

BRCT submission on The Energy Plan 1.0



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The Energy Plan 1.0

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Introduction

Thank you for this opportunity to submit to the **Dunedin City Energy Plan 1.0**.

The Blueskin Resilient Communities Trust (BRCT) is a registered charitable trust formed in 2008 to support sustainability and transition initiatives in a planned and structured way. We work as a legal body to provide a public benefit and achieve the long-term objective of building community resilience, particularly in the context of our changing climate. Our headline work is the Blueskin Wind Farm development and our core activity areas are in energy (particularly Cosy Homes), climate change action, and provision of community services. We offer support to a number of community groups working in the field of sustainability. Jeanette Fitzsimons is our patron.

The Trust is comprised of our patron, seven trustees, three staff, three contractors, numerous volunteers, a large pro-bono network and close to 300 subscribers to our E-newsletter. Our office is in Blueskin Bay, at Waitati, and we provide services Dunedin-wide and further afield when able.

We want to acknowledge the Council's work on developing a useful and clear strategic framework, and suite of strategies. We value the leadership shown by the Council, its Chief Executive and staff in the development of this Energy Plan 1.0 and early action on energy issues.

The Energy Plan 1.0 is attractively set out, and we believe it can easily be made much stronger and provide greater leadership and profile for the city. We support all the actions and believe there is capacity to add more and to reframe elements of the Energy Plan 1.0 for greater effect.

BRCT is a member of the Otago Chamber of Commerce and we support the Chamber's submission on Energy Plan 1.0 and the Chamber's own "Work Plan for Dunedin". Our submission follows.

1 The Energy Plan 1.0 Goals

We give our full support to the four goals in Energy Plan 1.0, which are:

1. Take advantage of economic opportunities in a changing energy context;
2. Save costs and enhance quality of life from energy efficiency improvements;
3. Boost the city's energy security and ability to adapt to future change, and;
4. Reduce Dunedin's climate change and environmental effects.

Recommendation

- We propose Energy Plan 1.0 actions be evaluated against these goals by the Sustainability Audit Sub-Committee or by the Project Convenor within *Strategic Theme 2: Alliances for Innovation* or within *Strategic Theme 5: A compelling destination*, if such a Project Convenor is appointed to run the Energy Plan as a project within the Economic Development Strategy.

2 The Energy Plan 1.0 Actions

We agree with all the Actions in the Energy Plan 1.0 and we are a strong supporter of the Cosy Homes Trust. We are energised by the variety and range of green-tech innovation in the city, and our submission is intended to enrich and add to the Energy Plan 1.0. We provided a substantial contribution to assist the development of the Energy Plan in 2013 and since then we have been working to implement actions we believe are critical to the success of an Energy Plan with all the resources we have. We share the Council's appreciation of partnerships and projects that have solid foundations. The participative approach aligns with our values and the way we operate.

Recommendations

- Once you have reviewed all submissions please provide further detail on delivery activity/implementation pathways and measures of success for Actions;
- We encourage the clustering of the Actions (along with delivery activities/implementation pathways and measures of success) into Work Streams, as used by the Otago Chamber of Commerce's Energy Committee, and;
- Include a greater number of actions in the Energy Plan 1.0 establishing some overall targets and a timeframe for those targets (further detail in Section 4).

3 BRCT support and action in implementing Energy Plan 1.0

3.0 Local Energy Infrastructure: Blueskin Wind Farm Development

BRCT's company, Blueskin Energy Limited, has just submitted a Resource Consent application to develop the Blueskin Wind Farm at Blueskin Bay. This is a small-scale community project to establish three wind turbines on Porteous Hill, above Blueskin Bay as a Community Support Activity. This project matches the four goals extremely well and while small in scale for a wind farm, it is actually the first significant energy infrastructure build for Dunedin since the Waipori Hydro Scheme over 100 years ago.

This project requires legal permission to proceed, and once this is obtained we are confident that we can secure the full investment needed to build the Wind Farm and commission it. The impact of this development will then be able to be measured against version 2 or 3 of the Dunedin Baseline Energy Study, and promises a reduction in emissions, greater efficiency through reduction of transmission losses, making good use of an available renewable energy resource and boosting Dunedin's energy security with generation close to supply, all while providing social and environmental benefits.

We are also preparing to monitor potential wind farm sites within the city boundary and undertake further appraisal of the Dunedin wind resource.

3.1 Local Energy Infrastructure: PV and Micro-wind

We provide advice on solar installations and encourage the uptake of household and business scale renewable generation. Solar PV uptake in Blueskin is now significantly higher than throughout the rest of the OtagoNet network percentage-wise (as at September 2014, the Blueskin area, which represents 4% of OtagoNets network connections represented 76% of OtagoNet's distributed generation capacity).

We see great potential to marry the Blueskin Wind Development with micro-scale generation to increase energy security and adapt to future change, while reducing emissions.

3.2 Local Energy Infrastructure: Smart Micro-Grid

With the high uptake of micro-scale generation and the likelihood of a community Wind Farm being commissioned in the near future, along with the rapid change in storage and distribution technologies, we can see opportunities to pilot a local level Smart Micro-

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Grid. We are working with University of Otago researchers to see if we can secure some applied research into a local system.

Residents are increasingly investing in distributed generation while gentailers have reduced their buyback rate from 26c/kWh to 7c, and battery technology is improving rapidly, allowing the integration of transport/storage systems as well. We would like to see Dunedin designing a system that works commercially as well as for residents installing micro-generation.

3.3 *Cosy Homes: Home Performance Assessments*

BRCT is the provider of independent Home Performance Assessment services for Dunedin city. As the Otago representative of the Community Energy Network, BRCT supports the HPA service and ongoing training, and collaborates with other organisations to tie in further provision of service where possible and in particular we assist the North East Valley Project. In parallel, we are currently working with BRANZ as the regional coordinator for the national BRANZ 'Home Conditions Survey', which contributes to our knowledge and understanding of the fuel poverty issues in the city.

Additionally we are supporting training for 4 people through Stage 1 (Home Energy Awareness and 1 person through Stage 2 (full Home Performance Advisor qualification) to build capacity in the city and strengthen the HPA service.

We also run a Carbon Offset service, which allows residents to offset greenhouse gas emissions (particularly those from national and international air-travel), and off-setting is provided through targeted Home Performance Assessments for targeted households, where emissions from electricity and heating are high. This service is tracked through time to measure emissions savings, but also will provide valuable data for Cosy Homes.

3.4 *Cosy Homes: Insulation and Firewood services*

BRCT provides access to high quality insulation and bulk firewood for residents who are able, either individually or in neighbourhoods, to self-organise. We do not provide insulation installation services or split firewood delivery and our services are run by a volunteer staff member to ensure they remain affordable and accessible to residents.

3.5 *Cosy Homes: Energy Advice*

We provide free Energy Advice, by telephone, email and in person at the office, to Dunedin residents. Our staff have worked on home energy issues for many years and/or undergone Home Energy Awareness or Home Performance Assessment training. While we struggle at times to resource this service, we are also aware that there is no-one else in Dunedin with the experience and mission to provide the service at the present time.

3.6 *Transforming the CBD: Transport*

While we agree with the Chamber of Commerce Energy Committee's designated *work streams* categorisation, our interest in Transport is in providing infrastructure and provision for low carbon transport and the development of an integrated transport system, rather than *transforming the CBD* per se. Through our work on energy systems we understand the potential for significant and rapid system change involving Transport, and in this sense we must view the city as a whole, with rural areas such as Blueskin linked to the CBD.

We work to link together all parties interested in low carbon transport solutions and work for collaborative solutions. This involves, from time to time, enabling sales of E-Bikes, holding workshops and events, and promoting EVs. We actively look for partners who share our vision and who seek a positive and proactive community partner.

3.7 *Transforming the CBD: Night Sky*

We support the Night Sky action and would like to partner with any organisation that can enable access to affordable and appropriate LED technology.

3.8 *Understand and Educate*

Our Home Performance Assessments, partnership in research projects, and Energy Advice could all be considered actions in the Understand and Educate Work Stream, as well as the Cosy Homes Work Stream (we follow the Chamber of Commerce's Work Streams for ease of categorisation). However, the clearest actions we take which fit the 'Understand and Educate' Work Stream are Energy Expos.

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The first Energy Expo which involved our staff was held in 2007 (a year before the establishment of the Trust), and contributed, in part, to the development of BRCT. A second Energy Expo was held in Waitati in 2008. Since then, through research projects, we have held a number of Energy Expos in Brockville and Pine Hill, as well as many other energy events throughout Blueskin.

In addition, our open office is situated at Waitati School, and the photo-voltaic panels on our office roof are a practical demonstration of micro-generation, while inside we have available a range of leaflets and information sheets for residents.

4 Our Recommendations

We are in agreement with the Otago Chamber of Commerce Energy Committee on the key additional implementation elements that could enrich and enable delivery of the Energy Plan 1.0.

1. We agree that the appointment of an external Project Convenor for delivery of the Energy Plan as a project within the Economic Development Strategy has now become essential. We propose, with the Chamber, to elevate the Energy Plan 1.0 to a project with Project Convenor within Strategic Theme 2: Alliances for Innovation or within Strategic Theme 5: A compelling destination.
2. The Dunedin Energy Baseline Study is a critical piece of baseline research. We hope that the publication of this resource will stimulate a deeper, richer 'urban metabolism study', and we agree with the 'Outlook' in the Dunedin Energy Baseline Study (page 49) that this Baseline report should become an annual study, to enable the measure and evaluation of progress through time and to enable better tracking of the many variables noted in the report.
3. We support the Energy Leaders Accord. While we are a small charitable Non-Governmental Organisation, we have many positive and productive relationships with large city institutions and organisations and we value the demonstration of leadership by these organisations. When institutions make positive choices, and build more productive relationships, they stimulate many other actions within the city, through supply chains and even emulation. Like the Chamber, we would like to see:
 - i. The Energy Leaders Accord confirmed with all main partners signed up;
 - ii. Secure high level partner commitments, to be reviewed biannually;

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- iii. Undertake a highly visible early collaborative action via the accord as suggested by the Chamber, eg. combined Electric Vehicle purchasing to establish EV fleets, and coordinated E-Charging at partner locations; implementing a city wide purchasing of LEDs for bulk pricing advantage should be planned and implemented.
4. Most obviously, given that our major project via Blueskin Energy Ltd is to build the Blueskin Wind Farm, and with the other work on Local Energy Infrastructure in the city, we believe that **Local Energy Infrastructure** is an important Work Stream that must be formally included in the Energy Plan 1.0.
5. Liquid fossil fuels are estimated to account for 76% of Dunedin's greenhouse gas emissions, and 'Transport' as a sector is estimated to be the biggest driver of the city's energy imports. By putting some focus through actions on transport within the Energy Plan, rapid progress on the four goals is possible. We congratulate the Council on its support for E-Charging infrastructure to date and suggest that this work is fully acknowledged in the Energy Plan 1.0. We also suggest that Council commit to planning CBD redevelopment with E-Charging infrastructure as a critical feature, and provide additional actions around Electric Vehicle and E-Bikes for resilience in rural areas. We note that the 2013 Integrated Transport Strategy states that: *"It is intended that the Energy Plan (currently under development), will deliver on aspects of the Integrated Transport Strategy in relation to rural resilience. The Energy Plan will explore the possibility of developing local alternative transport fuel sources, and other ways of providing travel choices and increased transport resilience, for rural communities to provide for their transport needs in a future of fuel price volatility"* (page 61). We would like to see this intention acted upon, particularly as the technological change since 2013 has been rapid and the growing number of Electric Vehicles and E-Bikes in Blueskin require supporting infrastructure.
6. Our modern food is energy dense and 'Food' is therefore critical to consider within the Energy Plan 1.0. We support the recruitment of a Food Resilience Officer/ Project Manager and inclusion of Food as an action area in Energy Plan 1.0 within a Work Stream such as **Understand and Educate** (as suggested by the Chamber), and linked to Strategic Theme 1: Business Vitality in the Economic Development Strategy.
7. Energy is one of the critical pillars of our city and society, and we are ill prepared to deal with any significant disruption or disaster. We agree with the Chamber that it is

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time to instigate work on an emergency plan to manage disruption to city energy supply and prepare for such a contingency, as per the “Local Energy Assurance Plan” of Portland, USA and other cities.

5 Strategic Context

We follow closely the evolution of strategies and plans undertaken at Council. The Energy Plan 1.0 cuts across all existing strategies and plans and we congratulate the Council on devising four goals that reflect the range of strategies (and anticipates the Environment Strategy). The Energy Plan 1.0 arose out of the Economic Development Strategy, and as such it should receive the attention it requires through appointment of an external Project Convenor. However, consideration of other strategies and plans is critical and we have noted that the Energy Plan 1.0 can be enriched to bring value to the Integrated Transport Strategy, for example. Similarly, with the publication of the Dunedin Baseline Energy Study, it is now possible that the Energy Plan 1.0 can propose targets for City emissions reduction for the Environment Strategy and evaluate actions against these targets. The Energy Plan 1.0 should set out the steps to achieve actions that might fit within different strategies, and we think this Energy Plan 1.0 shows promise and requires only a little more work. Well done.

6 Conclusion

Thank you for the opportunity to work with you through the long development of the Energy Plan 1.0, and the opportunity to submit our perspective. As an action based organisation, we appreciate the development of a supportive environment enabling the growth of positive solutions in our changing times.