



1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240
New Zealand
P: +64 4 237 1170
branz.co.nz

BRANZ submission on Te Kore, Te Pō, Te Ao Marama | Energy Hardship: The challenges and a way forward – The Energy Hardship Expert Panel’s Discussion Paper.

28 April 2023

The Building Research Association of New Zealand (BRANZ) welcomes the opportunity to provide a submission on The Energy Hardship Expert Panel (Expert Panel’s) Discussion Paper Te Kore, Te Pō, Te Ao Marama | Energy Hardship: The challenges and a way forward.

BRANZ commends the Expert Panel on the work done to date and the Challenges and Strategies articulated in the Discussion Paper and we support the overall direction outlined. For the greatest success of the desired outcomes outlined in the paper and to significantly shift the dial on energy hardship, we urge for stronger recognition of the importance of the following in the Expert Panel’s final report:

1. We recognise that different agencies may have different information needs, which will require bespoke approaches to collection of data about energy hardship. However, we believe that more needs to be done to ensure there is consistency of data, information and methodology across all areas, to ensure system stakeholders are confidently making decisions that are based on the best data available.
2. There is stronger alignment of funding, programmes and outcomes across all initiatives regardless of which agency is leading the work.

We build on the above points in more detail throughout this submission. BRANZ is committed to supporting this important multi-sector and multi-agency work and we are available to discuss this submission with the panel, should they have any questions in response.

In this submission, we provide some background on BRANZ’s role generally and our work of relevance to the Discussion Paper specifically. This background aims to provide the contextual lens through which we provide more detailed perspectives on the Discussion Paper which is of relevance to our role and our work. We then provide our perspective specifically on the Challenges and Strategies outlined in the Discussion Paper of relevance to our knowledge and expertise. We do not respond to all aspects of the Discussion Paper, hence we have chosen to not use the submission form.

Requested submitter information is included in the Annex.

About BRANZ

BRANZ¹, is a multi-faceted, science led organisation. We use independent research, systems knowledge, and our broad networks to identify practical solutions that improve Aotearoa New Zealand's building system performance. BRANZ is driven by the knowledge that to thrive as a society, New Zealanders need a built environment that is safe, healthy and performs well. Our vision is to ***Challenge Aotearoa New Zealand to create a building system that delivers better outcomes for all.***

To do this, BRANZ cultivates strong relationships with industry, government and building users through collaboration and facilitating the sharing of insights, opportunities and ideas. These relationships underpin the range and depth of BRANZ's knowledge and ability to understand the linkages and interactions that influence the building system.

BRANZ undertakes and commissions research, funded by the Building Research Levy, which is both practical and drives positive building and construction system change. This work helps improve industry practices around the performance of buildings and how we use them, through to informing policy and legislation and all points in between.

Our work of relevance to this Discussion Paper

BRANZ has over 25 years' experience of research on the condition and performance of our housing stock (for example, through the House Condition Survey² and Household Energy End-use Project³). In more recent decades, our *Warmer, drier and healthier buildings*⁴ programme and prior to that the *WAVE (Weathertightness, Air quality and Ventilation Engineering*⁵) programme have focused research on understanding the issues, solutions and implementation pathways to ensure all New Zealanders can live affordably in a warm, dry healthy home. Outputs and findings from these research programmes have influenced and informed industry best practice, Building Code and compliance pathways; consumer education and interventions (such as Warm Up New Zealand); and policy and regulations, such as the Healthy Homes Standards for rentals.

¹ <https://www.branz.co.nz/>

² <https://www.branz.co.nz/healthy-homes-research/hcs/>

³ <https://www.branz.co.nz/environment-zero-carbon-research/heap2/heap/>

⁴ <https://www.branz.co.nz/healthy-homes-research/warmer-drier-healthier-buildings/>

⁵ <https://www.branz.co.nz/healthy-homes-research/warmer-drier-healthier-buildings/wave/>

Current issues contributing to energy hardship

With regard to the issues the Expert Panel has identified on page 10 of its Discussion Paper, we provide some comments on some issues below.

"a significant proportion of New Zealand's housing stock is damp, draughty and uninsulated..."

Our studies support this observation. BRANZ's national housing surveys and other research has consistently shown that too many New Zealand homes are cold and damp, are poorly or inadequately insulated and lack efficient heating⁶.

We also know living in poor quality housing directly impacts occupants' health and wellbeing, and findings from our latest national housing survey further evidences this⁷.

"there is minimal information about individual housing performance"

We recommend the panel rewords this issue to "there is a lack of consistent, robust and enduring information on housing performance". We make this recommendation because we believe that information is currently collected by a wide range of different agencies, but this is not necessarily done so in a way that is useable, accessible or informative to policy. Rather, aligned with our comments above, we think more can be done to ensure there is consistency of information collected and methodological approaches across agencies, non-governmental organisations and iwi. There is an opportunity for agencies to be resourced and work with others to ensure the information that they do collect can be used to inform policy.

We recommend the panel notes that agencies such as BRANZ and Stats NZ have routinely undertaken national surveys to provide critical evidence and insight into the performance of Aotearoa/New Zealand's housing stock, and conditions people are living in. These include:

- the BRANZ House Condition Survey⁸
- the Pilot Housing Survey⁹, and
- the Household Energy End-use Project (HEEP1¹⁰ and HEEP2¹¹ (in progress))
- the General Social Survey¹², and
- the Household Economic Survey¹³

The Stats NZ Housing in Aotearoa: 2020 report¹⁴ draws on several of these data sources.

⁶ For example see: White, V. & Jones, M. (2017). Warm, dry, healthy? Insights from the 2015 House Condition Survey on insulation, ventilation, heating and mould in New Zealand houses. BRANZ Study Report SR372. BRANZ Ltd. <https://www.branz.co.nz/pubs/research-reports/sr372/>; White, V. (2020). Assessing the condition of New Zealand housing: Survey methods and findings. BRANZ Study Report SR456. BRANZ Ltd. <https://www.branz.co.nz/pubs/research-reports/sr456-assessing-condition-new-zealand-housing-survey-methods-and-findings/>; and White, V., Ferguson, A., Goodyear, R., & Saville-Smith, K. (2021). The condition of owned and rented housing in Aotearoa New Zealand. New Zealand Population Review, 47, 108–144.

https://population.org.nz/wp-content/uploads/2021/08/White_etal_Condition_Owned_Rented_Housing.pdf

⁷ For example see: Jones, S. and White, V. (2023). Housing condition and occupant wellbeing. Findings from the Pilot Housing Survey and General Social Survey 2018/19. BRANZ Study Report SR482. BRANZ Ltd. https://d39d3mj7qio96p.cloudfront.net/media/documents/SR482_Housing_condition_and_occupant_wellbeing.pdf

⁸ See: <https://www.branz.co.nz/healthy-homes-research/hcs/>

⁹ See: <https://www.branz.co.nz/pubs/research-reports/sr456-assessing-condition-new-zealand-housing-survey-methods-and-findings/>

¹⁰ See: <https://www.branz.co.nz/environment-zero-carbon-research/heap2/heap/>

¹¹ See: <https://www.branz.co.nz/environment-zero-carbon-research/heap2/>

¹² See: <https://www.stats.govt.nz/information-releases/wellbeing-statistics-2021/>

¹³ See: <https://www.stats.govt.nz/news/statistics-from-the-household-economic-survey-for-the-year-ended-june-2022-will-be-published-on-23-march-2023/>

¹⁴ See: <https://www.stats.govt.nz/reports/housing-in-aotearoa-2020>

A collaborative, co-funded project undertaken by BRANZ, the Ministry of Business, Innovation and Employment (MBIE) and Stats NZ in 2018/19¹⁵ demonstrated the value-add of a cross-agency partnership approach to data collection. Building on the success of that collaboration, BRANZ, Stats NZ, MBIE and the New Zealand Green Building Council (NZGBC) are working together to deliver a second phase of the Household Energy End-use Project (HEEP2)¹⁶.

BRANZ is committed to continuing its role in this area as a trusted, impartial source of information on housing performance. We believe the greatest value and commitment to a long-term and enduring approach to collecting robust and representative data on our housing stock lies in a cross-agency collaboration. BRANZ has a project in progress called the '*Future of Housing Surveys*', which provides the foundation for engagement with key stakeholders, to develop a framework for such an approach. We welcome any opportunity to discuss and share further insight on this work with the Panel.

There is also a not to be missed opportunity with the Building for Climate Change Programme and associated proposed changes to the Building Act to develop methods and approaches to assessing housing performance, that can benefit the energy hardship programme. For example, proposed amendments to the Building Act to support New Zealand's climate change goals include changes that aim to give building owners and occupants a new tool to understand energy use and performance. This includes mandatory energy ratings for buildings. The details of an energy rating scheme are yet to be worked out but if extending to, and compatible with, all residential buildings, this could support efforts to address energy hardship as well. We encourage the Expert Panel to emphasise the value and role a national home energy rating scheme could play. BRANZ has undertaken research into Energy Performance Certificates (EPCs) and whilst this does highlight some potential unintended consequences which need to be considered carefully, it also shows the potential value in providing insights into the performance of our building stock, assisting with identifying poor performing dwellings and driving change. Our latest research (soon to be published) recommends the implementation of a national housing efficiency 'scorecard' assessment initiative, similar to, and building on the Government of Victoria, Australia's Residential Efficiency Scorecard¹⁷.

BRANZ has based the HEEP2 building survey on the Australian scorecard. Much of the data required in HEEP2 is also collected in a Scorecard assessment, and we saw value in aligning our approach with one that had been tried, tested and was proving successful. The Australian Scorecard team recently presented to an audience in New Zealand¹⁸. In this presentation, they demonstrated the value a programme like Scorecard can have in both driving change through targeted, tailored housing energy efficiency advice and interventions, and as a research tool, which provides robust data to government on the condition of housing, at scale. A key thing to note about the Scorecard approach is the requirement for assessors to be trained and accredited. We believe this is critical to the success of any data collection (training is a significant part of our housing surveys and HEEP2) and home energy efficiency programmes.

Finally on the topic of information on housing performance, there is also a wealth of information held at the local level, by those embedded within the community. A wide range of organisations routinely collect data on housing, for example through surveys, home energy checks, home visits, evaluation programmes, in-home monitoring etc. At present, organisations (BRANZ included) need to develop their own tools and approaches to data collection and evaluation. Whilst there must remain flexibility to ensure each organisation can meet its own needs, there is significant potential added value in striving for some consistency and/or provision of tools. This could help alleviate the burden on individual organisations, improve efficiency and cost-effectiveness, whilst also providing consistent

¹⁵ See: Assessing the condition of New Zealand housing: Survey methods and findings. BRANZ Study Report SR456. BRANZ Ltd. <https://www.branz.co.nz/pubs/research-reports/sr456-assessing-condition-new-zealand-housing-survey-methods-and-findings/>

¹⁶ See footnote 9

¹⁷ See: <https://www.energy.vic.gov.au/for-households/save-energy-and-money/residential-efficiency-scorecard>

¹⁸ See: https://www.youtube.com/watch?v=s791qf_cvF8

data and information that can inform our understanding of energy hardship across Aotearoa. Discussions through the Energy Wellbeing Evaluation Consortium – an informal cross-sector group formed in 2020 – show there is widespread appetite for and interest in more consistency of data and tools. We encourage the Expert Panel to reflect upon this opportunity and incorporate a recommendation into its final report that this be further explored, noting that robust evidence and data are essential for understanding the current environment; informing, implementing, and targeting effective interventions; and monitoring impact and change.

"new technologies and innovations are not always reaching those who would benefit most and do not have access to them"

Addressing climate change and reducing the carbon footprint of our housing stock to achieve our emission reduction goals has implications for energy hardship. For example, the phasing out of household gas in new and existing homes from 2030 and 2035 will likely mean more households will be reliant on electricity and other technologies, with significant increase in the use of heat pumps¹⁹. Decarbonisation, through a shift to new/alternative technologies and improvements in housing performance can (should) be an opportunity to also address energy hardship. For example, alleviating energy hardship and achieving energy justice aligns with one of the objectives of the Building for Climate Change programme on transforming operational efficiency to improve comfort, health and wellbeing. Taking a system wide, holistic view is important for identifying such linkages and avoiding possible conflicting outcomes or unintended consequences. We therefore strongly encourage the Expert Panel to recommend the energy hardship programme of work is delivered in alignment and collaboration with other parts of government and industry.

Wider programme of work

We acknowledge the Expert Panel's work is just one part of the government's wider response on energy, health and wellbeing. As noted above in relation to transition to zero carbon, we consider alignment and collaboration across all parts of the system is critical to the success of any energy hardship response. We note the Panel acknowledge the role housing quality policy has to play and this being the responsibility of the Ministry of Housing and Urban Development (HUD).

BRANZ research clearly evidences the impact poor housing condition has on occupant wellbeing. Housing quality is part and parcel of housing performance. In 2018/19 BRANZ, Stats NZ and MBIE collaborated to develop the Conceptual Framework for Housing Quality for Aotearoa.²⁰ Through this same collaboration, a national housing survey was undertaken to help address the data gap on housing quality and provide a baseline against which the (then new) Healthy Homes Standards could be assessed. This data is now available in the Integrate Data Infrastructure (IDI) and also held by HUD (and BRANZ). We support further collaboration between these agencies and MBIE to consider the role housing quality has to play in addressing energy hardship. This also links to the Discussion Document's Strategy HH2 (fund broader building repair and improvement work, which we support) and Strategy HH3 around strengthening the monitoring of the Healthy Homes Standards (HHS). A cross-agency commitment and collaboration to conducting national housing assessment surveys routinely could provide the data needed to monitor impact and change, inform future policy, as well as supporting MBIE/HUD in enforcing compliance with the standards.

¹⁹ See:

https://d39d3mj7qio96p.cloudfront.net/media/documents/SR478_Housing_stock_strategies_responding_to_New_Zealands_2050_carbon_target.pdf

²⁰ See: <https://www.stats.govt.nz/methods/framework-for-housing-quality>

Response to specific Challenges and Strategies proposed in the Discussion Paper

Challenge: A significant number of New Zealand homes require retrofit to bring them to a healthy standard of energy performance

Strategy HH1: Strengthen and expand Warmer Kiwi Homes (WKH) programme (measures, reach and funding) so more low-income New Zealanders are supported into energy wellbeing

BRANZ supports this proposed strategy. As outlined above, BRANZ research consistently highlights many of our homes perform poorly. We support extending measures beyond roof and underfloor insulation and heating, as for many New Zealanders these measures alone will not be enough to ensure a warm, dry healthy home and/or affordable energy bills. We encourage any programme to consider a 'deep retrofit' approach (e.g., retrofitting beyond Code-minimum and aligning with the Building for Climate Change programme, taking a long-term view of energy performance and resilience). We'd also encourage the Panel to recommend any strengthening and/or expansion of a national retrofit programme is codesigned and developed with organisations and iwi who have the insight into and understanding of different householder/community needs, as well as with building/industry experts.

Challenge: The full benefits of energy efficiency improvements cannot be accessed unless a home is weathertight and reasonable quality

Strategy HH2: Fund broader building repair and improvement work to support home retrofit programmes

BRANZ supports this proposed strategy. As well as needing to overcome the barrier to ensure eligible households can access retrofit programmes, our housing surveys show a significant proportion of dwellings are in such a poor state of repair (e.g. roofing and wall cladding in need of major repair or maintenance) and this will impact thermal performance and comfort²¹.

Knowledge and navigation Kete

Challenge: Stronger coordination and collaboration across providers of energy hardship programmes and support services is needed to improve effectiveness and coverage

Strategy KN1: Establish and fund a nation-wide "energy wellbeing sector network" to facilitate and support enhanced service integration and collaboration between local organisations and establish co-networks for Māori and Pacific practitioners

BRANZ supports this proposed strategy, and would welcome the opportunity to be part of such a network. In addition to the points noted by the Panel, we'd note benefits of a cross-sector energy wellbeing network would help ensure:

- Consistency, accuracy, science-base and alignment of programmes and support services
- Opportunities for collaboration, cofunding, codesign, data sharing are identified.

The Energy Wellbeing Evaluation Consortium could provide a starting point or help support the development of this network, noting that we agree it does need adequate resourcing and funding.

Challenge: There is a lack of widespread, easy access to trusted and informed community-based energy advisers, home assessors and service navigators

Strategy KN2: Strengthen and deliver energy wellbeing 'navigator' training (such as Home Performance Advisor), including Māori and Pacific energy wellbeing training wananga/programmes that are grounded in Te Ao Māori and Pacific worldviews

²¹ See footnote 7

Strategy KN3: Strengthen and extend MBIE’s Support for Energy Education in Communities (SEEC) programme, and ensure funding targeting and programme design recognise those groups over-represented in energy hardship such as Māori, Pacific peoples and tenants

BRANZ supports this proposed strategy. BRANZ cofounded the Eco-Design Advisor (EDA²²) network run by councils and continues to support this service through on-going professional development of EDAs. Rolling this scheme out to all councils would ensure householders throughout Aotearoa/New Zealand have equal opportunity to access the advice and expertise.

BRANZ also works closely with the Home Performance Advisor network (HPA)²³. As a science-based organisation, they provide an important link between research and householders/communities. BRANZ and EECA co-funded the HPA network to develop a new training programme in 2021, targeted at frontline/community workers. This course, called ‘Healthy Homes: making energy work for whānau’²⁴, was developed specifically in response to, and to help address, energy hardship. This training programme – which was codesigned with its end user target group – should be a key source of training, and could be made more widely accessible with additional funding support (e.g. to offer subsidised rates to community groups). HPA is a well-established programme. It is important that this work is built on, not duplicated and focussed on ensuring those delivering home performance advice can access (and do access) this training programme. This is critical to ensuring advice is consistent, robust and grounded in science, yet delivered by trusted voices.

²² <https://www.ecodesignadvisor.org.nz/>

²³ See: <https://homeperformanceadvisor.org.nz/>

²⁴ <https://hpa.arlo.co/w/courses/8-healthy-homes-making-energy-work-for-wh%C4%81nau>

References

- Jaques, R. & Bullen, L. (2023) Housing stock strategies responding to New Zealand's 2050 carbon target. Study Report SR478. BRANZ Ltd. Wellington.
https://d39d3mj7qio96p.cloudfront.net/media/documents/SR478_Housing_stock_strategies_responding_to_New_Zealands_2050_carbon_target.pdf
- Jones, S. and White, V. (2023). *Housing condition and occupant wellbeing. Findings from the Pilot Housing Survey and General Social Survey 2018/19*. BRANZ Study Report SR482. BRANZ Ltd.
https://d39d3mj7qio96p.cloudfront.net/media/documents/SR482_Housing_condition_and_occupant_wellbeing.pdf
- Muirden, A. (2023). The key to improve the energy performance of homes: Residential Efficiency Scorecard, Australia. Presentation to the Otago Energy Research Centre seminar series, 29 March 2023. <https://www.otago.ac.nz/oerc/news/seminars/index.html> Recording of presentation available here: https://www.youtube.com/watch?v=s791qf_cvF8
- Residential Efficiency Scorecard Australia <https://www.energy.vic.gov.au/for-households/save-energy-and-money/residential-efficiency-scorecard>.
- Stats NZ, (2020). Housing in Aotearoa: 2020. Updated 2021. Retrieved from www.stats.govt.nz
- White, V. & Jones, M. (2017). Warm, dry, healthy? Insights from the 2015 House Condition Survey on insulation, ventilation, heating and mould in New Zealand houses. BRANZ Study Report SR372. BRANZ Ltd. <https://www.branz.co.nz/pubs/research-reports/sr372/>
- White, V. (2020). Assessing the condition of New Zealand housing: Survey methods and findings. BRANZ Study Report SR456. BRANZ Ltd. <https://www.branz.co.nz/pubs/research-reports/sr456-assessing-condition-new-zealand-housing-survey-methods-and-findings/>
- White, V., Ferguson, A., Goodyear, R., & Saville-Smith, K. (2021). The condition of owned and rented housing in Aotearoa New Zealand. *New Zealand Population Review*, 47, 108–144.
https://population.org.nz/wp-content/uploads/2021/08/White_etal_Condition_Owned_Rented_Housing.pdf

Annex: Submission information

(Please note we require responses to all questions marked with an *)

Personal details and privacy	
Q1.	I have read and understand the Privacy Statement above. Please tick Yes if you wish to continue* [To check the boxes above: Double click on box, then select 'checked'] <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Q2.	What is your name?* Chris Litten
Q3.	Do you consent to your name being published with your submission?* <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Q4.	What is your email address? Please note this will not be published with your submission.* Chris.Litten@branz.co.nz
Q5.	Are you submitting as an individual or on behalf of an organisation?* <input type="checkbox"/> Individual (skip to Q8) <input checked="" type="checkbox"/> Organisation
Q6.	If on behalf of an organisation, we require confirmation you are authorised to make a submission on behalf of this organisation. <input checked="" type="checkbox"/> Yes, I am authorised to make a submission on behalf of my organisation
Q7.	If you are submitting on behalf of an organisation, what is your organisation's name? Please note this will be published with your submission. Building Research Associated of New Zealand (BRANZ) Ltd.
Q8.	If you are submitting on behalf of an organisation, which of these best describes your organisation? Please tick one. <input type="checkbox"/> Iwi, hapū or Māori organisation <input type="checkbox"/> Energy retailer <input type="checkbox"/> Energy regulator <input type="checkbox"/> Energy distributor <input type="checkbox"/> Registered charity <input type="checkbox"/> Non-governmental organisation

- Local Government
- Central Government
- Academic/Research
- Other. Please describe:

Q9. I would like my submission or parts of my submission to be kept confidential.*

Yes

No

Q10. If you answered yes to Q9 above, please provide your reasons and grounds under [section 9 of the Official Information Act](#) that you believe apply, for consideration by MBIE.

Q11. If you answered yes to Q9 above, please confirm you will provide publishable versions of your submission in both Word and in PDF by emailing them to the MBIE secretariat at energyhardshipMBIE@mbie.govt.nz - clearly labelling both "for publication"

Yes

No