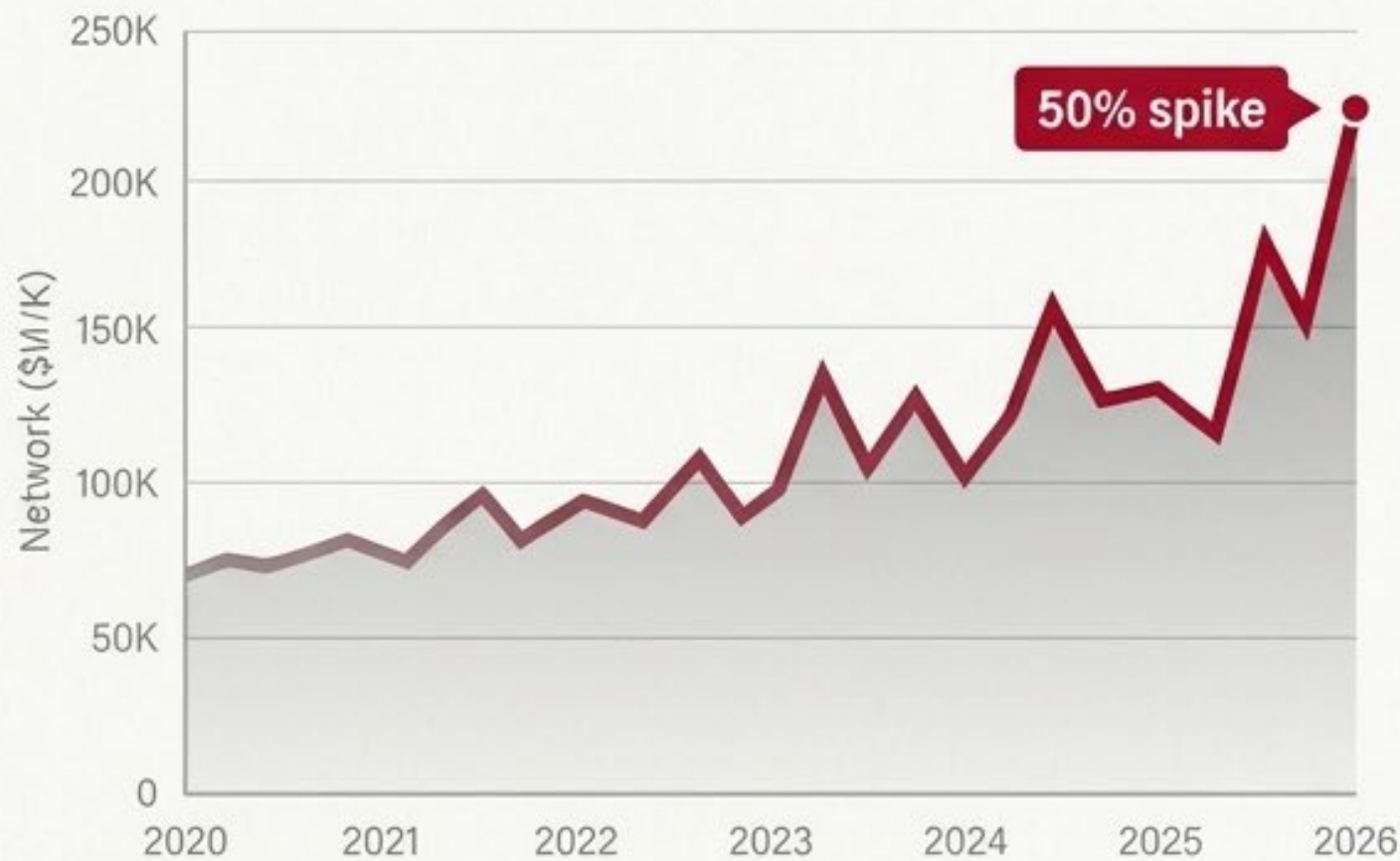




# The rules of the grid are changing: Peak demand is penalized, but flexibility is rewarded

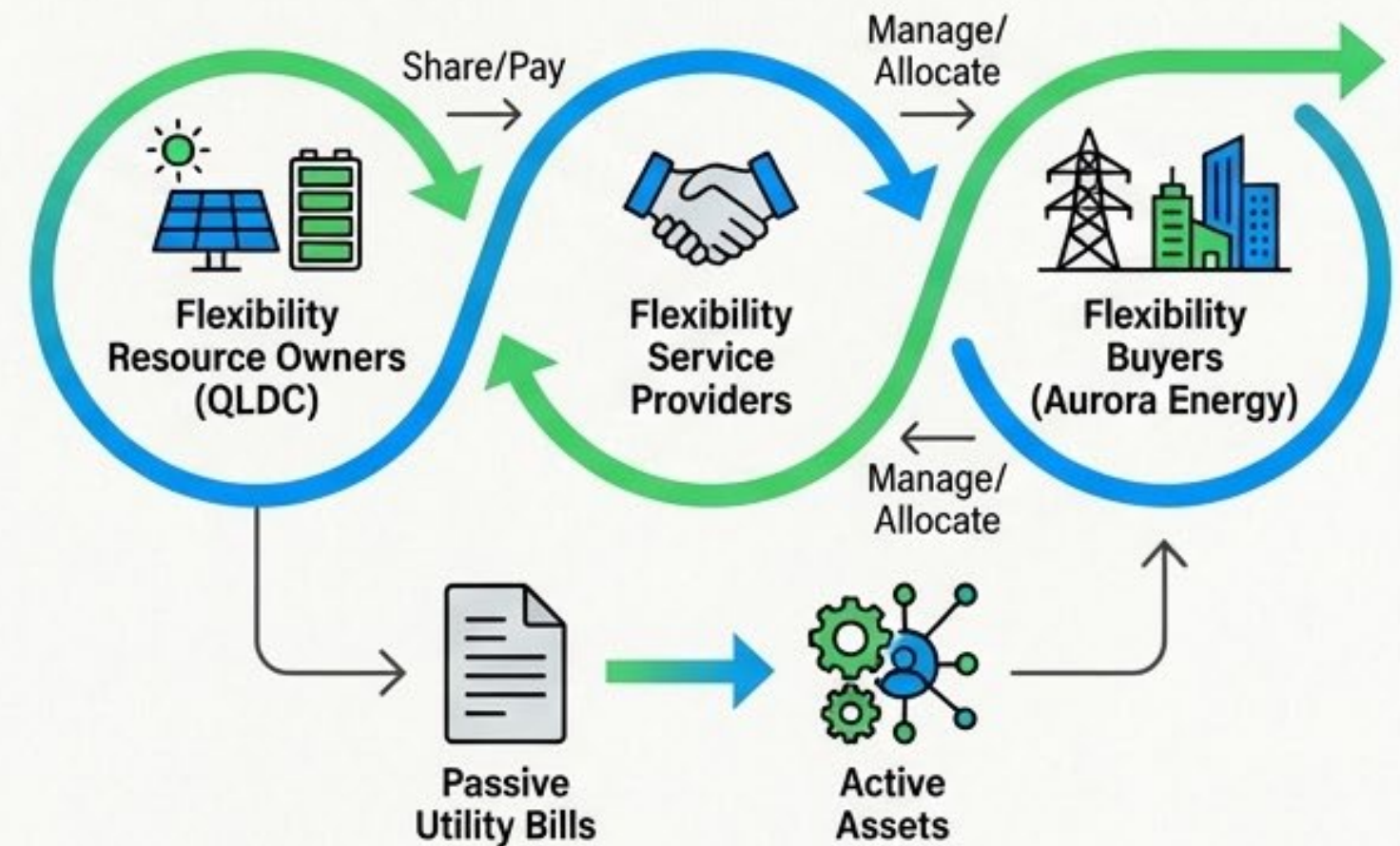
## The Stick (Punishment)

'Integrated Blueprint' Design language



Aurora's new pricing severely punishes passive consumption during peak periods. For example, the Wānaka Recreation Centre (WRC) is projected to see its line network charge jump from \$120K to \$180K in 2026/27—a 50% spike.

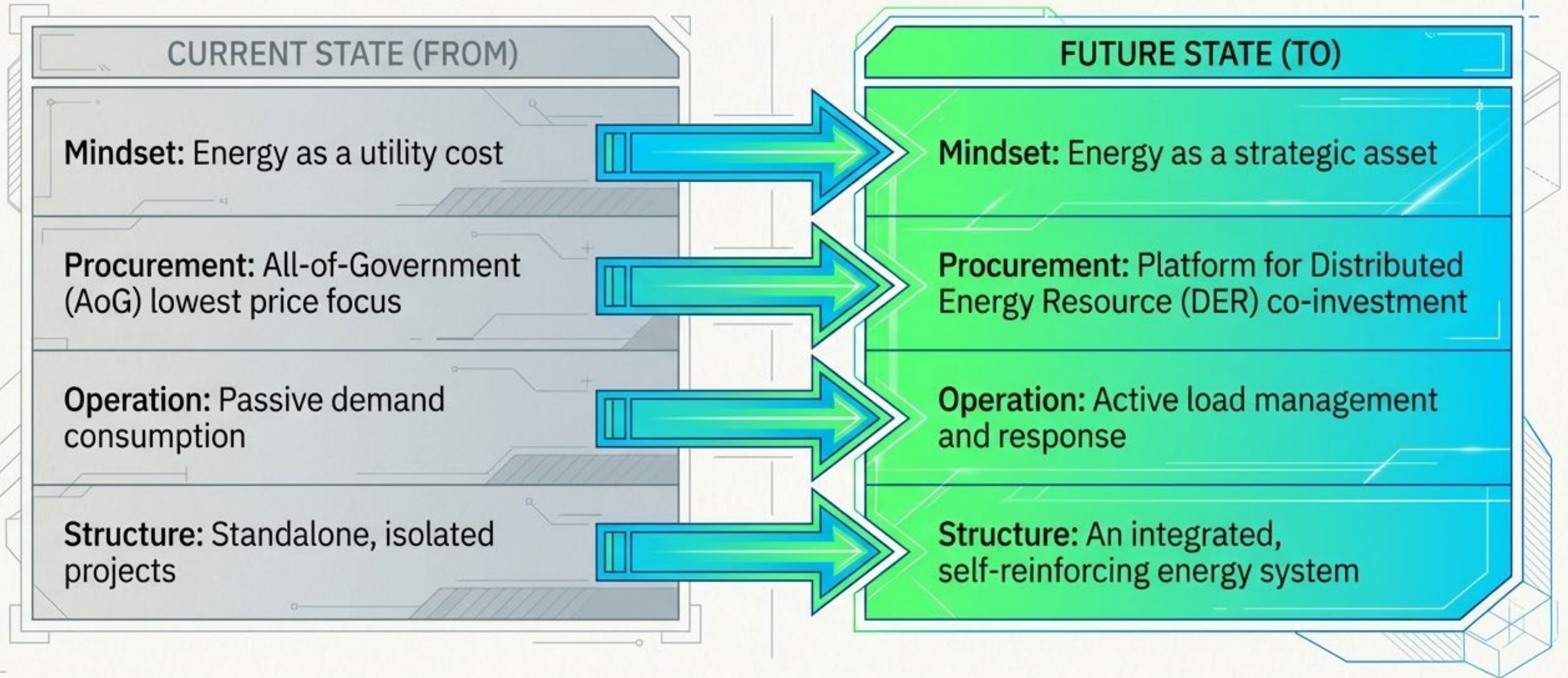
## The Carrot (Reward)



Emerging markets pay 'Flexibility Resource Owners' to manage demand and dispatch stored energy. With ~20GWh of annual consumption, QLDC holds major market leverage to turn passive bills into active assets.



# The Strategic Shift: Moving from Commodity Purchasing to System Investment





# From Isolated Projects to a Self-Reinforcing System

**2026 Contract Renewal:** enables retailer co-investment and DER-friendly tariffs.

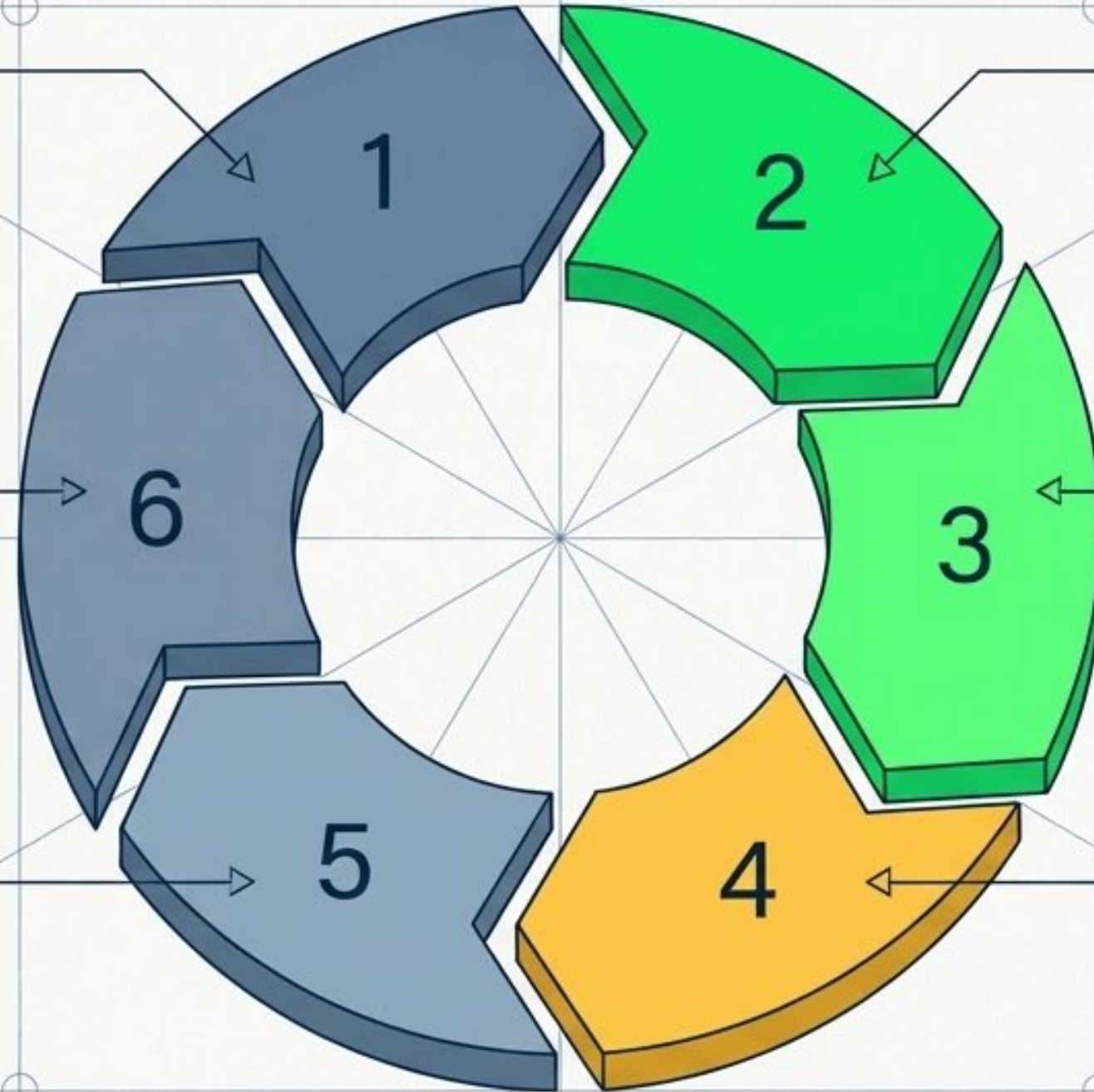
**Supports Aquatics Electrification:** capturing the higher, controllable electric load.

**Reinvests into the Community:** to fund further Distributed Energy Resources.

**Drives Solar & Battery Overlay:** to manage the new localized load.

**Generates Commercial Revenue:** shifting assets from cost centers to income generators.

**Enables Aurora Flexibility Market:** positioning QLDC as an active grid player.





2026

# The 2026 Electricity Contract Renewal is our foundational strategic lever

## Key Context

Current contracts with Contact, Meridian, and Genesis all renew in September 2026.

The new procurement will target a longer 5-7 year term to increase negotiation leverage.

## The Strategic Shift

By exiting the standard All-of-Government (AoG) model, we will use this renewal to negotiate export tariffs for onsite generation, enable retailer-financed solar/battery deployment, and secure flexibility-aligned pricing structures.

## The Outcome

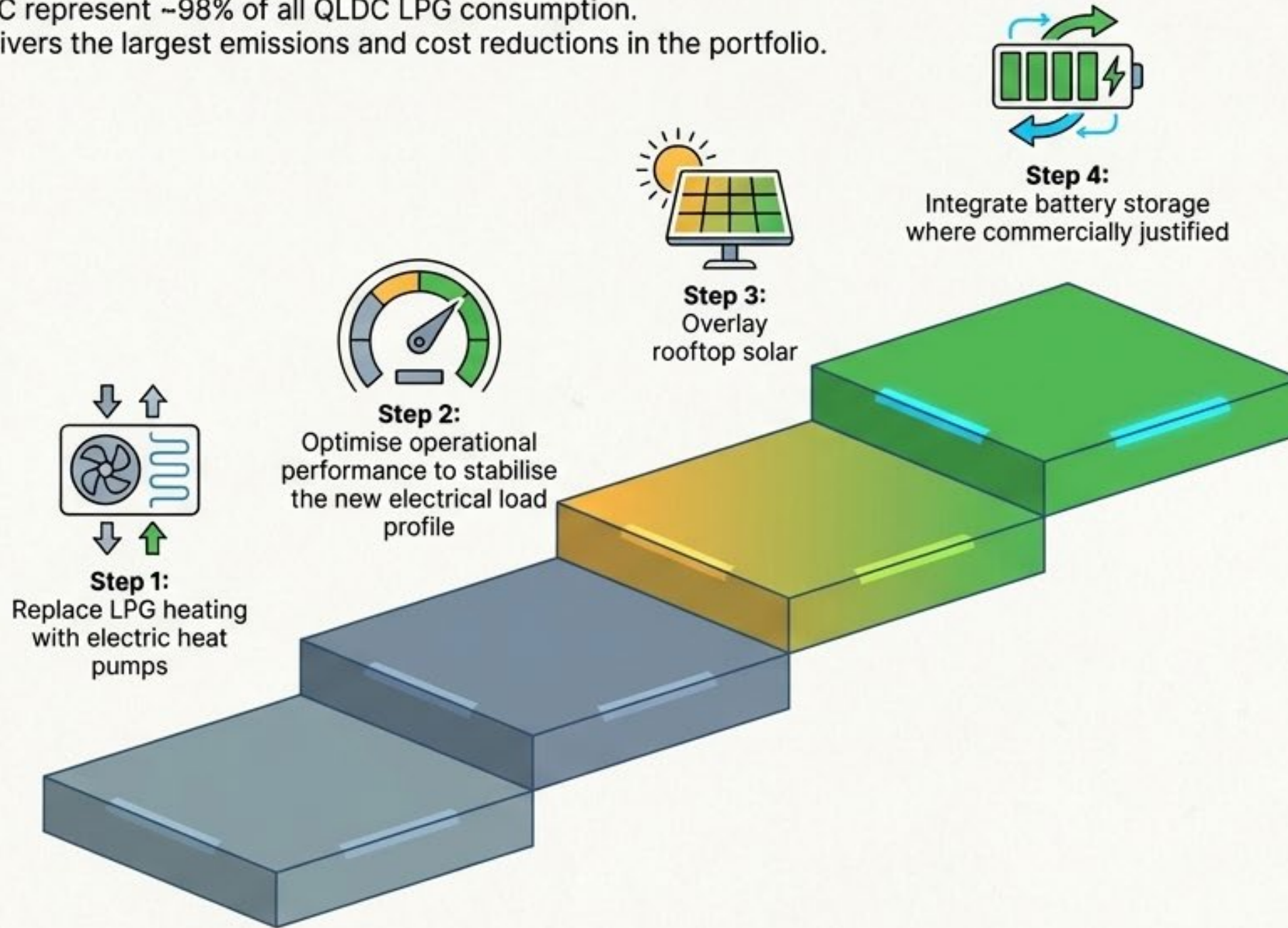


**The Prize: Exiting the All-of-Government (AoG) model unlocks \$18M–\$42M in procurement value and transforms purchasing into a platform for active DER investment.**



# Electrify Aquatics First, Then Optimise and Scale

**Context:** QEC and WRC represent ~98% of all QLDC LPG consumption. Electrification here delivers the largest emissions and cost reductions in the portfolio.



## Why This Order?

Load must be stabilised before sizing solar and batteries to avoid overbuilding infrastructure. It ensures facilities are designed for peak management from day one. The new stabilized electrical load becomes a key input for the 2026 contract renewal.

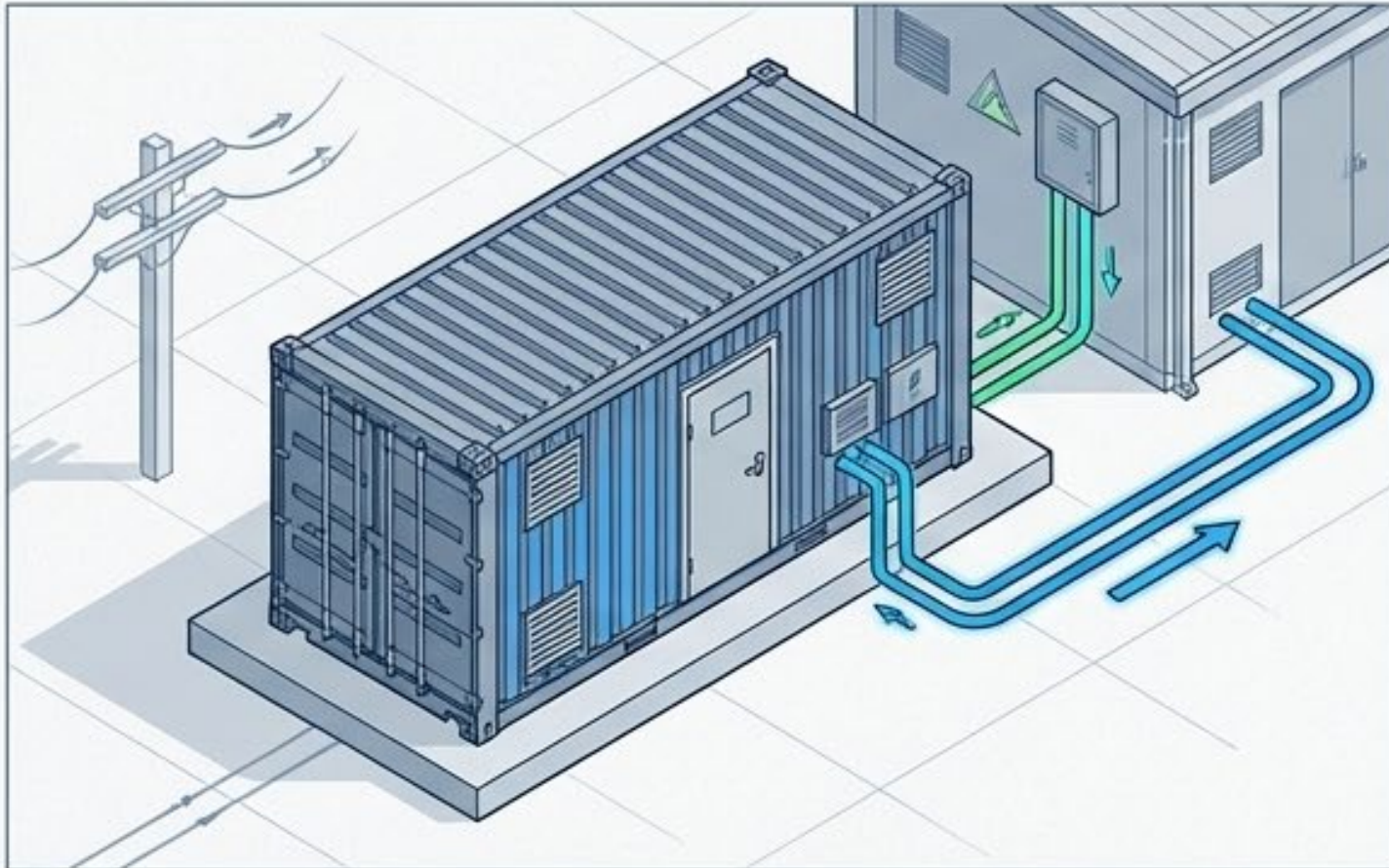




# Learning by Doing: De-risking Innovation via Strategic Pilot Partnerships



## WRC BESS Pilot

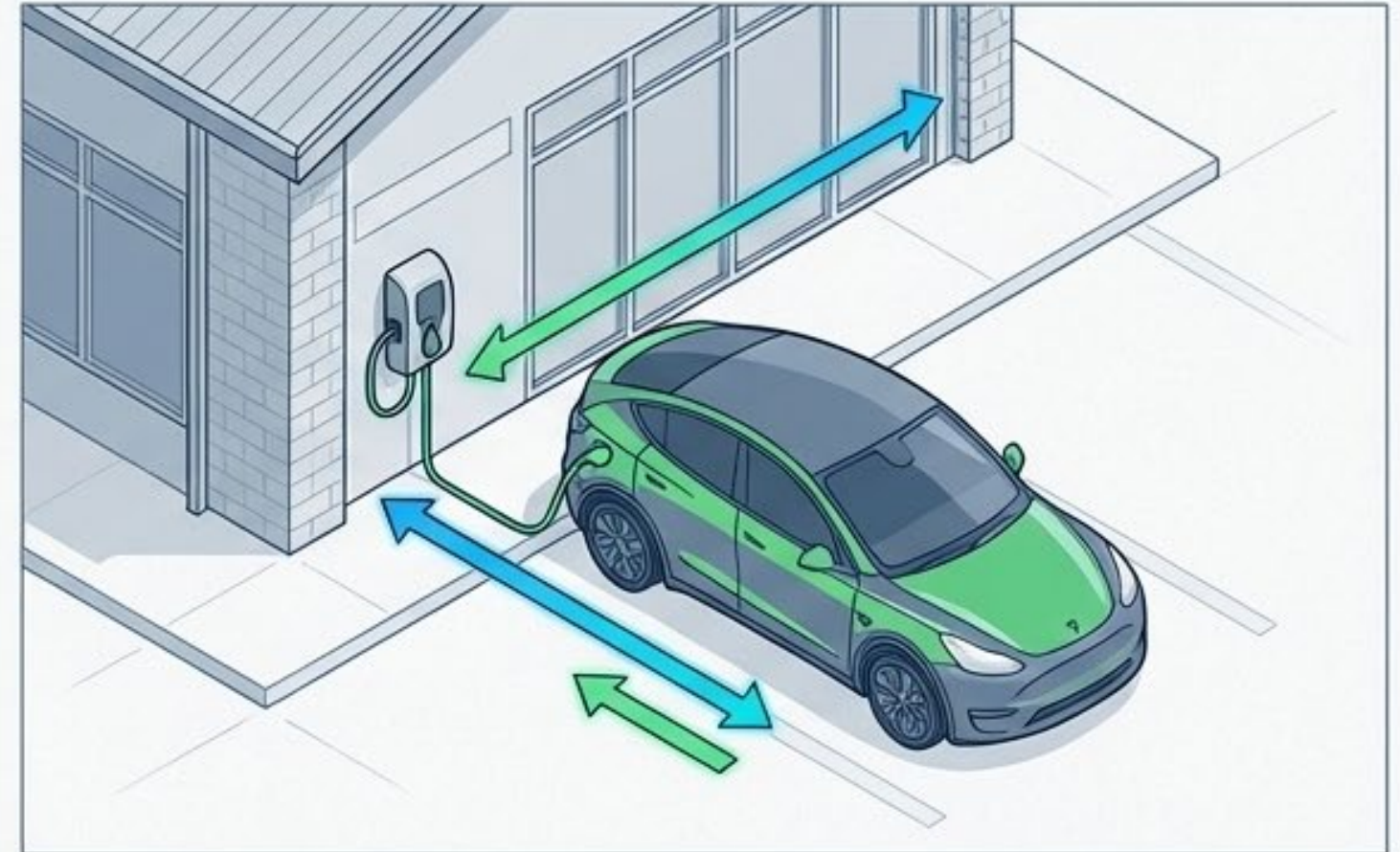


**The Partnership:** Simply Energy funds, installs, and operates a 260kWh battery at Wānaka Recreation Centre.

**The Value Stack:** QLDC receives 20% of the commercial value (Flexibility payments from Aurora, Avoided CPD peak charges, Energy Arbitrage).

**Resilience Upgrades:** QLDC is applying for a \$67K Ara Ake National Flex Discovery Fund grant to enable off-grid 'islanding' capability for emergency backup.

## Arrowtown V2G Pilot



**The Partnership:** Queenstown Electrification Accelerator.

**The Value:** Testing Vehicle-to-Grid charging at Arrowtown Community Centre. Transforms Council EVs from simple transport assets into mobile resilience resources capable of discharging power back to the building and grid.



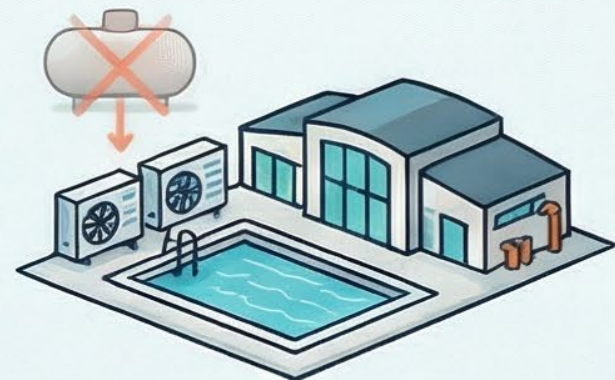
# QLDC Energy Roadmap: From Cost Exposure to System Leadership

## Phase 1: Building the Foundation (2026)



### 2026 Electricity Contract Renewal:

Use the renewal to negotiate export tariffs and enable retailer-financed solar and battery deployment.



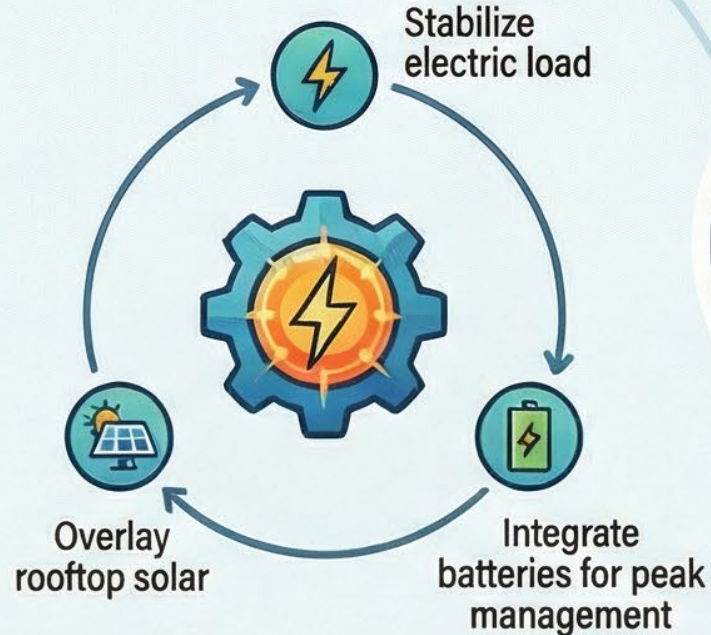
### Aquatics Electrification First

Priority 1: Replace LPG heating with electric heat pumps at QEC and WRC facilities.



Pilot Projects (BESS & V2G)

### The 'Flywheel' Logic



## Phase 2: Scaling & Revenue Generation (2027-2029)

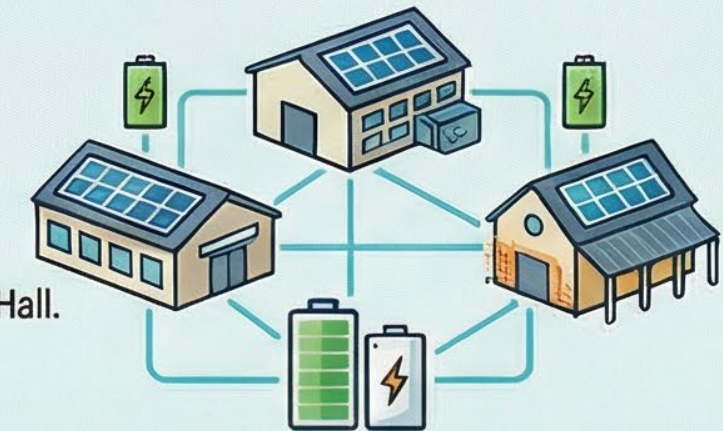


### Commercial Revenue from BESS

Use the Wānaka Recreation Centre battery pilot to generate income through Aurora's flexibility market.

### Distributed Energy Scale-up

Expand solar and batteries to high-load sites like Luggate Memorial Centre and Glenorchy Hall.



### Community Energy Trust

Anchor community-scale solar and shared batteries to target energy equity across the district.



### Project Category

**Renewables & Storage**



### Key Initiatives

Solar/Battery investigations (Luggate, Glenorchy, Wānaka Library, QEC Stadium)



### Transport Innovation

Public EV Charging Network rollout and Vehicle-to-Grid (V2G) trials



### Strategic Partnerships

Queenstown Electrification Accelerator and Aurora Flexibility Market participation

