Community Based Approach to Energy Hardship

For: Minister Megan Woods
Minister of Energy and Housing

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Executive Summary

Energy hardship is experienced in most, if not all, our communities. It is the outcome of the relationship between the quality of the home, the way they are used and the affordability of energy. The impact on our health, education, financial outcomes, and general wellbeing is considerable. It is also preventable, in most cases, and this should be our collective goal.

Existing programmes from Government are making an impact and they should continue. That Warmer Kiwi Homes has received further funding in the May Budget is recognised and strongly supported. Other stakeholders, such as philanthropy and community-based social service providers are funding or working on programmes that also provide in-community services which provide close support for these Government programmes.

While the Government and many other stakeholders are working hard on parts of the problem, there are many opportunities being missed to make deep, long lasting differences to the people living in energy hardship.

This proposal provides a pathway for how we can make the most of the existing programmes and then build on them to make serious inroads into eliminating energy hardship in our communities. We expect outcomes from this proposal to include significant training and employment opportunities, increased community economic development, and improved health and education. This proposal will improve the ability of Government agencies to work with sector stakeholders to design and fund policies that maximise our collective impact on energy hardship at all levels.

While the country has been very successful in responding to the Covid 19 pandemic, the economic impact from this response alongside the international economic situation are producing the conditions for what might become a deep and long felt (especially in the regions) recession. This proposal recognises that and recommends that there is a staged response.

In the first stage, the focus is on delivery of full retrofits in the next 12-18 months. This stage recognises the need to move fast to address the increased prevalence of energy hardship, provide opportunities for skills training and employment in our regions and to develop a robust way to measure the key impacts of this intervention. It is proposed that Stage 1 uses the existing programmes to develop a more impactful set of actions.

Stages 2 and 3 are designed to take the learnings from the first stage 1 and to develop a robust response to the systemic gaps we have in our current energy hardship programmes. With an Impact Framework to support decision making, the full retrofit programme can be rolled out into other regions alongside the deployment of new high-performance social housing and community energy infrastructure. These stages are proposed to be implemented after the first year of Stage 1 so that the models for governance and management can also be well thought out and implemented.

Introduction

This document has been written by Community Energy Network with discussion and input from the Tindall Foundation, Habitat for Humanity, Waikato Tainui, Te Putahitanga o Te Waipounamu, Ākina Foundation and Solar City.

This programme has been designed to maximise the potential for wellbeing outcomes at the community level. (See appendices for description of how this project aligns to the Living Standard Framework and the Sustainable Development Goals). Our community-based approach to eliminating or significantly reducing energy hardship represents a rich set of relationships providing national coordination for regional delivery. This requires a flexible approach to implementation so that organisations managing regional projects can adapt the delivery of the programme to align with the needs of their communities.

This programme is focussed on maximising *long term* social, environmental, and economic value to communities. Wherever possible, high quality, locally manufactured, and easily maintained materials will be used for retrofits and new homes while energy infrastructure will be procured and designed to be built (as much as possible) and maintained by skilled community members.

Purpose

The purpose of this proposal is to eliminate or significantly reduce energy hardship while supporting community economic development and increasing community wellbeing and resilience. It is proposed that a collaborative mode, developed over time, is the only way this can be achieved.

This collaborative approach is the best method to ensure that a broad range of outcomes are achieved, including opportunities to train and employ people to significantly reduce or eliminate energy hardship within their communities.

The programme will generate significant benefits for individuals, households, and families, communities and regions, New Zealand society, and the environment. The benefits will include:

1. *All* members of each targeted community live in homes that can affordably be kept warm, dry, and free of mould. This reduces the incident rate of housing related hospital admissions, improves education and work attendance, increases social engagement, and positively impacts mental health outcomes.
2. Community members develop trades skills and secure permanent employment opportunities. Based on CEN member experience and research from earlier versions of the Warmer Kiwi Homes programme, employment (direct and indirect) should be around 9-10 FTEs/$1m spent. There will also be a community economic development multiplier effect from direct investment through this programme.
3. Communities become more engaged and resilient and are better able to cope with future shocks such as the impacts of climate change, economic disruptions, and social issues such as another pandemic.
4. All households in the community has access to affordable energy options, enabling a just and fair transition to a low-carbon economy.
5. Energy security based on a resilient *local* system for energy generation, management and transmission that mitigates the impacts on the grid of future increasing incidences of adverse weather events caused by climate change.

6. Support the Government's transition to a low carbon economy through energy efficient and effective homes as well as potential access to new housing that is designed to be adaptable to Climate Change impacts.

Current State

Programmes relating to energy hardship are being delivered at the national and regional levels by a range of organisations. These programmes do not provide a cohesive suite of programmes that fully address energy hardship. This section summarises the core problems that we are seeing in our communities relating to these programmes.

1. Duplication and overlap

The healthy homes sector works within a complicated set of interactions between Government, Local Government and those involved in community-based service delivery. Programmes and key policies currently run through Government agencies include:

- Warmer Kiwi Homes
- Healthy Housing Standard
- Te Puni Kokiri full retrofits and social service wrap around with Whanau Ora
- Healthy Housing Initiatives

These are all excellent programmes and CEN are advocating that they remain. However, many of these programmes overlap each other and with other programmes that are generated at the regional level by other funders and community organisations. There are opportunities to create a more cohesive approach between Government Ministries, regional funders, and service providers that will be both more efficient and more effective.

2. Gaps in Response

While there is significant resourcing and several wide-ranging programmes in this sector, there are some critical gaps that are impeding our collective efforts to remove or reduce energy hardship. These include:

a. There is no comprehensive coordination of these programmes. This means that funding, policy development, and community-based services can be poorly directed. This is closely related to the duplication and overlap issue mentioned above.
b. There is no comprehensive and commonly understood definition of energy hardship. This makes it very difficult to find alignment between Government policy and funding with regional and community-based initiatives. The result is delay, duplication, overlaps and gaps in services.
c. There is no framework for measuring the critically important outcomes of these programmes. Many of these outcomes are not being measured properly and so are not being fully valued when policy and funding decisions are made, especially when establishing the weighting attributes during for procurement processes. At the very least, these poorly understood outcomes include:
    - Improvement in health of the vulnerable families included in programmes (other than those measured by Otago University, based on discrete research projects).
    - Impact on short and medium-term household financial outcomes.
    - Nature and scale of community economic development.
    - Improvement in education outcomes for children in vulnerable families.

- Engagement in and knowledge of energy sector and issues.
- Impacts on wider social services delivery.
- Community resilience and wellbeing (a combination of many of the above).

d. There is no clear and well-resourced education strategy. We see this as a critical deliverable because it will ensure that knowledge can be shared in our communities in ways that are as effective as possible. We have attached in the appendices an overview of what an education strategy could look like.

3. Research

Government is currently supporting research through the Building Better Homes, Towns and Cities National Science Challenge …… Researchers have conducted studies into the validity of delivering wellbeing through home-based energy infrastructures, why community engagement and taking a partnership approach was to the success of the Christchurch CBD's rebuild, as well as analysis of existing community housing developments in Waimahia[1] Inlet in Weymouth, South Auckland, Tamaki[2] and Hobsonville Point. This proposal can implement the results of that work.

Design of Proposal

This proposal has been designed to achieve reduction and elimination of energy hardship to be addressed as quickly as possible, while allowing time for the solutions to the more complex issues to be developed collaboratively over time.

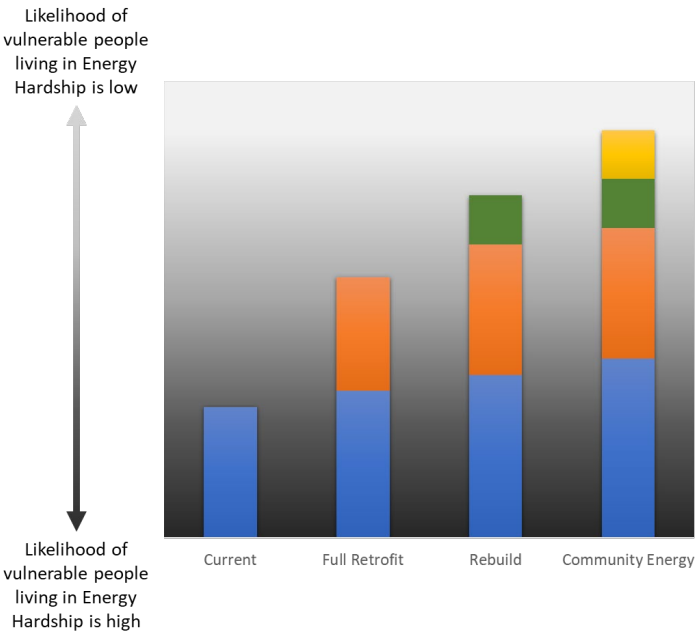
The Proposal uses a definition of energy hardship that has three core causes:

1. Low quality housing that is damp and cold, reducing householders' ability to keep their homes warm and dry and their families healthy. This is often exacerbated by lack of knowledge on how to run the home properly.
2. High energy retail prices and network costs to individual homes so that energy costs reduce the budget available for food, clothing, education, and other necessities.
3. Households are unable to pay for the energy that they need for heating, which compounds the effects of damp and cold housing.

When energy hardship is prevalent it has a range of negative impacts on households, communities, and their economic performance. As we transition to a low-carbon economy, it is essential that the solutions we build today enable those who may not be able to afford to participate in low-carbon society. The stages below are designed to alleviate all these three main causes.

[1] https://www.buildingbetter.nz/publications/urban_wellbeing/Witten_et_al_2018_Developing_community_Waimahia_initiative.pdf

[2] https://www.buildingbetter.nz/publications/urban_wellbeing/Henry_et_al_2019_urban_regeneration_social_cohesion_SOAC.pdf



Community Energy

- Owned by the community
- Renewable electricity generation
- Includes storage when economic (can include R&D)
- Demand management
- Microgrids over time, as required

Rebuild

- Small, well designed, high performance, low maintenance
- Replaces houses that cannot be retrofitted
- Built to above Building Code standard
- Climate change resilient

Full Retrofit

- Core infrastructure - piles, roofing, plumbing and drainage, wiring, windows, heating, ventilation
- All core appliances are energy efficient
- Full thermal envelope – insulation, curtains, air tightness, moisture barrier
- Strong connection to community-based wrap around services

Current Interventions

- Warmer Kiwi Homes
- Whanau Ora and other SD services
- Winter Fuel Payment
- Healthy Housing Standards
- Electricity Price Review – actions to be determined

Stage 1 (page 6) is about immediate action. This is about what the Government and supporting stakeholders (such as philanthropy and current service providers) can do, starting in July this year, that provides clear and valuable impacts within the next 12-18 months. These actions are being driven by the need to meet the many challenges that a Covid-19 induced recession will create. In the healthy housing sector, the impacts of this recession will be expressed immediately in the sharp increase in households who will not be able to afford to keep their homes warm and dry. We acknowledge and support the increased funding for Warmer Kiwi Homes to meet these needs as well.

The timing for Stages 2 and 3 (page 10) recognises that many of the issues discussed above cannot be addressed in the next year. Instead, many of the features of Stages 2 and 3, such as the need for genuine co-design and collaboration, represent a significant change in approach. This will emphasise work on how the stakeholders can best establish a partnership model that maximises the efficiency of and effectiveness of the funded programmes. Careful planning will be required to ensure that the appropriate governance and operational systems are in place.

Stages 2 and 3 also draw on the developments made in Stage 1, especially regarding development of the Impact Strategy and Framework, and are designed to support the work to pull together the actions across Government and Community sectors into a cohesive suite of interventions.

Stage 1 – Immediate Action – Retrofits in Four High-Priority Regions

The proposed actions in the first year are to focus on provision of full retrofits for homes assessed within the programme. This will focus on four regions where strong needs are known to exist and where members of Community Energy Network (CEN) and partner organisations already have expertise, systems, and capacity to manage this type of project. These projects will each target 100 – 200 homes in their region, with an indicative budget of up to $24m. The learning from this stage will be applied to develop the Implementation Plan for Stages 2 and 3.

High quality home assessments

These homes will be selected based on Hospital/PHO referrals and referrals from other community based social service providers such as Whanau Ora and budget advisors. Given the scale of the proposed pilots, these referral pathways will be more than adequate to provide a pipeline of high-priority assessments and retrofits.

The assessments will identify the requirements for retrofit and identify cases where a retrofit is not economically possible. When making this assessment, the cost of the retrofits will be included. In addition, the potential for each house needing future rebuilding and/or location to avoid coastal inundation and flooding will be assessed. To achieve whānau engagement, the assessment will include four critical areas:

a. House structure,
b. Energy use and requirements,
c. Household behaviours,
d. Household aspirations.

The assessment is not just observational and technical it is also conversational and relational. CEN and member organisations understand that this adds time and cost to assessments, but these are critical aspects to include if elimination of energy hardship is the long-term goal.

Retrofits

Homes are assessed and benchmarked against an agreed national standard. In the first instance, this will be NZ Green Building Council's HomeFit standard. The definition of energy hardship currently in development by MBIE - based on recommendations from the Electricity Price Review – can also be used when it is available.

Investments in the house structure and heating appliances would include the following:

- Insulated to *at least* current building code requirements for ceilings, underfloor and walls as well as high performing curtains.
- Have appropriate heat source(s), using the best heating method for each home, that ensures the entire home can maintain at least 18 degrees, at an affordable cost, throughout the year.
- All core/critical appliances and water systems, including water heating, are cost and resource efficient. That is, the cost of using these essential services does not put the household into energy hardship.
- All electrical and water systems are upgraded to at least meet the Building Code.
- House is weather tight and fit for purpose. This includes guttering, downpipes, and drainage.
- Effective ventilation system as defined by the Homefit Standard and/or Healthy Housing Standard.

Retrofits that include the above requirements will cost an average of $20,000-$30,000 per home for those that have moderate retrofit requirements through to $60,000-70,000 per home in high-need communities.

Retrofits can leverage the funding already available through Warmer Kiwi Homes so that insulation and heating costs will already be covered. We note that CEN members in some communities, have needed to 'walk away' from up to 30% of the homes assessed for Warmer Kiwi Homes subsidies because other issues with the home (such as a leaky roof) would need to be fixed first, and funding has not been available for this.

It is intended that Stage I will deliver these outcomes:

1. The targeted households have homes that can affordably be kept warm, dry and free of mould. This reduces the incident rate of housing-related hospital admissions.
2. Practical evidence that community members develop trades skills and take up the employment opportunities that are generated.
3. Practical evidence of communities becoming engaged in the processes of the Programme and thereby becoming stronger.
4. Quality data/measurement on the impact on employment, social wellbeing of participants and the local economy. All of these outcomes will be used within the Impact Framework.

Project Management

It is proposed that during Stage 1, EECA contracts with CEN with its 4 regional members to provide the immediate (starting within the next 2 months) full retrofit programme. CEN may involve other community-based service providers, such as Habitat for Humanity, to add value where possible. EECA, through the WKH programme, will channel the funding and support, such as utilisation of the GEM database and provision of external audits.

It is proposed that a working group made up of Government and community-based service providers is established. An informal 'Independent Energy Hardship Group' has been established over the last 3 months, which includes CEN, Habitat for Humanity, BRANZ, ERANZ, Salvation Army and Fincap. Members of this group, alongside Government representatives, could be considered to provide oversight. This oversight would include:

a. Nature of community and whanau engagement
b. Quality and reporting of home assessments
c. Retrofit processes relating to building, plumbing, electrical and insulation services.
d. Provision of appropriate community education resources to ensure homeowners/renters understand how to use their homes efficiently and effectively, including how to maintain newly retrofitted or built homes in the long term.
e. Ensuring people are on the best energy plan for their needs – working directly with energy retailers.
f. Working as closely as possible with other community support services to ensure that the cost of energy requirements can be met by households.

In support of CEN's proposed role in the Programme its noted that its members have retrofitted (mostly insulation and heating) over 120,000 homes and assessed well over 300,000 homes in the last 15 years. CEN is also a founding partner, alongside Beacon Pathways and Toimata (Enviroschools), of the Home Performance Advice training programme – the only training programme available in this sector in New Zealand. CEN and its members have extensive networks

that include EECA, MBIE, MHUD, Otago University's He Kainga Oranga, BRANZ, the Eco Design Advisor service, DHBs, PHOs, Fincap, Salvation Army, Habitat for Humanity, ERANZ, regional and national philanthropy, Ekos, Zero Waste Network, Environment Hubs Aotearoa and other social and community enterprises.

Impact Strategy and Framework

As Stage 1 progresses, a full impact strategy and framework will be developed for application in Stage 2. The process will be iterative, with input from the communities influencing how aspects of the strategy and framework are developed and used. This approach has been used by the Ākina Foundation, within programmes such as their DIA partnership (Social Enterprise Sector Development Programme), with Kainga Ora, Hutt City Council and across Ākina's social procurement programme, 'fwd:'. It is critical that the Maori organisations are involved develop the aspects of an impact framework that is right for them.

CEN proposes that an expert panel be established to oversee the development of the impact strategy and framework(s). This panel would include Government staff, experts from the healthy housing and social housing sectors, and the energy sector. It is envisaged that most of the panel would be made of people who are in organisations that are partners in this programme.

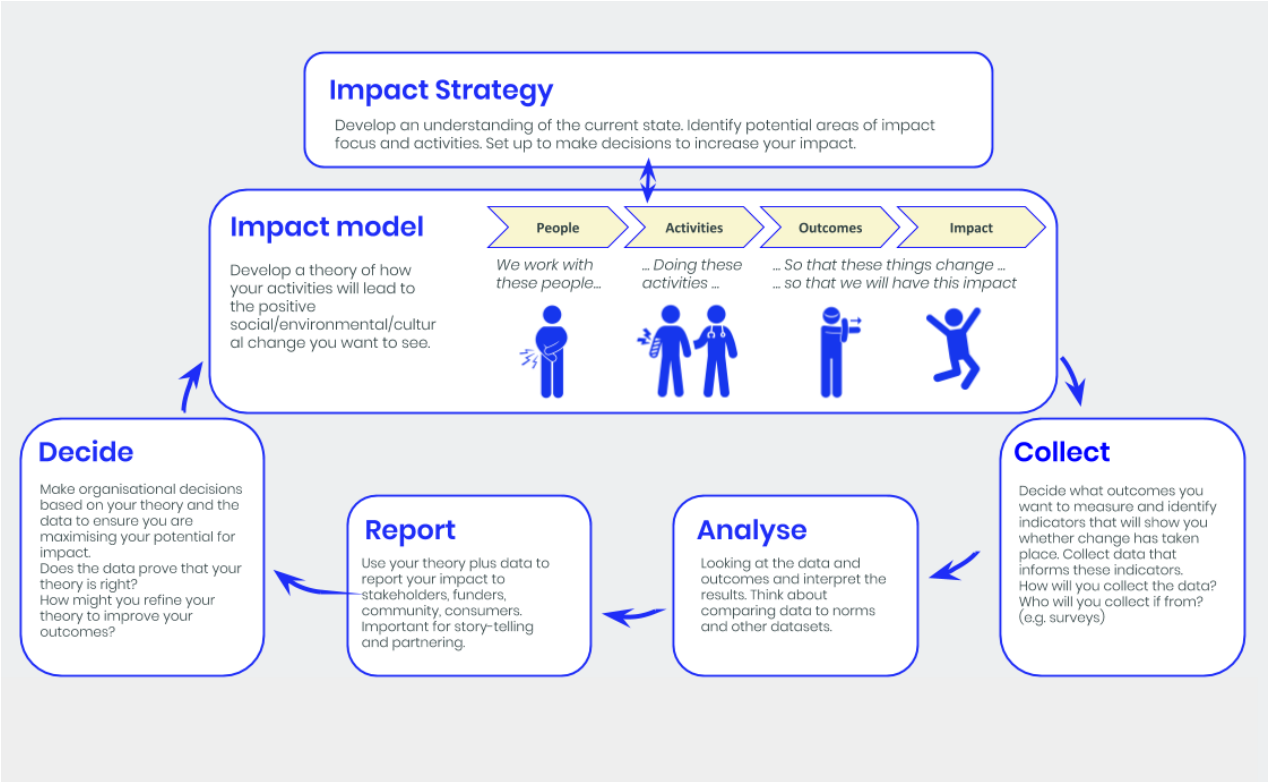
The Impact Strategy and Framework will be developed, tested, and improved throughout the Programme, based on global best practice. This approach has been taken because it is critical that the Programme can evolve as we learn that the priorities for outcomes have shifted, rather than having a process locked in at the start.

Where possible, the Impact Strategy and Framework will be aligned to the Living Standards Framework used by the Government to set Wellbeing Budget(s) and the Sustainable Development Goals. These will include quantitative and qualitative measures of impact.

The process of developing the strategy will help to articulate the objectives from an impact perspective; to refine its focus; and usually to generate new insights and opportunities. A clear Impact Strategy can also help to excite and motivate partners and stakeholders and increase the likelihood of achieving collective impact.

The process of developing an Impact Strategy involves learning what works best to achieve positive impact, including drawing on existing evidence; understanding which impact should be pursued through consultation with stakeholders; and developing an impact model or framework that represents the hypothesis of activities will create positive change.

The following diagram shows how the components of an impact strategy and impact model fit together:



This impact approach will provide robust and appropriate measures of success. This framework will include a systemic approach for monitoring and reporting on the impact of the retrofits, home replacements, education, and renewable energy installations. The value of this type of framework has also been covered in the research under the Building Better Science Challenge[3]

This approach will allow quantitative and qualitative measures to be developed and applied, potentially including:

1. Home sensors – measuring the temperature and humidity of a home every 10min. These systems also allow for education opportunities if the home occupier has a smart phone. This data can be cross referenced with energy use to determine the efficiency with which the home is using energy to achieve heating and ventilation requirements.
2. Financial impact:
    a. On homeowners or renters who have benefited from any part of the programme.
    b. Through the multiplier effect of funds invested directly into the community.
3. A self-assessment from community members before and after the programme that includes confidence in being able to manage and operate the home effectively.
4. Carbon footprint. We note that overall energy use may increase initially, as people are able to afford enough energy to achieve the appropriate heat levels, but this will be offset by improved efficiency of energy use and access to more renewable energy.
5. A large number of local people employed in new work over an extended period. There will be substantial employment created from this programme over a broad range of skills, including:

[3] https://www.buildingbetter.nz/publications/urban_wellbeing/Yates_et_al_2019_whanake_mai_te_ara_hiko_think_piece.pdf

g. Social engagement and consultation with local homes and communities
h. Management and Administration
i. Assessment, scoping, and audits
j. Semi-skilled trades employment
k. All building and associated trades
l. Apprenticeships in all building trades
m. Ongoing Social Services engagement and training
n. Design and build of new homes
o. Establishment and build of renewable energy installation

These measures will enable assessment of the effectiveness of the Programme.

Stage 2 – National Roll-out of Retrofits and Pilot Rebuilds

The key features of Stage 2 are:

1. The roll out of the retrofit work, begun in Stage 1, to all regions.
2. Implementation of the pilot to begin building new, climate-safe homes in the cases that were identified in Stage 1 as being too expensive to retrofit.

Rebuilds

High-need communities have many houses for which retrofitting is not feasible. In these situations, rebuild options will be considered. The criteria and process for making all recommendations to remove and build rather than retrofit must be set at the local level.

Implementation would depend on each homeowner agreeing to removal of the unhealthy home and replacement with a high-performance house. Where possible, this cost of the new home would be funded, either partially or in full, through building at least one other new dwelling on the property, for sale or rent (in the social housing market). A high-performance replacement house would:

a. Be at or close to passive housing standards so heating and ventilation costs are minimal, or potentially not required at all. This follows international *standard* practice.
b. Have fresh, grey, and black water systems that are fit for purpose and enhance individual home and community response to drought/flood events.
c. Use materials are high quality. Low waste and locally sourced where possible – especially engineered wood products.
d. Be low maintenance and low overall cost over the lifetime of the home.

Stage 3 – The Full Package

Stage 3 includes all the features of Stages 1 and 2: full retrofits are ongoing and homes that cannot be retrofitted economically are replaced by well-designed and high-quality homes. Stage 3 introduces the development of community energy infrastructure. It is appropriate that homes are retrofitted to be as energy efficient and as effective as possible and/or replaced before there is investment in energy generation.

As described in the Accelerating Renewables Discussion Paper, there is no recognisable community energy sector in New Zealand yet. If it is agreed that this sector should be supported to develop, then this will take time, and will coincide well with Stage 3 of this proposal. That said, it may be possible, in the short to medium term, to generate a small number of exemplar pilots that showcase

how community energy projects can be developed in communities. Projects already being planned, and these may be appropriate for this purpose.

Community Energy

Community-owned renewable energy generation and storage can be developed at the rooftop and/or land based solar systems or wind turbines) and storage. This could enable communities to provide specified households with cheaper energy through using revenue from selling the energy into wholesale market. It would also provide funds for each community for further investment in retrofits. Community energy initiatives will be project-managed by CEN.

The core features of the model for communities to benefit from local distributed energy generation and storage technologies include:

a. Development of community enterprises that establish and operate renewable (wind and solar) power generation between 1MW and 10MW capacity. Net revenue would be spent on community development projects that increase energy security and grid resilience. CEN and partners can oversee the establishment of these farms by community organisations. The regional electricity distributor would usually be closely involved.
b. PV installations hosted on large roofs in the community, such as schools, halls, churches, supermarkets, and industrial buildings. If owned or leased by the community, these installations would operate in a similar way to the solar farm concept.
c. Residential homeowners could also participate through engaging in the peer to peer trading system offered by some retailers. This approach allows the residential generators of electricity to sell directly to their neighbours.

Community Leadership and Enterprise Training

CEN's experience is that it is vital for a community organisation with suitable capabilities to lead and manage the local work programmes. In many regions, these organisations will be CEN members. During Stage 2 when rolling out into other regions, CEN will work with communities to identify a local lead organisation and then support them to provide the necessary services.

All community organisations in these management roles will need robust skills and capacity for operational management, project management, impact management and financial management. CEN will oversee the enterprise training, coaching, and development of the skills that they require. It is possible that the Ākina Foundation could be the deliverer of these training and development services, especially regarding impact management.

CEN is also able to arrange mentoring and ongoing guidance to local provider organisations that are aligned with the services required in the communities. Other organisations, such as Habitat for Humanity, could also be brought in to provide guidance.

CEN's members have found that utilising combinations of local service providers (social engagement, skilled and semi-skilled trades) have achieved a high level of community engagement and support for the households involved. This ensures that we do not only improve the physical quality of the home but also achieve long term behaviour change of occupants. A positive programme of this nature changes long term attitudes to all who participate, including funders, Government ministry staff, sponsors, retrofit staff and home occupants. This style of project management delivers ongoing cost savings and local economic benefit in the long term.

Indicative Investment in CEN and partner delivery of Stage 1

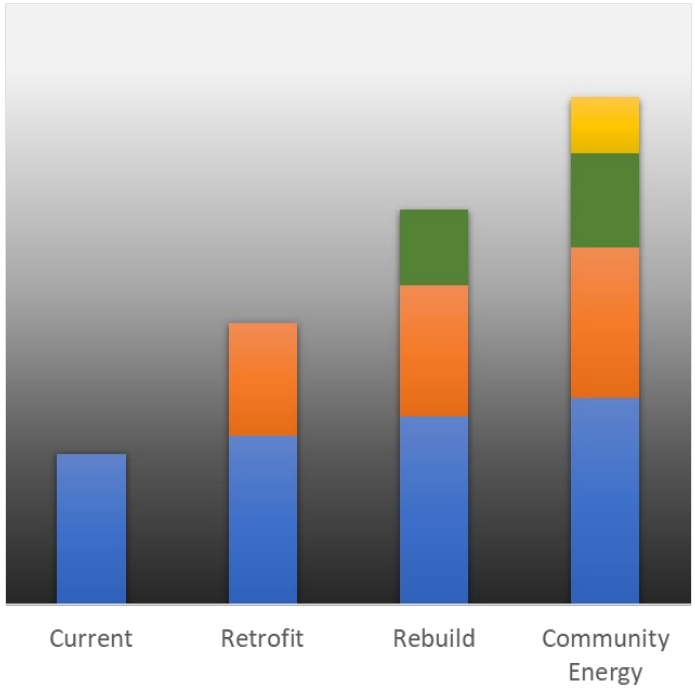
	Cost
Retrofits – estimate of $30k per home[1]	$18m
Community education – estimate of 0.5 FTE/region[2]	$400,000
Impact strategy and framework	300,000
Project management – 1FTE/region, 1.5 FTE CEN[3]	$2m
Total	**$21.7m**

Notes

1. Average cost for retrofits for 150 homes in each of 4 regions. There will be communities where the average cost will be considerably higher based on needs. Where this is the case, other funding options will be explored and may include regional philanthropy and/or low or no interest loans from a bank. Assessments of around $800-1000/home are covered within this cost.
2. Includes community workshops (max 20 people) and the development of maintenance plans
3. This line also includes enterprise training, mentoring and IT systems for data collection/reporting.

Appendices

1. Summary of key features of each stage of proposal



Community Energy

- Pilots to include at least solar and wind generation, starting within 1-2 years
- At least 5 community energy projects completed in next 3-4 years as model exemplars
- Assessed against Impact Framework using Living standards Framework
- Strong response to, and leadership of, the actions to transition to a 'Just' Low Carbon Economy

Rebuild

- Pilot to include 4 regions, starting 1 year after retrofit programme
- At least 15 homes rebuilt
- Using Beacon Pathways (theoretical) and Habitat for Humanity (practical) models
- Link into Just Transition to Low Carbon Economy and local government actions

Full Retrofit

- Pilot to include 4 regions, starting immediately and at least 300 homes completed in 18-24 months
- Using current programmes already underway – Warmer Kiwi Homes and Te Puni Kokiri funded programme as basis for design
- Includes development of Impact Strategy and Framework – used in decision making process regarding roll out to other regions

Current Interventions

- All current policy and funding continue as planned
- Confirm actions under the Electricity Price Review recommendations
- These interventions are informed by Impact Framework, using the Living Standards Framework as the model
- Both the EPR response and knowledge gained from Impact Framework development to improve impact of core Government interventions over time

2. Summary of Healthy Housing Education Programme

Background

CEN has been in discussions with MBIE, MHUD/Tenancy Services and EECA over the last few years to support good policy decisions regarding the changes to the RTA, the energy Price Review, supporting and growing the reach of programmes such as Warmer Kiwi Homes and the development of the HHGA and resulting regulations/standards. Throughout this period, we have been consistent with our message that our communities need deep engagement and a properly resourced education programme to support these policies and funding programmes if they are going to have the best outcomes.

We have noted that while communication campaigns have been launched on a regular basis to support the above policies and funding, the outcomes have been mixed (from our point of view). A case in point being the very slow uptake from landlords when they had access to the WKH subsidy. The below highlights what we think are the key features of an effective education programme in our sector.

Purpose

The purpose of an education programme is to:

- Ensure that all homeowners, tenants, and property managers understand their responsibilities and opportunities to influence the performance of their homes.
- Minimise the occurrence of energy hardship – especially where this hardship can be minimised through behavior change and accessing subsidies.
- To ensure that the 'healthy housing' sector has the capacity to meet the requirements of all stakeholders and feedback to Government to support good policy decisions.

This programme should be designed to have a timeline of at least 5 years, reviewed annually. The successful engagement and education of the stakeholders below are core to meeting the purposes above.

1. Experts

These experts lead the healthy home conversation in each region. Their knowledge and reach into their communities allow them to provide answers to most, if not all, questions regarding how to make a home healthy, including both structural and behavioural requirements. These people can perform in house assessments, but their core value is through:

- Running community workshops
- Mentoring/coaching advocates (see below) and other professionals in or closely connected to the sector.
- Supporting good policy and funding decisions made at the regional or local level (through Council and philanthropy for example).

Noted that there may be some elements to energy hardship issues, such as affordability for example, that are outside their core expertise, but they have access to other people who can provide these types of expertise (in this case, budget advisors).

Examples of these experts currently include Eco Design Advisor service (just 7 councils employ an EDA at present), and Home Performance Advisor (level 2) trained home assessors. These experts are a very small group in New Zealand currently.

To develop this expert base, the education programme should focus on:

- Expanding the capacity of this group of experts – we need significantly more EDAs and Level 2 trained HPA assessors to ensure that all communities are well covered.
    - Investment in the HPA programme to expand the reach and depth, and
    - Supporting the development of the EDA service.
- Supporting this group through opportunities for professional development.

2. Advocates

These people work with or in organisations that are closely connected to their communities. Examples include FinCap budget advisors, Salvation Army, District Health Nurses, Plunket, and staff in Tenancy Services/HUD/Kainga Ora. In our view, all real estate agents and property managers should be trained to this level.

Advocates need to understand the basics, which include:

- Can identify an unhealthy home when they are in one.
- Understand the core requirements for a home to be healthy, including behavioural and structural components.
- Understand the priorities around what can be addressed quickly and what will need time/resourcing.
- Be able to advocate for the homeowner, tenant, and/or landlord when talking to any organisation that is providing support for that household.

Type of education that should be available:

- 'Community' focused HPA courses (half day version of the HPA Level 1).
- Mentoring from the local Healthy Home experts.
- Regular workshops that include networking opportunities with other community organisations involved in supporting the people in these households.
- Noted that ERANZ are supporting the development of the EnergyMate programme, which is pitched at this level. This programme should be grown significantly.

3. Homeowners, Tenants and Landlords

These people are the primary beneficiaries. They are by far the biggest group and will be interacting with the regional experts and advocates in a variety of ways. Each group will find value in different aspects of this programme. They include but are not limited to the below.

a. The landlords and homeowners will realise value through:
    - Keeping themselves and their families/tenants healthy while saving money in energy use and maintenance.
    - Having tenants and family who understand how to keep the home warm and dry and thereby protecting their investment.
    - Understanding their legal responsibilities.

b. The tenant will realise value through:

- Being able to stay healthy.
- Minimising or mitigating energy hardship issues (financial and health).
- Having a better relationship with landlord leading to longer and more stable tenancy.

Type of education that should be available:

- Regular locally run workshops, run/facilitated by local experts
- Face to face education during inhouse assessments and when working with advocate agencies.
- Standardised information/resources that provide all aspects of what is required for a warm dry house. This includes some 'myth busting' aspects and where to find the advocates and experts above in each community.

3. Sustainable Development Goals

SDG emphasis	Our focus	Description
SDG 3: Ensure healthy lives and promote well-being for all at all ages	Homes that are warm, dry and safe for whanau.	Homes are retrofitted or rebuilt while education and support for whanau is provided to maximise impact
SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	Energy efficiency to reduce demand and renewable generation to future proof homes in our changing climate.	Work with technical partners to install renewable generation, smart appliances and provision of smart grid services.
SDG 8: Full and productive employment and decent work for all	Regional employment opportunities.	Community members develop trades skills and permanent employment opportunities.
SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Poor quality housing locks our community into the past. Our focus is to build back better, using renewable and local technology.	Employ strategies as needed for full house retrofit; new climate safe homes; home energy management systems.
SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable	Elimination or reduction of energy hardship to improve health and wellbeing outcomes.	Comprehensive retrofit programmes alongside rebuild and new build of climate safe homes.
SDG 13: Take urgent action to combat climate change and its impacts	Our most vulnerable population are in poor quality homes and are less resilient to climate change impacts.	Energy literate communities: replacement of poor-quality homes with climate safe homes suited to our changing climate.
SDG 17: Partnership for sustainable development	To work collaboratively with partners for greater reach and impact.	The project includes diverse partners working collaboratively at the national and regional levels with housing, energy, waste, and community values as core.

4. Climate Safe House

This pilot home was developed by Blueskin Resilient Community Trust and has been built in Blueskin Bay, just North of Dunedin. The home is 60m$_2$ and designed to be very energy, thermally and water efficient as well as transportable if climate change impacts mean the location is no longer safe to live in. It includes components that are prefabricated, and the entire home took only 7.5 weeks to build. This home replaced another dwelling on the property that was completely rotten and uninsurable. Homes like this are proposed to be part of the demolish and rebuild stream of work. Click here for more details.

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5. Healthy Homes Tai Tokerau

Healthy Homes Taitokerau, a partnership formed between He Iwi Kotahi Tatou Trust (Moerewa) and CBEC (Kaitaia) have been involved in the Warmer Kiwi Homes programme since the beginning of the EECA run programmes. In the current year they have outperformed all other contract holders, including commercial service providers. The second photo shows Haka Bristow receiving Foundation North's Tohu Autaia- Community Star Award from Governor General Dame Patsy Reddy. This award recognises Haka's leadership within the team and community as well as her exceptionally high standard of work. Click here for the summary of award recipients.