MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

COVERSHEET

Minister	Hon Chris Penk	**Portfolio**	Building and Construction
Title of Cabinet paper	Incentivising residential solar generation	**Date to be published**	September 2025

List of documents that have been proactively released		
Date	**Title**	**Author**
April 2025	Incentivising residential solar generation	Office of the Minister for Building and Construction
9 April 2025	Incentivising residential solar generation ECO-25-MIN-0054 Minute	Cabinet Office
April 2025	Regulatory Impact Statement: Incentivising residential solar generation	MBIE
August 2024	Energy Efficiency Requirements for Homes	Office of the Minister for Building and Construction
6 August 2024	Energy Efficiency Requirements for Homes EXP-24-MIN-0039 Minute	Cabinet Office
April 2025	Refocused climate work programme for building and construction	Office of the Minister for Building and Construction
9 April 2025	Refocused climate work programme for building and construction ECO-24-MIN-0312 Minute	Cabinet Office
14 August 2024	Briefing 2425-0569: Updating the building chapter of the First Emissions Reduction Plan to reflect your portfolio priorities	MBIE
18 September 2024	Briefing 2425-0886: Opportunities to include buildings in the Second Emissions Reduction Plan	MBIE

Information redacted **Yes**

Any information redacted in this document is redacted in accordance with MBIE's policy on Proactive Release and is labelled with the reason for redaction. This may include information that would be redacted if this information was requested under Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below. Where information has been withheld, no public interest has been identified that would outweigh the reasons for withholding it.

- Confidential Advice to Government
- Privacy of Natural Persons
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- Commercial Information

In Confidence

Office of the Minister of Building and Construction

Cabinet Economic Policy Committee

Energy efficiency requirements for homes

Proposal

1 This paper brings to Cabinet's attention concerns that have been raised with me around the recent "H1" Energy Efficiency changes to the Building Code and also seeks Cabinet approval to progress work to making it easier to retrofit insulation into existing homes.

Relation to government priorities

2 This relates to the Government's commitment to go for housing growth and tackle the housing affordability and supply crisis, as well as rebuilding the economy by reducing artificial barriers to construction activity.

Executive summary

3 As Minister of Building and Construction, I am focused on ensuring that building homes in New Zealand is quicker, more straightforward and affordable. The cost of building a house has increased by more than 40 per cent since 2019. Massive increases in construction costs have ruined the dream of home ownership for many young Kiwis.

4 Among other factors, an ever-increasing level of regulation has added to the delays, complexity and cost associated with building. Removing unjustifiable regulations – including those that are well intentioned but prove impracticable to implement – is crucial to reverse the trend of construction becoming a slower, more difficult and more expensive process.

5 I am bringing to Cabinet's attention significant concerns being expressed about recent changes to clause H1 Energy Efficiency (H1) of the Building Code. These came into force in November last year and required additional levels of insulation of roofs, walls, windows and floors. In some cases, these changes moved significantly beyond the level already required; for example, the previous requirement was that the windows of all new homes be double-glazed, whereas the new standards also now require thermally broken aluminium frames and heat reflective glass.

6 **Annex One** shows how the new requirements can be achieved using a prescriptive "schedule method" of compliance.

7 Since becoming Minister I have heard significant concerns that the recent H1 changes are increasing the upfront cost of building by amounts considerably above those originally anticipated. Hypothetical savings on future energy bills will not be realised by those unable to afford a home in the first instance.

8 Estimates of the real-world costs of H1 provided to me by a number of credible and experienced building practitioners have ranged from an additional $20,000 to $50,000 per new build.

9 MBIE has also fielded concerns over thermal and ventilation issues resulting from the new requirements, indicating that in some instances the changes have been counterproductive.

10 I have instructed my officials to investigate the sector's concerns with the current H1 settings, and they have begun engaging with building and construction sector stakeholders to understand the practical upfront costs of implementing these requirements.

11 MBIE will also undertake full cost benefit analysis using updated modelling. This will help to deliver a clear understanding of how the H1 changes have impacted the cost to build and how this has affected housing affordability, as well as the real-life impacts on power bills and energy savings for households.

12 In terms of process, any change to the Building Code falls under the responsibility of MBIE's chief executive who must follow section 29 of the Building Act 2004 which includes a requirement to consult with the sector on any proposed changes.

Striking the balance of energy efficiency and upfront costs.

13 There are clear benefits to improving the energy efficiency of homes (including lower power bills and healthcare costs), but this needs to be done in a way that does not add unreasonable costs at a time when households are already facing significant cost pressures. For many families, an additional $20,000 of cost could be the difference between purchasing a home and remaining in a rental property. It is worth noting that borrowing an additional $20,000 in a home loan will mean an individual pay around approximately $50,000 (depending on interest rates) across the 30 years of their mortgage.

14 When MBIE originally proposed these changes, they estimated that the additional requirements would increase the cost of home by between $9,000 to $12,000 dollars. This calculation has been challenged by the sector and was the basis on which strong support was indicated for the proposed changes. It was claimed that the energy required to heat new homes would be reduced by up to 40 per cent. I have not heard any feedback on whether this estimate has proven accurate.

15 In addition to the range of views I have heard about the real-world effect of the recent H1 changes, observations were also provided by industry participants in MBIE's 2022 and 2023 State of the Building and Construction Sector surveys.[1] Please refer to **Annex Two**. Some key concerns included:

15.1 The impact of these changes on the upfront cost to build;

15.2 Whether these changes are justified for warmer parts of New Zealand such as Northland;

[1] https://www.mbie.govt.nz/building-and-energy/building/building-system-insights-programme/state-of-the-building-and-construction-sector

15.3 Thermal and ventilation issues;

15.4 Preventing homeowners from choosing what standard they would like their home to be built to;

15.5 The reliance on the schedule method versus the modelling method of demonstrating compliance with H1.

16 I am deeply concerned that the H1 settings are adding an unreasonable additional cost onto homes at a time when Kiwis are facing significant cost pressures.

17 I am also mindful that parts of the sector have made significant investments to adjust their products, processes, or facilities to meet the new H1 settings. This includes feedback that I have heard from insulation and window manufacturers, concrete suppliers, and glass importers. These investments could mean additional costs are already baked into the system.

18 I have drawn all these issues to the attention of my MBIE officials, who have initiated engagement with a cross-section of key industry stakeholders to better understand the experience of implementing H1. This includes representatives of key industry associations, group home builders, building product merchants, building consent authorities, and building research. I look forward to hearing the results of this feedback soon.

19 Feedback from this engagement will enable MBIE to develop a more detailed understanding of potential issues with the H1 settings and help to inform any potential changes to address the concerns raised.

20 In addition, MBIE will undertake cost benefit analysis to ensure there is a clear picture of the impacts on the cost of building, and work to understand how this affects housing affordability. MBIE is also aware there is significant evidence linking improved insulation with improved health and wellbeing outcomes and whole-of-life energy savings. MBIE will seek to quantify this and include it in the analysis. A potential review of the H1 settings may result in a recommendation that the new requirements be adjusted, for example by:

20.1 greater differentiation of requirements in different climate zones within New Zealand, noting that thermal modelling should still be able to demonstrate that reaching the WHO standard for indoor temperature (18 degrees) is reasonably easy to achieve;

20.2 amending the schedule method of H1 compliance, for example so that concrete slab-on-ground floors need not require insulation;

20.3 removing the schedule method entirely but ensuring that it is reasonably practicable to demonstrate compliance using an alternative method. (The modelling and calculation methods, for example, allows a greater degree of nuance than the schedule method as design features can be taken into account.)

MBIE's chief executive may decide to make changes to current H1 settings

21 MBIE's chief executive is responsible for making decisions about energy efficiency settings in the acceptable solutions and verification methods.

22 I expect that this work will attract significant, and potentially controversial public and sector interest, based on the recent media interest in H1, including to the extent that some in the sector have now adjusted to the new requirements.

23 The chief executive is required to follow the process set out in section 29 of the Building Act 2004. This will include:

23.1 identifying all reasonably practicable options;

23.2 analysing the impacts, benefits, and costs of these options; and

23.3 publicly consulting on options for proposed changes and considering submissions.

24 Should MBIE proceed with proposals to make changes that will address the concerns that have been raised with me, this could be completed by the end of the first quarter of 2025. I intend to update Cabinet on the outcomes of any such review.

25 Any changes to the H1 settings may have implications for the currency and sufficiency of the first Emissions Reduction Plan (ERP1). This is because the H1 changes were an action in ERP1 and they were expected to contribute 0.12 Mt CO2-e to the first emissions budget. My officials will work with the Ministry for the Environment to understand any potential implications as needed.

Making it easier to retrofit existing homes.

26 Public discourse about the negative effects of under-insulated housing almost invariably focuses on existing housing stock from a period in New Zealand's history where no insulation was required at all.

27 Around half of all homes in New Zealand were built at least 50 years ago, prior to insulation being required (from 1978 onwards). It is these homes, rather than those built within the past decade or so, that are often cold, damp and contribute to poor health outcomes and have low energy efficiency.

28 Improving this older housing stock is an entirely separate matter to the question of whether the recent H1 regulatory changes should be retained in their current form.

29 One barrier to retrofitting insulation to existing homes is cost, part of which is due to regulatory requirements. Addressing these will make it easier to improve existing homes from a relatively low standard and with this benefits such as lower energy bills, better health outcomes and reduced emissions. This would also not detract from increasing the supply of new homes being built to modern insultation standards.

30 For example, it is currently the case that a building consent is required to install insulation into a cavity of an external wall, due to concerns over moisture and

fire/electrical safety. The requirement to have a building consent for this work can add between $1,000 – $2,000 to a project (depending on consent fees), which in many cases may make the retrofitting work less likely to occur.

31 I propose progressing work on making it easier to retrofit existing homes. This will include working with ministerial colleagues and targeted engagement with industry stakeholders to ensure any changes are appropriate.

Cost-of-living Implications

32 There are no cost-of-living implications as a result of this Cabinet paper, although decisions that flow from consultation may have such implications.

Financial Implications

33 There are no financial implications as a result of this Cabinet paper.

Legislative Implications

34 There are no legislative implications as a result of this Cabinet paper.

Impact Analysis

Regulatory Impact Statement

35 There are no regulatory proposals in this paper, therefore Cabinet's impact analysis requirements do not apply.

Climate Implications of Policy Assessment

36 There are no climate implications as a result of this paper however decisions that flow from consultation may have climate implications.

Population Implications

37 There are no population implications as a result of this paper.

Human Rights

38 There are no Human Rights implications arising from the proposals in this paper.

Use of external Resources

39 No external resources were used directly in the preparation of this paper.

Consultation

40 The following agencies have been consulted: Department of Prime Minister and Cabinet, Ministry of Housing and Urban Development, Ministry for the Environment, Ministry of Health, Ministry for Regulation, Treasury.

Communications

41 I do not intend to make any press releases following consideration of this paper.

Proactive Release

42 This paper will be proactively released within 30 business days of decisions being confirmed by Cabinet, in accordance with the Cabinet Office Circular CO (18)4, with any appropriate redactions.

Recommendations

The Minister for Building and Construction recommends that the Cabinet Economic Policy Committee:

1 **note** Cabinet has confirmed that my priority is to create an efficient, competitive building regulatory system and reduce overall building costs [CAB-24-MIN-0069 refers];

2 **note** that the 2021 changes to H1 settings for housing were strongly supported at the time as intended to help create healthier homes and reduce power bills, but since implementation there has been a range of views about how they have actually affected the upfront cost of building;

3 **note** I have asked MBIE to engage with key building and construction sector stakeholders to understand their experience of implementing the changes;

4 **note** that depending on the nature of the issues raised, the chief executive of MBIE may decide to make changes to the current H1 settings, following the process required by section 29 of the Building Act 2004; and

5 **agree** that the Minister of Building and Construction will progress work to make it easier to retrofit existing homes.

Authorised for lodgement

Hon Chris Penk

Minister for Building and Construction

Annex One: Table showing how the additional insulation requirements for housing are typically achieved.

Annex Two: Indicates some of the industry views expressed about H1 in MBIE's 2022 and 2023 State of the Building and Construction Sector surveys.[2]

[2] https://www.mbie.govt.nz/building-and-energy/building/building-system-insights-programme/state-of-the-building-and-construction-sector

Annex One: Insulation requirements summary table

The following table describes how the insulation requirements for housing are typically achieved when using the prescriptive schedule method for demonstrating compliance, comparing the previous and current H1 settings.

Note that compliance can also be demonstrated using the calculation and modelling methods, which allow provide flexibility around the insulation levels of different building elements

How insulation requirements can be achieved for housing and small buildings if using the prescriptive H1 schedule method

Building element	**Previous 2008 H1 schedule method settings**	**Current 2021 H1 schedule method settings**
Roofs	Single layer of roof insulation.	Two layers of insulation, or one layer of high-performance roof insulation
Windows	Double-glazing in standard aluminium frames	Double-glazing with heat reflective low-E glass, Argon gas filling and thermally broken aluminium frames.
Walls	Single layer of wall insulation	Wall insulation requirements did not change significantly.
Slab-on-ground floors	No insulation was required for concrete floors	For smaller houses and buildings, slab-on-ground floors now usually require some kind of slab insulation (conventional slab edge and/or underslab insulation).
Other floors, eg timber floors	Underfloor insulation installed between floor joists	Thicker underfloor insulation installed between floor joists (no changes needed to floor construction)

Annex Two: State of the Sector comments on H1 2022-2023

Survey frequency and target audience

The State of the Building and Construction Sector survey ran twice, in 2022 and in 2023.[1]

Each time the survey was sent to the following groups:

- **Group One:** Building/construction sector business owners or managers.
- **Group Two:** Designer or building professional business owners or managers (including architects, designers, engineers, building consultants, technical services etc).
- **Group Three:** End users (those who had building work done recently or were about to).

Note: the survey questions differed between groups. However, there was substantial overlap in the questions for Group One and Two. While there were no specific questions on H1, participants in Groups One and Two provided comments ***relating*** to H1.

Response numbers and questions

1,046 people completed the Group One survey and **581** people completed the Group Two survey.

The surveys included the following questions asking:

- how often they received customer enquiries on a list of energy-saving initiatives including insulation above H1 schedule method minimum values
- what suggestions they had for assistance or support that MBIE could provide to building and construction sector businesses.

Note: Almost every comment was negative. This is typical of these types of questions at the end of surveys where people get to have their say. Comments can often be inflammatory and hostile to government and staff. People do not use these types of questions to offer support to government or systems.

Specific comments about H1

- Change the H1 regulations. Homes are now too warm. Clients are needing to run air con in winter to cool the home down!
- Consulting with the manufacturers before introducing new legislation, The changes to H1 were ridiculous when window manufacturers didn't even have suitable products to meet the new codes.
- Don't bring in new hoops for us to jump through in the next couple years we are all trying to get our feet with the H1 changes after COVID increases and you are making things less appealing for clients to build.
- H1 changes have increased build costs by $35,000.00 on a standard 3-4 bedroom house 230m sq. Thermal break has increased it by 15-20K alone. We could have gone full solar on an existing house insulation for 45K. 55k if they want a spa pool. Builds that were $750 K 2-3 years ago are now 1.1 million. No one can afford to go above Building Code- Changes are killing the industry. We can't afford to do passive

[1] https://www.mbie.govt.nz/building-and-energy/building/building-system-insights-programme/state-of-the-building-and-construction-sector

house modelling, H1 calculations are a numbers game of percentages not taking account of localized conditions

- H1 upgrade to insulation values, in the Gisborne Region I am unsure if it is necessary to upgrade form where we are at. Just add so much cost that the public won't build new homes.
- I feel there is huge inconsistency in terms of what the designers and BCA/BCO know about the new H1 requirements/calculation method/R-value calculations. It is hugely unfair to the designers who strive to improve and learn to implement the H1 requirements accurately, when not everyone is on a level playing field. Also, instead of the benefits from the improved H1, cost still remains to be the single factor that drives the decision making.
- I think the H1 methods are too complicated
- I think the updated H1 code requirements have been highjacked by the mass building sector. It's very disappointing and appears more political than effective. Our houses have been designing above this revised standard for 15 years. The doubling on insulation to the roof but with a 500mm perimeter weak point and only 100mm framing and insulation is not logical. It's discouraging for the industry to have such a poor outcome. We design above code and only use it as a reference. I had promoted a star rating for construction systems and details before, to inform the consumer. Just like the consumer decides with the purpose of an $80 toaster, and $800 dryer, an $8,000 car, they should be able to do so with an $800,000 house. We wouldn't have a minimum standard housing industry if this was implemented.
- MBIE and BRANZ need to be ahead of the game not chasing it. Upgrading H1 without upgrading E2/AS1 at the same time - particularly around window details, just makes no sense and causes further issues.
- MBIE should pay more attention to the coal face builders who understand the true cost and practicalities of building. The H1 changes are based on fanciful ideas of environmentalist and greedy suppliers, unfortunately the of the builder [sic] and consumers get drowned out by the academics and bureaucrats.
- More readily available information to support the integration of the H1 changes with the current building code i.e. bracing units clashing with external foundation insulation, and cantilevered walls over the same foundation insulation. An easier to follow calculation method for builders that clients ask first before engaging designers on the new H1 clause so there's better clarity around underfloor heating and need for further insulation in the floor as a result of the heating source
- More support for small businesses, especially in regions, when major changes such as the H1 changes and carbon footprint calculation requirements are coming into effect to allow us to access information – for instance the latest proposed BRANZ seminars are only coming to Auckland and that is 3 hours min drive away, a huge expense and time out of my business at a critical time. I cannot afford to attend. Webinars are just not as beneficial. More public awareness campaigns about the effect these changes will have for example in Northland the effects of the H1 changes are not nearly as extreme or costly to a build as it was perceived they would be.
- new H1 requirements will cause massively increased costs to end customers and further stall our industry, this has not been well considered and the increase from R0.22 in double glazing to R0.46 with thermal broken joinery is such a minimal improvement that this directive gives little hope in the nation's ability to meet our current and future housing needs.

- Ongoing teaching is always helpful as interpretation of codes between council and design field always differs - H1 was a big change to the industry - emission ratings will be the next big change which we would prefer to have as much support as possible with all possible calculation tools.
- Please stop excessively raising the compliance bar. H1 is now excessive and expensive. You're trapping more people out of being able to afford humble alterations that would otherwise enhance their home's liability
- The changes to NZBC H1 thermal performance for thermally broken aluminium joinery is crazy and way too expensive. Climate zone 2 seriously does not require a thermally broken suite.
- The introduction of the new H1 requirements is a mess, poorly introduced, lacked market detail. Architects are totally confused and do not understand the requirements. To put it in perspective – we process around 500-600 plans per month solely for insulation QS.
- There is currently a gap in knowledge around H1 changes and how the new performance standards actually benefit the homes sector. A lot of people don’t actually fully understand how slab insulation works or the insulation line in relation to windows and building ventilation.
- We and our draughtsmen and it appears, suppliers, are still struggling to come up with cost effective solutions to meet H1. H1 revisions have added a minimum of $25,000 to a small home build. This flies in the face of affordable housing. If you bring in new regulations, the industry must be ready.
- Where do I start... First off, the new H1 changes are a complete and utter waste of time and money. Houses built in 2018 are easy to heat, easy to cool, warm and dry. The need for the Govt to impose regulations solely for the purpose of climate goals is irresponsible, particularly when there is record homelessness and record emergency housing. Comparing us on a world stage for energy efficiency in a home is ridiculous, we don't have the temperature shifts of European nations. It's also using a trickledown economics model, increasing the standards on already warm and dry homes won't scratch the surface compared to improvements to existing inefficient homes with no insulation and single glazing. It's lazy in my opinion, and adding expense to an already crippled residential housing industry right now is madness. We have a housing crisis, adding unnecessary cost is not an intelligent decision.
- You need to be realistic of the cost implications to building from making substantial changes to the building code (H1) this has added around an additional 6-7% in building costs, which is further pushing the prices of construction up. Where MBIE has not introduce any offsetting cost initiatives to balance this out, or reduce the cost to build, further increasing pressure on inflation, but slowing demand for construction.