g

PUBLIC
COUNCILLOR BRIEFING

AGENDA & SUPPORTING MATERIAL

Commencing at 9.00am

Wednesday 26 February 2025

Council Chambers

.

MEETING	**PUBLIC COUNCILLOR BRIEFING**		
Date	Wednesday 26 February 2025	**Time**	Commences at 9.00am
Location	Council Chambers		
AGENDA			
9.00am – 10.00am	Joint Housing Action Plan (JHAP) - **DOCUMENT 1**		Robert Love
10.00am – 10.20am	Morning Tea		
10.20am – 10.50am	Castle Hill Community Energy Project - **DOCUMENT 2**		Robert Love
10.50am – 11.05am	Resource Consent Dashboard Demo - **DOCUMENT 3**		Emma Larsen
11.05am – 11.35am	Revaluation Presentation by QV - **DOCUMENT 4**		Brendon McCurley
11.35am – 12.15pm	CWMS Committees Review -		Cam Smith (Senior Section Manager, Strategy and Planning Management) Ecan
12.15pm – 1.00pm	**LUNCH**		
1.00pm – 1.30pm	RMA Reform Submission – **DOCUMENT 6**		Emma Larsen

Meeting Ends

M E M O R A N D U M

TO: Sharon Mason - Chief Executive Officer

FROM: Robert Love - Executive Director – Development and Growth

DATE: 26 February 2025

SUBJECT: **CASTLE HILL COMMUNITY ENERGY PROJECT**

1. Context/ proposal

Members of the Castle Hill community have come together to lead an energy project with the aim of improving the energy resilience of the Castle Hill Township before, during and post an adverse event, and to assist in reducing carbon emissions of the Village.

The project would include at a minimum solar generation (rooftop and/or ground based) but may also include energy storage via batteries.

They have approached Orion and have been accepted into the Community Energy Activator programme. This programme seeks to work collaboratively with communities in Christchurch and Selwyn to provide support for community energy projects. More information on this programme can be found at: https://www.oriongroup.co.nz/our-story/the-latest/energy-pilot-launches?_ga=2.61194092.1334245236.1732658486-1932206686.1732658485

This group presented to Council on 23 October 2024, with this memo forming part of the Council response to this project, and to set out Council's position on its potential involvement in the project. The group asked three key questions of Council:

1- Is this an initiative Council could support in principle?
2- Can SDC assets be included in the proposal?
3- Can SDC provide/lease or land for a ground-based solar array?

Additional information on this community led project and group can be found at: https://www.chca.org.nz/residents-info/community/comm-energy-proj/

The Community Group has been involved in the drafting of this memo, and have provided these additional comments:

As confirmed by our community survey, the main objective for residents is to increase energy supply resilience for the village.

Key elements of energy resilience for our community during an emergency are:

- *Power to the hall for either Civil Defence staff or residents, including lighting, fridge freezers, cooking facilities etc;*
- *Charging of batteries associated with emergency management actions, as well as batteries for communication needs;*
- *Communications not reliant on the main grid, eg WiFi via Starlink;*
- *Provision of fresh water via the village reticulation, and ideally;*

- *Provision of waste water services via the village reticulation, (noting that this may not be possible in some emergency scenarios).*

For clarification, heating and power for residents' homes during an emergency or daily operation are out of scope for this initial phase. However there may be interest from residents in exploring generation and power sharing arrangements in a yet-to-be scoped second phase of this project.

Options analysis

The current focus for the group is completing a detailed options analysis, including high level technical design details and a discussion of benefits and constraints. This piece of work will also determine which of the options has the lowest cost of energy supply for the best return on the solar and battery investment. Please let us know if you would like to see this options analysis once completed.

Below are the key points from this work in progress.

- *A community battery and the ability to 'isolate' the village from the main grid is a critical component of any solar generation solution implemented.*
- *The battery would be best located within the low voltage network of the village, rather than connected to the main 11 kV line from the substation.*
- *The solar panels can be located on the ground, on Council asset roofs or on residents' roofs in the village. It is also feasible to draw excess power from panels on residents' roofs to top up the battery for a fee.*
- *From our discussions with a wastewater engineer familiar with the waste water plant, there are no technical reasons preventing panels being sited either around the pond or on the irrigation field itself. Other options may also be available, depending on the availability of land and the number of panels required.*
- *Assuming that Council agree for the power needs of SDC assets during normal operation or an emergency to come from our proposed project, the options for Stage 1 of the project are:*
    - *1. Battery/rooftop solar array (SDC and residents)/ground based array. (This is the preferred option for both resilience and capacity reasons.)*
    - *2. Battery/rooftop solar array (SDC and residents). (Currently, excess from residents' rooftop solar alone is estimated to be insufficient to provide certainty of supply to Council assets.)*
- *Our current modelling proposes a small array (100-200 panels initially), which Orion have confirmed can be accommodated on the current grid infrastructure at Castle Hill with no constraints on location (close to the substation or within the village).*
- *We are investigating a number of funding sources for this project and would also welcome the chance to consider a loan from SDC.*
- *Further, an agreement from Council to have assets powered by the Community Energy Project would necessitate a power purchase agreement for Council power use to be negotiated.*

Upcoming engagement opportunities

- *We have joined Rewiring Aotearoa's network of community energy projects.*
- *Our next Castle Hill community engagement is scheduled for Sunday 2 March 2025 following the community association's AGM. We have also organised a solar walk around the current rooftop solar arrays in the village to further inform residents and potential residents about installing solar panels up at Castle Hill.*
- *Our project will feature as a case study in the Orion Activator Programme report, due out on 19 March 2025.*

- *This report and our case study will also feature at Downstream, the Energy Sector's Annual Strategic Forum being held in Christchurch on 20-21 March 2025.*

2. Regulatory background

Resource Management Act considerations:

The project would be considered to be a 'small and community-scale electricity generation' activity, which is generally enabled within the District Plan. However, further details on the scope and scale of any development would be needed to inform the regulatory pathway.

Building Act considerations:

Roof mounted solar arrays:
Building roofs are designed to support a level of dead load which typically caters for the majority of solar panel installation, however given the alpine environment consideration also needs to be given to ensure that the installation will not lead to a buildup of snow which could adversely affect the structural performance of the building.

Ground mounted solar arrays:
Unfortunately, the Schedule 1 of the Building Act 2004 Clause 28C provisions for ground mounted solar panel arrays outside of rural areas does not apply to Castle Hill township due to its location in a lee zone for wind requiring specific engineering design.

Dependent on the nature of the installations, there are two potential pathways for ensuring compliance under the Building Act:

1. Building Consent application, which would involve full technical review of installation to ensure compliance with the relevant sections of the NZ building code, and onsite inspection at the completion of the installation prior to issuing a code compliance certificate, or
2. Territorial Authority Discretionary Exemption application under Schedule 1 Clause 2 of the Building Act 2004, where the same level of documentation would be needed to support the application with the fundamental difference being the building owners is responsible for ensuring the work complies with the NZ building code, (ie; no technical review or inspections by council).

We would recommend obtaining building consents for the work given the environmental conditions requiring specific engineering design (snow, wind).

3. Strategic Alignment

This project aligns with the strategic directions provided in Future Selwyn. More specifically it aligns with the following:

A great place to call home:
- ResC-1 Focus on place-based solutions and the needs of local communities
- ResC-2 Enable and enhance community resilience
- ResC-3 Empower collective action, responsibility and community-led initiatives

- ResC-4 Reduce risks faced by communities from natural hazards and the impacts of climate change
- ResC-5 Increase our readiness for emergencies and disasters
- ResC-6 Increase our ability to effectively respond to and recover from emergencies and disasters

A healthy and restored environment:
- LWEL-3 Promote the use of renewable resources over non-renewable resources

Livable low carbon towns:
- LLCT-7 Strengthen the resilience of towns to natural hazards and climate change

4. Selwyn District Council's involvement

Council currently has the land holdings within Castle Hill indicated in figure 1, including a community hall. Additionally, Council has the following water assets within Castle Hill:
- Freshwater reticulation and storage
- Wastewater treatment and disposal

Figure 1: SDC land in Castle Hill

Based on discussions with the Property and Infrastructure Teams these recommended opportunities exist for Council's involvement:
- Community Hall roof
- Reserve land adjacent to the Hall
- Infrastructure land and/or on infrastructure buildings roofs

Emergency Management Considerations:

The development of 'off the grid' energy generation capacity in Castle Hill has the potential to improve the resilience of this township.

Council does have water infrastructure located in this township which is reliant on the network grid. This project has the potential to ensure that these pieces of critical infrastructure can continue to function in a disaster where the network grid goes offline. However, further investigation would be required to assess the energy requirements of this infrastructure.

Additionally, in an event such as Alpine Fault 8 Castle Hill would most likely be cut off from the rest of Selwyn and would act as a forward operating base for an emergency response. Currently the only existing alternative generation is a 22kva fixed diesel generator reliant on the availability of fuel.

5. Next steps

Council has multiple possible options available to it regarding its involvement in the project. The options are:

- Have no further active involvement other than as a regulator for the activity and construction.
- To help support the Community Group in the development of the project but don't commit land or funding.
- To either provide land, or the use of land for generation.
- To develop generation on Council land ourselves.
- To provide funding for this project, subject to a future annual plan or long-term plan process.
- To become a customer of this Community Energy Project to power Council assets.

Depending on the direction given by Council in this briefing a report can be brought back to Council to formalise Council's position and ongoing involvement. Noting that no funding currently exists with budgets to contribute to this project.
Figure 1

Robert Love
Executive Director – Development and Growth