Report on energy hardship measures

Year ended June 2022

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Te Kāwanatanga o Aotearoa
New Zealand Government

Ministry of Business, Innovation and Employment (MBIE)

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Purpose

The Report on Energy Hardship Measures for year ended June 2022 is the first annual release that provides data and insights on how many New Zealanders may be experiencing energy hardship.

The measures provide an indication of how many households and individuals across Aotearoa New Zealand may be experiencing energy hardship. This will help ensure policy interventions and programmes are targeting groups that are most in need. With these measures, we will also be able to track levels of energy hardship over time to monitor the effectiveness of such policies and programmes.

This report covers the results from measures of energy hardship from 1 July 2012 to 30 June 2022. Data sources, limitations, and other things to note has more information about the data, which has been sourced from Stats NZ's Household Economic Survey (HES).

Background

Cabinet asked the Ministry of Business, Innovation and Employment (MBIE) to define and measures energy hardship. The definition of energy wellbeing, energy hardship, and an accompanying framework was published on MBIE's website in June 2022. Additionally, MBIE published a summary of submissions received from stakeholders which contains key themes raised by submitters. In June 2023, MBIE published a final report outlining the initial set of measures that will be used to monitor levels of energy hardship, and potential improvements for future releases.

Energy wellbeing is defined as when individuals, households and whānau are able to obtain and afford adequate energy services to support their wellbeing in their home or kāinga.

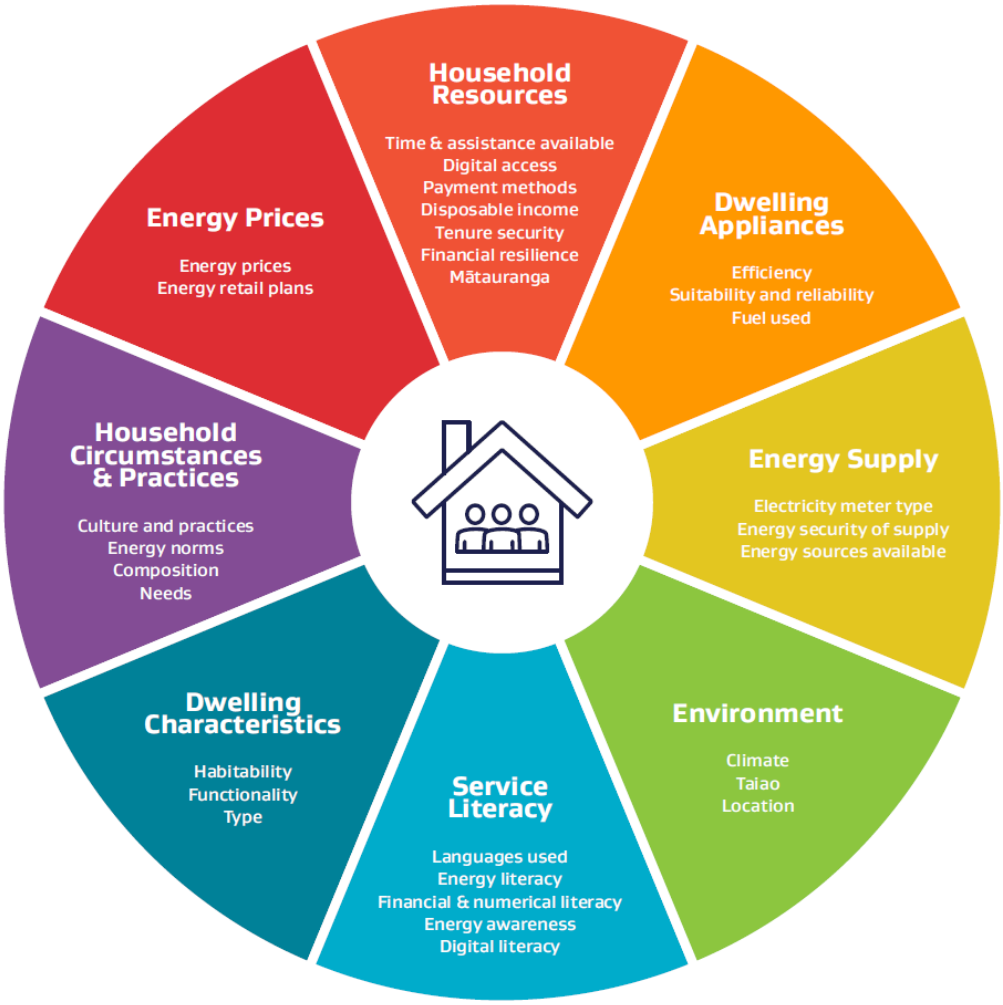
Energy hardship is defined as the opposite of energy wellbeing. It occurs when individuals, households and whānau *are not* able to obtain adequate energy services to support their wellbeing in their home or kāinga.

Our framework shows the drivers of energy wellbeing or hardship

Our definition is supported by a conceptual framework, presenting the range of factors that can interact and affect energy wellbeing or hardship. People and their dwelling are at the centre of the framework.

The following diagram is a visual representation of the interaction between these various factors: household resources, dwelling appliances, energy supply, environment, service literacy, dwelling characteristics, household circumstances and practices, and energy prices.

Figure 1 Accompanying framework for energy wellbeing



Summary of key points

MBIE was tasked by the Cabinet Economic Development Committee on 25 September 2019 to define and measure energy hardship in New Zealand. We consulted extensively with a range of stakeholders to develop an initial suite of measures for energy hardship. This is the first annual release.

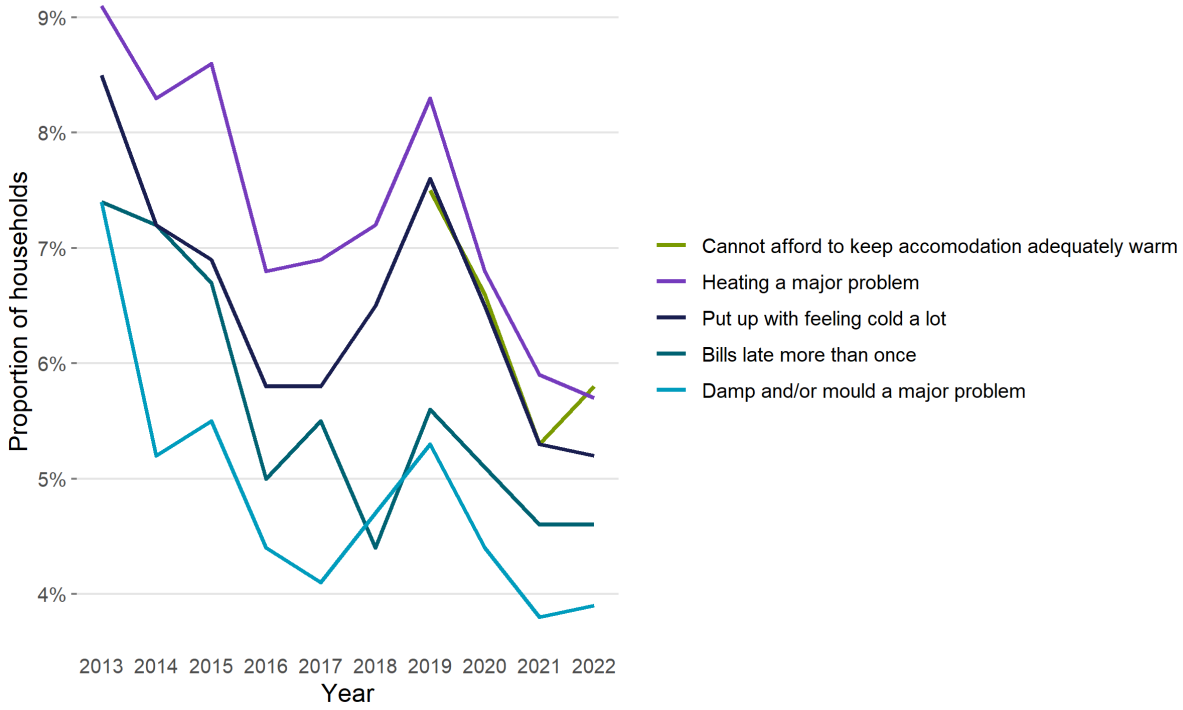
There is no single measure for energy hardship as there are multiple dimensions and experiences of energy hardship. The initial suite of measures will be used to monitor levels of energy hardship over time.

In the year ended June 2022:

- 110,000 households reported that they could not afford to keep their homes adequately warm
- 110,000 households found heating their homes a major problem
- 100,000 households put up with feeling cold a lot to keep costs down
- 88,000 households reported paying utility bills late more than once
- 74,000 households reported major problems with damp and/or mould.

Figure 2 shows the proportion of households experiencing measures of energy hardship have decreased slightly since the start of the series in year ended June 2013.

Figure 2 Proportion of households experiencing energy hardship measures trending downwards, HES years ended June 2013 to June 2022



The distribution of the measures of energy hardship are varied with:

- renters being four to five times more likely to experience energy hardship compared to owner-occupiers

- crowded households being five times more likely to report a major problem with dampness and/or mould compared to households with 1+ spare bedrooms
- Māori and Pacific households being overrepresented across all energy hardship measures.

Energy hardship affects the wellbeing of individuals, households and whānau

Energy hardship affects the lives of many New Zealanders and has an impact on wellbeing. People experiencing energy hardship are more likely to experience negative physical and mental health outcomes. For example, data from the latest General Social Survey (GSS) shows that the average life satisfaction for people living in homes that were often cold or damp was significantly lower than for people living in homes without these problems.

Research in Stats NZ's Integrated Data Infrastructure (IDI) found that poor housing conditions such as cold, dampness, mould, and crowding was linked to increased hospitalisations. The data from the 2018 General Social Survey showed that living in homes with mould, cold, and dampness was associated with increased reporting of health issues such as asthma, more frequent colds and flu, and an increased number of sick days and care days. (Stats NZ, 2021).

Energy hardship in linked to negative physical and mental health outcomes, which is why it's important to reduce energy hardship in our communities. One of the first key steps to achieving this is to have ways to measure energy hardship. Having ways to measure energy hardship is a key step in supporting efforts to reduce energy hardship in our communities. The initial suite of measures can help government agencies and others to evaluate whether existing initiatives to increase energy wellbeing are working. Additionally, this initial suite of measures will enable community groups to recognise energy hardship.

Rationale for measures

The energy wellbeing framework includes eight different factors which relate to the physical and economic environment, and how these intersect with the needs of individual households and whānau. These factors are energy prices, household resources, dwelling appliances, energy supply, environment, service literacy, dwelling characteristics, and household circumstances and practices. These components of the framework are explored in a range of different measures.

The initial suite of measures used here were decided after public consultation. The measures are self-reported from Stat NZ's Household Economic Survey (HES) and are a subset of the material wellbeing questions. The initial set of measures of energy hardship relate to the household and dwelling themes in the framework. Future work may include other measures that explore the remaining components of the framework.

Table 1 presents each measure and shows how they contribute to our understanding of energy hardship. All measures come from HES and can be measured annually from year ended June 2013 except for 'cannot afford to keep dwelling adequately warm', which was introduced to HES in the year ended June 2019.

Table 1 Measures of energy hardship and how it links with aspects of energy wellbeing

Measure of energy hardship	Relationship to definition	Relationship to framework	What this shows	Aspect of energy wellbeing
Could not pay electricity, gas rates, or water bills on time more than once in the last 12 months	Able to obtain – able to afford and manage bills	• Household resources	Households that have been unable to pay bills on time are likely to be at risk of disconnection	Able to afford energy bills without borrowing or economising on other expenses
Cannot afford to keep dwelling adequately warm	Able to obtain – able to afford and manage bills	• Household resources • Dwelling characteristic	Direct measure of energy hardship as shows energy rationing and the ability of the household to pay for heating	Able to wash, clean, cook, and heat/cool as required to stay comfortable (without economising on other necessities)
Put up with feeling cold a lot to keep costs down	Able to obtain – able to afford and manage bills	• Household resources • Dwelling characteristic	Direct measure of energy hardship as shows energy rationing	
Dampness and/or mould a major problem	Wellbeing is supported in the home and kāinga	• Household resources • Dwelling characteristic	Indicates poor housing quality and internal environment – such a dwelling is likely to be underheated. Additionally, damp homes require more energy to heat	A dry and well-ventilated home
Trouble heating accommodation and or/keeping it warm in winter	Wellbeing is supported in the home and kāinga	• Household resources • Dwelling characteristic	Indicative of quality of dwelling as it is unlikely to be energy efficient and more costly to heat/cool and maintain at a healthy temperature	A dwelling that can maintain a healthy temperature

Over 110,000 households could not afford to keep their home adequately warm

Figure 3 shows the proportion of households who experienced each of these measures for the year ended June 2022. Around 4 to 6 per cent of households experienced at least one of the measures of energy hardship.

In the year ended June 2022, 6 per cent of households said that they could not afford to keep their accommodation adequately warm. Similar proportions of households reported having a major problem with heating their accommodation or putting up with feeling cold a lot to keep costs down.

Figure 3 Proportion of households experiencing energy hardship measures, HES year ended June 2022[1]

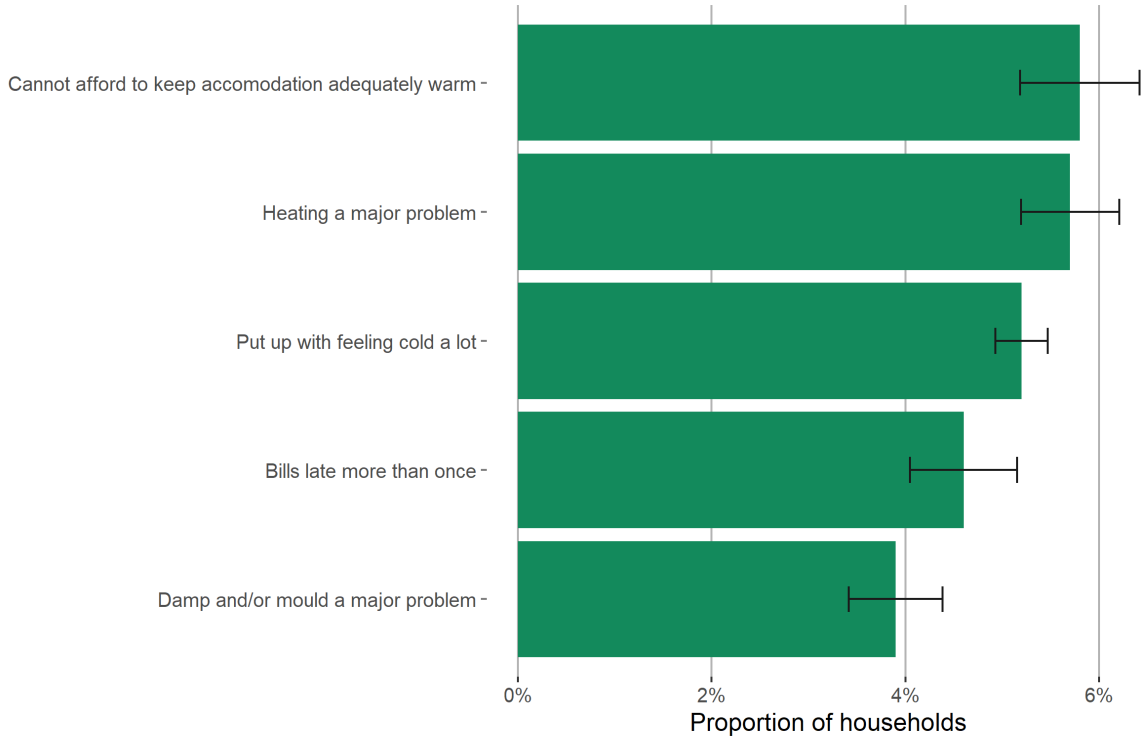


Table 2 Proportion of households experiencing energy hardship measures, HES years ended June 2020 to 2022

	2020	2021	2022
Bills late more than once	5.1	4.6	4.6
Cannot afford to keep accommodation adequately warm	6.6	5.3	5.8
Damp and/or mould a major problem	4.4	3.8	3.9
Heating a major problem	6.8	5.9	5.7
Put up with feeling cold a lot	6.5	5.3	5.2

[1] Error bars show 95 per cent confidence interval of estimates. A confidence interval of 95 per cent means that there is a 95 per cent chance that the true value falls within this range

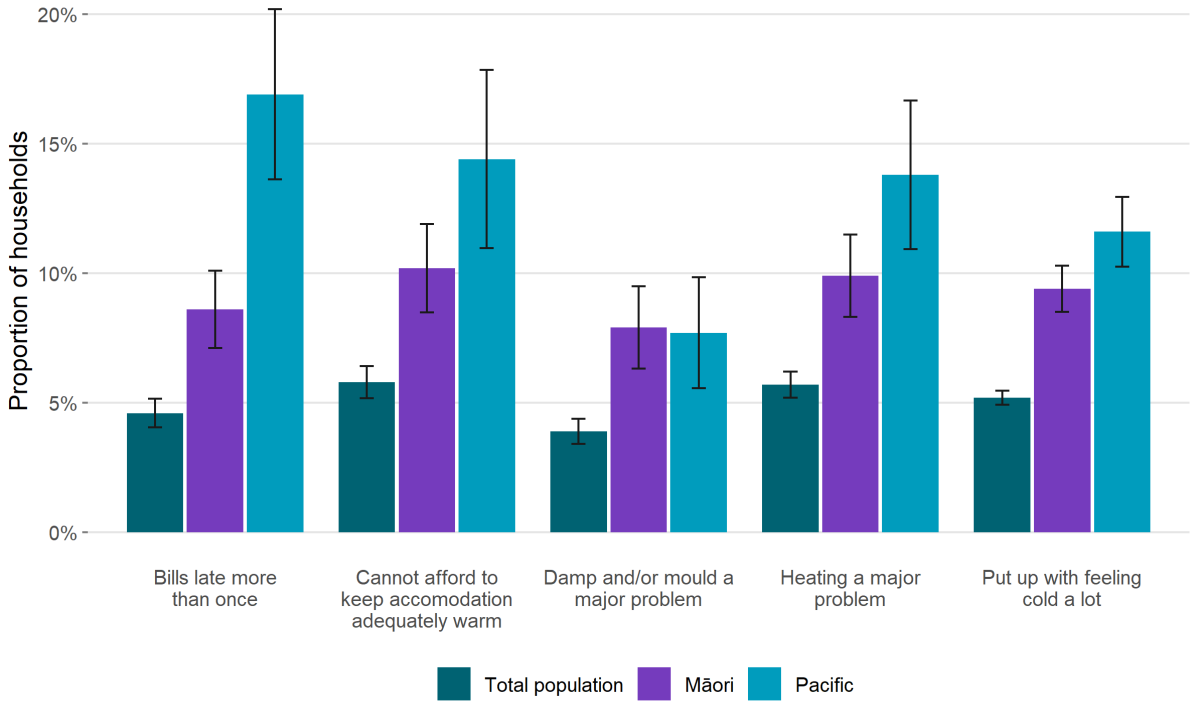
Table 2 shows that compared to June year 2020, the proportion of households who report putting up with feeling cold a lot decreased from 7 per cent to 5 per cent in June year 2022. Households reporting heating as a major problem also had a statistically significant decrease, falling from 7 per cent in June year 2020 to 6 per cent in June year 2022.

It is important to note that data collection in the year ended June 2022 was impacted by restrictions on activities and movements as part of the response to the coronavirus (COVID-19) pandemic[2]. As a result, the sample collection was interrupted. Stats NZ found the data was fit for purpose at a national level to support official statistics but advised caution when interpreting statistics for subpopulations (Stats NZ, 2023).

Households with Māori and Pacific peoples are more likely to experience measures of energy hardship

Figure 4 shows the proportion of households experiencing the measures of energy hardship by selected household ethnicities. This compares the total population with households where at least one person in the household identifies with a particular ethnicity. Households with Māori and Pacific peoples[3] are between two to three times more likely than the general population to experience measures of energy hardship.

Figure 4 Energy hardship measures by selected ethnicities, HES year ended June 2022[4]



[2] Further information can be found on Stats NZ's media release for Household Economic Survey (HES) year ended June 2022 release 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/

[3] Data on ethnicity is collected as part of the Household Economic Survey (HES). Individuals can identify with more than one ethnicity, so these groups are not mutually exclusive.

[4] Error bars show 95 per cent confidence interval of estimates

Table 3 Energy hardship measures by selected ethnicities, HES year ended June 2022

	Total population	Māori	Pacific
Bills late more than once	4.6	8.6	16.9
Cannot afford to keep accommodation adequately warm	5.8	10.2	14.4
Damp and/or mould a major problem	3.9	7.9	7.7
Heating a major problem	5.7	9.9	13.8
Put up with feeling cold a lot	5.2	9.4	11.6

Māori and Pacific households are around twice as likely to have a major problem with dampness and mould, and to struggle to afford to keep their home adequately warm.

In 2022, the proportion of households that report a major problem with dampness and mould was around 8 per cent for both Pacific and Māori households. This contrasts with 4 per cent across all households. Additionally, for 14 per cent of Pacific households and 10 per cent of Māori households, heating is a major problem. The same measure is 6 per cent for the total population.

Figure 5 shows that in the year ended June 2020, nearly 18 per cent of Pacific households, and 11 percent of Māori households reporting putting up with feeling cold a lot. This decreased significantly to 12 per cent and 9 percent respectively in year ended June 2022, even after accounting for a lower sample size for HES in year ended June 2022. Putting up with feeling cold is a direct measure of energy hardship as it shows energy rationing behaviour where households try to keep costs down.

For most of these measures, there has been a significant reduction in the proportion of Māori, Pacific and total households reporting experiencing an energy hardship measure compared with 2013.

Figure 5 Proportion of households that put up with feeling cold a lot by selected ethnicities HES year ended June 2013 to June 2022[5]

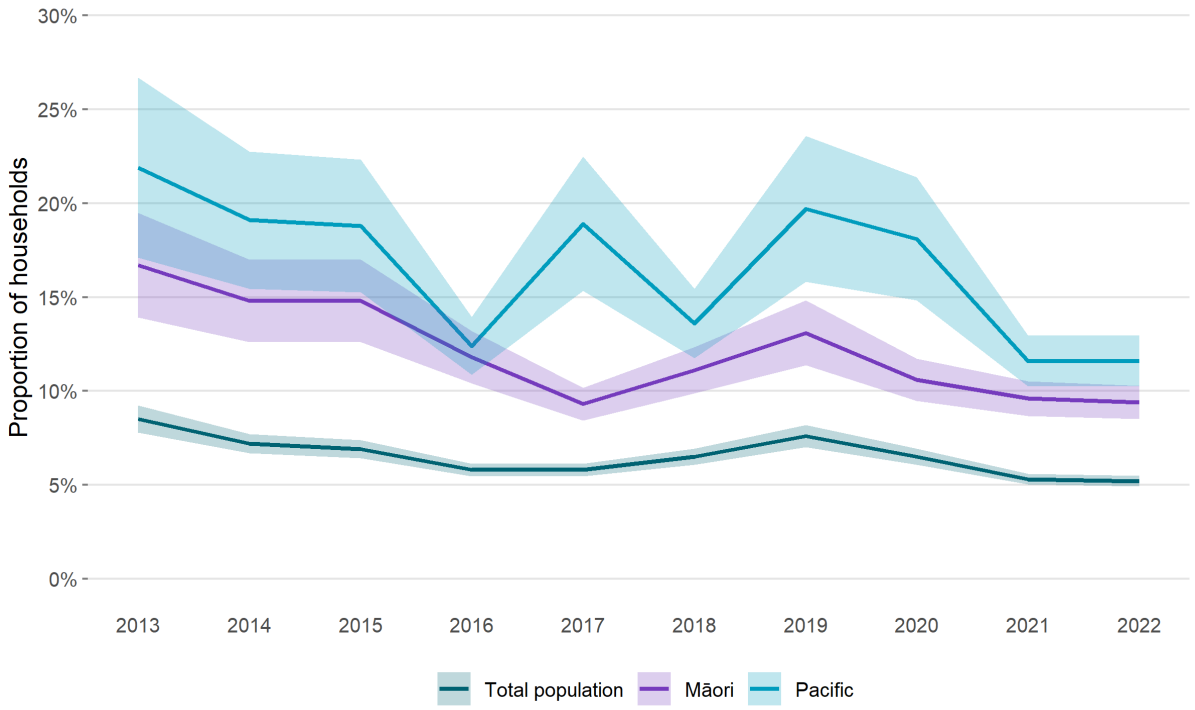


Table 4 Proportion of households that put up with feeling cold a lot by selected ethnicities HES year ended June 2013 to June 2022

Year	Māori	Pacific	Total population
2013	16.7	21.9	8.5
2014	14.8	19.1	7.2
2015	14.8	18.8	6.9
2016	11.8	12.4	5.8
2017	9.3	18.9	5.8
2018	11.1	13.6	6.5
2019	13.1	19.7	7.6
2020	10.6	18.1	6.5
2021	9.6	11.6	5.3
2022	9.4	11.6	5.2

[5] Shaded area shows 95 per cent confidence interval of estimates

Renters are between four and six times more likely to experience energy hardship

In the year ended June 2022, renters were around six times more likely than owner-occupiers to pay bills late more than once. Renters were five times more likely than owner-occupiers to say they could not afford to keep their home adequately warm, and put up with feeling cold a lot to keep costs down. Renters were also around four times more likely to experience a major problem with damp and mould, and struggle to keep their home warm in winter.

Figure 6 Energy hardship measures by tenure, HES year ended June 2022[6]

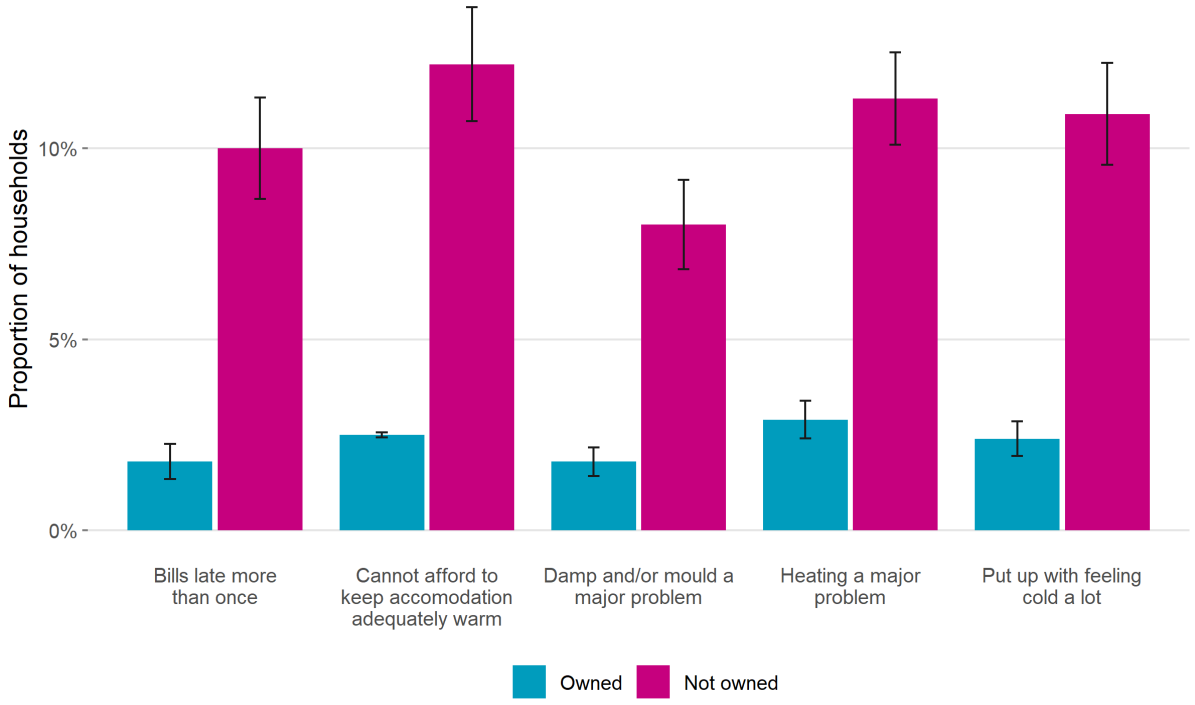


Table 5 Energy hardship measures by tenure, HES year ended June 2022

	Owned	Not owned
Bills late more than once	1.8	10.0
Cannot afford to keep accommodation adequately warm	2.5	12.2
Damp and/or mould a major problem	1.8	8.0
Heating a major problem	2.9	11.3
Put up with feeling cold a lot	2.4	10.9

The proportion of renters who put up with feeling cold a lot decreased from 15 percent for year ended June 2019 to 11 per cent in the year ended June 2022. Additionally, the proportion of renters reporting a major problem with dampness and/or mould has decreased slightly since 2019, falling from 10 per cent to 8 per cent. The proportion of renters experiencing these energy hardship

[6] Error bars show 95 per cent confidence interval of estimates

measures have also decreased when compared to year ended June 2013. Despite this overall decrease, the gap between owner-occupiers and renters has remained significant.

Figure 7 Proportion of households reporting a major problem with damp and/or mould by tenure, HES year ended June 2013 to June 2022[7]

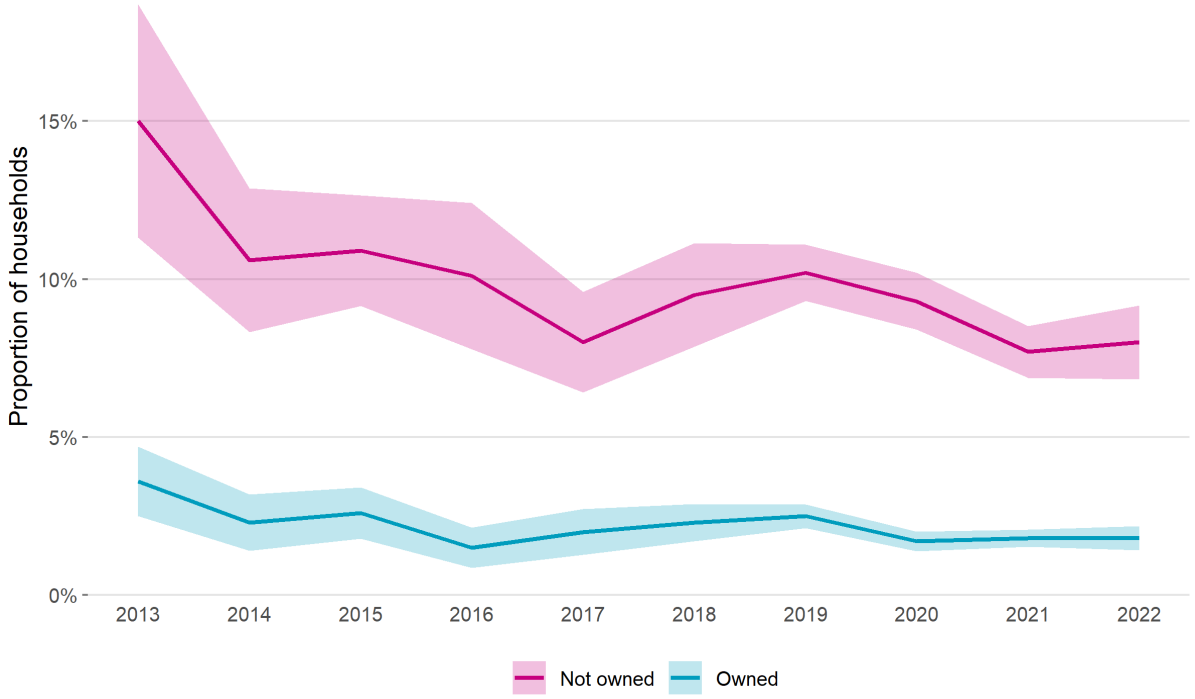


Table 6 Proportion of households reporting a major problem with damp and/or mould by tenure, HES year ended June 2013 to June 2022

June year	Owned	Not owned
2013	3.6	15.0
2014	2.3	10.6
2015	2.6	10.9
2016	1.5	10.1
2017	2.0	8.0
2018	2.3	9.5
2019	2.5	10.2
2020	1.7	9.3
2021	1.8	7.7
2022	1.8	8.0

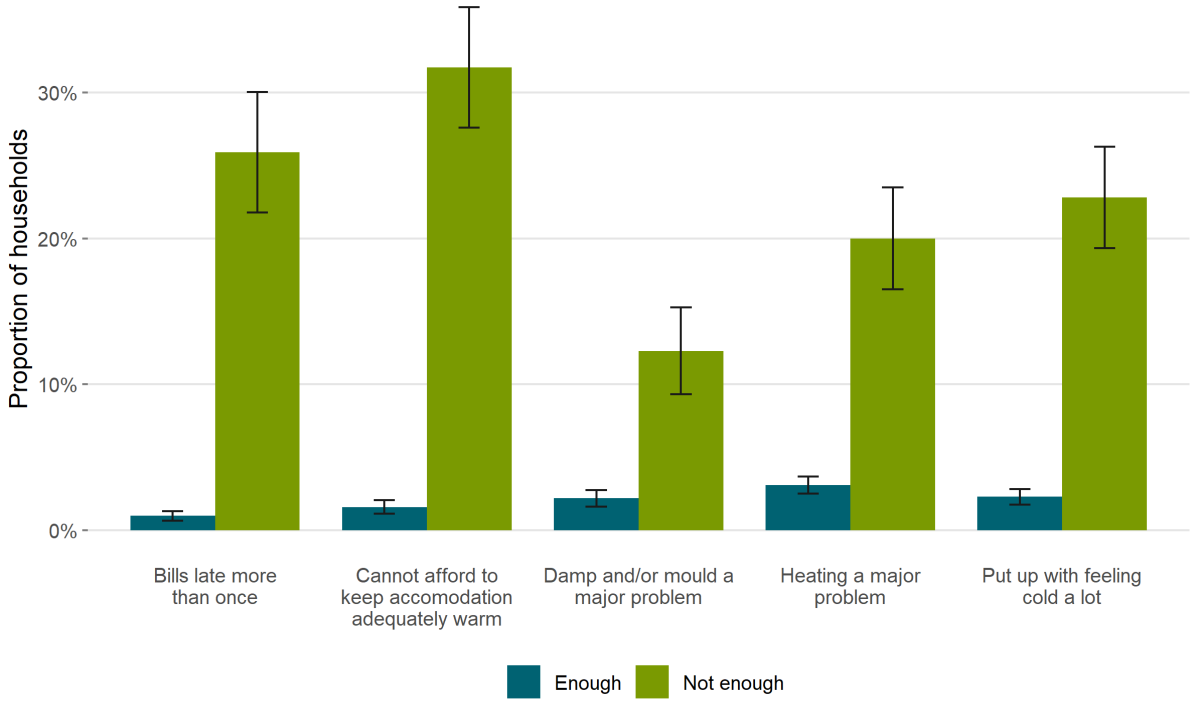
[7] Shaded area shows 95 per cent confidence interval of estimates

Around a third of low-income households cannot afford to keep their accommodation adequately warm

Households reporting not enough income to meet their everyday needs are more likely to experience energy hardship, highlighting the intersection between energy hardship and broader material hardship. Around 3 out of 10 households that reported not having enough income for everyday needs[8] also report that they could not afford to keep their home adequately warm. These results are consistent with the Stats NZ 2017 report that investigated different measures of energy hardship, which found that low-income households were significantly more likely to experience measures of energy hardship.

Almost 3 out of 10 households (32 per cent) with not enough income said they could not afford to keep their accommodation adequately warm, compared to 2 per cent of those that reported having enough income. Households that have been unable to pay bills on time are likely to be at risk of disconnection. In the year ended June 2022, 26 percent of households who did not have enough income for every day needs reported paying utility bills late more than once. In comparison, less than 1 percent of households reporting that they had more than enough income said that they had paid utilities bills late more than once.

Figure 8 Energy hardship measures by households that reported having not enough income and enough income for everyday needs, HES year ended June 2022[9]



[8] Income adequacy is a self-assessed measure where the survey respondent is asked how well they consider that their total household income is able to meet their everyday needs.

[9] Error bars show 95 per cent confidence interval of estimates

Table 7 Energy hardship measures by households that reported having not enough income and enough income, HES year ended June 2022

	Not enough	Enough
Bills late more than once	25.9	1.0
Cannot afford to keep accommodation adequately warm	31.7	1.6
Damp and/or mould a major problem	12.3	2.2
Heating a major problem	20.0	3.1
Put up with feeling cold a lot	22.8	2.3

Crowded households are more likely to experience measures of energy hardship compared to non-crowded households

Crowded households[10] are more likely to experience energy hardship. In HES 2022, around 13 per cent of crowded households put up with feeling cold a lot and report being unable to afford to keep accommodation adequately warm. This is around three times higher than the proportion of households that have one or more bedrooms to spare.

The crowded household measure from Stats NZ only captures structural crowding, which compares the number of people in the household to the number of rooms in the dwelling. It is unlikely to capture functional crowding behaviour, where households share a single room to keep heating costs down.

[10] A crowded household is measured by Stats NZ using the Canadian National Occupancy Standard. It assumes that there should be no more than two people to a bedroom, with some exceptions such as children aged less than five years sharing a bedroom.

Figure 9 Energy hardship measures by household crowdedness, HES year ended June 2022[11]

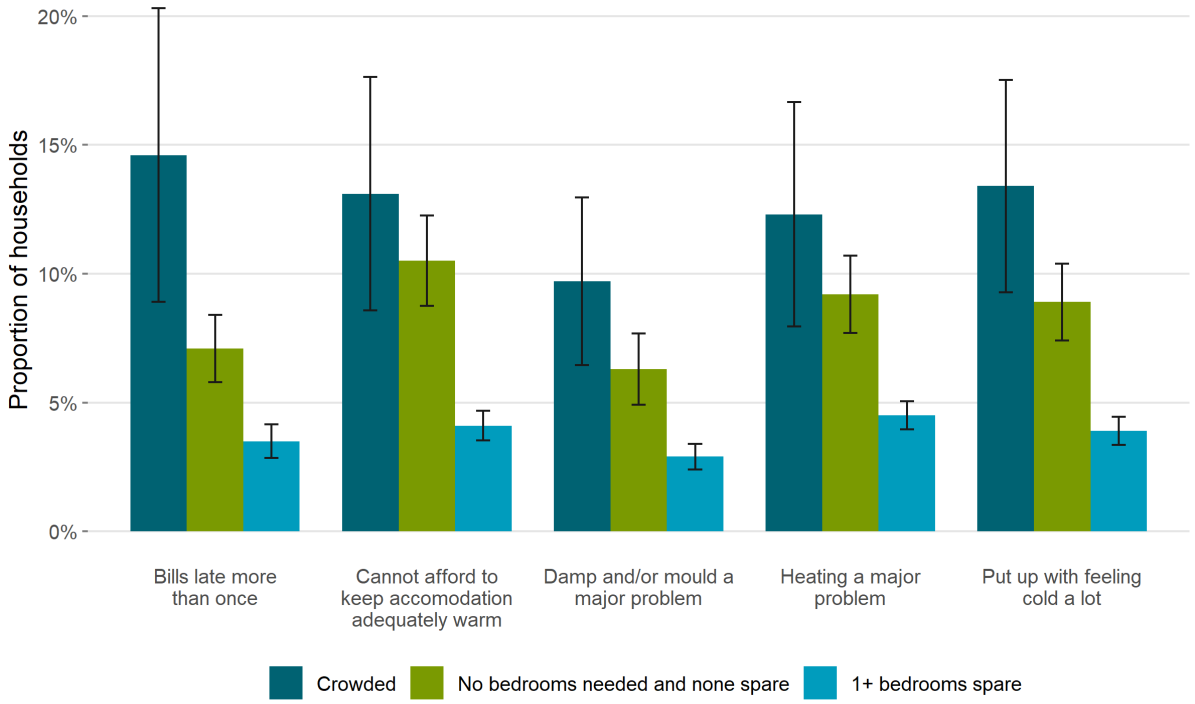


Table 8 Energy hardship measures by household crowdedness, HES year ended June 2022

	Crowded	None spare	1+ bedrooms spare
Bills late more than once	14.6	7.1	3.5
Cannot afford to keep accommodation adequately warm	13.1	10.5	4.1
Damp and/or mould a major problem	9.7	6.3	2.9
Heating a major problem	12.3	9.2	4.5
Put up with feeling cold a lot	13.4	8.9	3.9

[11] Error bars show 95 per cent confidence interval of estimates

Data sources, limitations, and other things to note

The Household Economic Survey (HES)

HES is an annual survey designed to measure the economic wellbeing of New Zealanders. HES has three components: HES income, HES expenditure, and HES net worth[12].

- **HES income** is the main vehicle and is run every year. The survey is conducted over a 12-month period, from 1st July to 30th June. It includes household income, housing costs, and material wellbeing – this is the 'core' HES.
- **HES expenditure** includes additional components – an expenditure diary and an expanded household expenditure questionnaire. It runs every three years and allows for the collection of more detailed information on household expenditure. HES expenditure was being collected at the time of the writing of this report (July 2022 to end of June 2023).
- **HES net worth** includes additional questions on household assets and liabilities. It also runs every three years. Net worth will next be collected from July 2023 to end of June 2024.

Collection timelines mean a significant lag in data reporting. Official child poverty reporting also draws on the HES, and the Child Wellbeing and Poverty Reduction Group website provides some more information on the timing of HES surveys and data release, and the lag between policy changes taking effect and their impact showing up in official reporting[13].

How HES works

The target population for HES is people aged 15 years or older usually residing in private households in the North and South Islands, and Waiheke Island. Households are selected using a random sample and are interviewed about their circumstances in the previous 12 months (Stats NZ, 2019). The intention is that this will even out households' experiences over time but does mean it can take longer to see patterns in the data.

Increase in sample size and COVID-19 impacts

The measures used in this report are based on a subset of self-reported material wellbeing questions collected annually in the core Household Economic Survey (HES). In Budget 2018, Stats NZ received additional funding for improving the HES to better meet the requirements of the Child Poverty Reduction Act.

These improvements included a significant increase in the sample size for these material wellbeing questions to include an achieved sample of 20,000 households, an increase from the previously achieved sample of 3,000 to 3,500 households. There were also modifications to the survey design to ensure good representation of low-income households[14]. These two improvements have reduced sampling errors for the material wellbeing questions, which are used in official child poverty measurement.

The target sample size for the HES in a regular cycle is 20,000 households. However, given restrictions on activities and movements as part of the response to the coronavirus (COVID-19)

[12] https://www.stats.govt.nz/methods/changes-to-the-household-economic-survey-201819
[13] *Timeframes for Stats NZ data and reporting* can be found at https://dpmc.govt.nz/our-programmes/reducing-child-poverty/child-poverty-measures-targets-and-indicators
[14] Sample size was increased for HES income , more information can be found here: https://www.stats.govt.nz/methods/expanding-the-household-economic-survey-to-obtain-good-measures-of-child-poverty

pandemic during the 2021/2022 collection period, this target was reduced to 10,000 households. At the end of data collection in June 2022, the 2021/2022 HES achieved a sample size of 8,900 households.[15] After analysing the data, Stats NZ found the data was fit for purpose at a national level to support official statistics, but advised caution when interpreting statistics for subpopulations, where sample error and risk of bias might be higher (Stats NZ, 2023).

Interpreting statistics for subpopulations

Due to the smaller size of Māori and Pacific populations, there are large sample errors for these groups prior to 2019. Prior to 2018/19, the HES sample was much smaller at around 3,000 to 3,500 households, which limited the ability for the data to be disaggregated for smaller populations.

Stats NZ increased the sample size of HES to allow for a more accurate measurement of child poverty and to allow the government to measure progress against targets in the Child Poverty Reduction Act. As a result of the small sample size for these populations prior to 2019, there is some volatility prior to 2018/19 in the energy hardship measures series.

A new measure for HES 2018/19 onwards

The 2018/19 HES included a new material wellbeing question related to energy wellbeing.

This question asks "Can [You/ Your Household] afford to keep the [Dwelling] adequately warm?" This question has a yes/no response option, although it should be noted that households can also respond that they do not know. While this question has been asked from a wellbeing perspective, the inverse of this question (i.e. whether households *cannot* afford to keep their accommodation adequately warm) has been analysed by MBIE to align with the other subjective measures of energy hardship analysed here. This is a useful question as it shows some of the key elements of energy hardship – the affordability of energy ("cannot afford"), and ability to keep warm ("keep warm"). Keeping warm can be seen as a proxy for how well a dwelling retains heat, as a well-insulated dwelling that meets high energy standards may require little or no heating in winter (or cooling in summer).

Therefore, this measure is presented in the report as 'households that cannot afford to keep their accommodation adequately warm'.

Analysis of wellbeing questions from HES

Material wellbeing questions in the HES include a range of response options, such as whether the individual/household put up with being cold to keep costs down "not at all", "a little", or "a lot". As with child poverty measurement, for the measures of energy hardship in this analysis the most extreme response has been used (e.g. "a lot", or "major problem").

Number vs proportion of households

We have presented information here on the **number** and **proportion** of households experiencing these measures. However, when comparing measures over time, only **proportions** should be used. The number of households in Aotearoa New Zealand has grown over time as the population increases. This means that using proportions gives a better indication on the extent of energy hardship.

[15] Impacts of disrupted data collection on 2022 Household Economic Survey Statistics https://www.stats.govt.nz/methods/impacts-of-disrupted-data-collection-on-2022-household-economic-survey-statistics/

Rounding used in this document

The numbers used in the text of this report have been rounded up to the nearest integer. Tables provided in the Appendix are presented with one decimal place.

Scope of energy hardship

The scope of energy hardship measures does not include fuel used for transport. Any trade-off or rationing behaviour households might have, such as the trade-off between fuel for transport and heating their homes adequately, might not be reflected in the data.

Appendix – Tables

Measures of energy hardship

Appendix Table 1. Proportion of households reporting experiencing energy hardship measures for the total population, HES years ended June 2013 to June 2022

Year	Put up with feeling cold a lot	Damp and/or mould a major problem	Heating a major problem	Bills late more than once	Cannot afford to keep accommodation adequately warm
2013	8.5	7.4	9.1	7.4	-
2014	7.2	5.2	8.3	7.2	-
2015	6.9	5.5	8.6	6.7	-
2016	5.8	4.4	6.8	5	-
2017	5.8	4.1	6.9	5.5	-
2018	6.5	4.7	7.2	4.4	-
2019	7.6	5.3	8.3	5.6	7.5
2020	6.5	4.4	6.8	5.1	6.6
2021	5.3	3.8	5.9	4.6	5.3
2022	5.2	3.9	5.7	4.6	5.8

Bills late more than once

Appendix Table 2. Proportion of households that reported paying bills late more than once by selected ethnicities, HES years ended June 2013 to June 2022

Year	Māori	Pacific	Total population
2013	13.6	32.6	7.4
2014	18.0	24.0	7.2
2015	16.1	25.5	6.7
2016	12.5	14.9	5.0
2017	10.7	17.9	5.5
2018	10.8	11.8	4.4
2019	11.8	17.6	5.6
2020	10.7	15.4	5.1
2021	10.0	13.4	4.6
2022	8.6	16.9	4.6

Appendix Table 3. Proportion of households that reported paying bills late more than once by household crowdedness, HES years ended June 2016 to June 2022

Year	Crowded	No bedrooms needed and none spare	1+ bedrooms spare
2016	12.0	8.9	3.6
2017	18.2	9.4	3.8
2018	12.4	8.1	2.8
2019	15.8	9.3	4.0
2020	12.2	8.6	3.7
2021	14.5	7.7	3.2
2022	14.6	7.1	3.5

Appendix Table 4. Proportion of households that reported paying bills late more than once by self-reported income adequacy, HES years ended June 2013 to June 2022

Year	Not enough	Only just enough	Enough	More than enough
2013	29.2	8.9	1.8	0
2014	30.3	9.4	1.2	0
2015	28.1	9.3	1.4	0
2016	21.3	7.0	1.9	0
2017	27.7	7.3	1.3	0
2018	23.6	4.9	2.0	0
2019	24.5	8.6	1.5	0.5
2020	24.2	8.6	1.4	0.4
2021	23.8	7.4	1.4	0.5
2022	25.9	8.3	1.0	0.3

Appendix Table 5. Proportion of households that reported paying bills late more than once by tenure, HES years ended June 2013 to June 2022

Year	Owned	Not owned
2013	4.0	14.1
2014	3.0	15.1
2015	3.1	13.5
2016	2.5	9.9
2017	1.9	11.8
2018	2.1	8.9
2019	2.5	11.2
2020	2.1	10.5
2021	1.9	9.8
2022	1.8	10.0

Cannot afford to keep accommodation adequately warm

Appendix Table 6. Proportion of households that reported being unable to afford to keep accommodation adequately warm by selected ethnicities, HES years ended June 2019 to June 2022

Year	Māori	Pacific	Total population
2019	12.3	18	7.5
2020	11.0	17.3	6.6
2021	9.3	12.4	5.3
2022	10.2	14.4	5.8

Appendix Table 7. Proportion of households that reported being unable to afford to keep accommodation adequately warm by household crowdedness, HES years ended June 2019 to June 2022

Year	Crowded	No bedrooms needed and none spare	1+ bedrooms spare
2019	18	12	6
2020	16	10	5
2021	15	8	4
2022	13	11	4

Appendix Table 8. Proportion of households that reported unable to keep accommodation adequately warm by self-reported income adequacy, HES years ended June 2019 to June 2022

Year	Not enough	Only just enough	Enough	More than enough
2019	33.8	10.8	2.3	0.6
2020	34.8	10	1.7	0.4
2021	29.1	8.4	1.2	0.3
2022	31.7	9.8	1.6	0.6

Appendix Table 9. Proportion of households that reported unable to afford to keep accommodation adequately warm by tenure, HES years ended June 2019 to June 2022

Year	Owned	Not owned
2019	3.6	14.6
2020	3.3	12.4
2021	2.3	10.8
2022	2.5	12.2

Damp and/or mould as a major problem

Appendix Table 10. Proportion of households that reported damp and/or mould as a major problem by selected ethnicities, HES years ended June 2013 to June 2022

Year	Māori	Pacific	Total population
2013	15.2	17.1	7.4
2014	11.8	14.8	5.2
2015	13.6	17.5	5.5
2016	9.9	10.9	4.4
2017	7.5	10.0	4.1
2018	9.7	7.2	4.7
2019	10.4	14.9	5.3
2020	8.4	12.6	4.4
2021	7.0	8.8	3.8
2022	7.9	7.7	3.9

Appendix Table 11. Proportion of households that reported damp and/or mould as a major problem by household crowdedness, HES years ended June 2016 to June 2022

Year	Crowded	No bedrooms needed and none spare	1+ bedrooms spare
2016	4.3	8.8	3.2
2017	11.1	6.6	3.1
2018	8.8	8.8	3.3
2019	13.9	8.9	3.7
2020	13.5	7.7	3.0
2021	13.8	6.1	2.6
2022	9.7	6.3	2.9

Appendix Table 12. Proportion of households that reported damp and/or mould as a major problem by self-reported income adequacy, HES years ended June 2013 to June 2022

Year	Not enough	Only just enough	Enough	More than enough
2013	20.2	10	3.4	1.7
2014	15.4	8.3	1.7	0
2015	17.6	6.8	2.4	2.0
2016	14.3	7.1	2.3	0
2017	13.9	6.7	1.9	0.6
2018	14.7	6.4	3.1	2.2
2019	15.8	7.5	3.2	1.2
2020	14.6	7.0	2.3	1.5
2021	13.7	5.7	2.2	1.1
2022	12.3	6.8	2.2	1.2

Appendix Table 13. Proportion of households that reported damp and/or mould as a major problem by tenure, HES years ended June 2013 to June 2022

Year	Owned	Not owned
2013	3.6	15
2014	2.3	10.6
2015	2.6	10.9
2016	1.5	10.1
2017	2.0	8.0
2018	2.3	9.5
2019	2.5	10.2
2020	1.7	9.3
2021	1.8	7.7
2022	1.8	8.0

Major problem with heating accommodation and/or keeping it warm during winter

Appendix Table 14. Proportion of households that reported major problem heating accommodation and/or keeping it warm in winter by selected ethnicities, HES years ended June 2013 to June 2022

Year	Māori	Pacific	Total population
2013	16.4	22.3	9.1
2014	15.0	19.8	8.3
2015	16.8	24.3	8.6
2016	11.4	14.6	6.8
2017	12.5	14.6	6.9
2018	14.0	15.2	7.2
2019	15.0	20.9	8.3
2020	11.7	17.7	6.8
2021	9.2	11.8	5.9
2022	9.9	13.8	5.7

Appendix Table 15. Proportion of households that reported major problem heating accommodation and/or keeping it warm in winter by household crowdedness, HES years ended June 2016 to June 2022

Year	Crowded	No bedrooms needed and none spare	1+ bedrooms spare
2016	10.4	11.4	5.4
2017	18.0	11.7	5.1
2018	14.9	11.2	5.6
2019	19.5	13.6	6.1
2020	16.8	10.2	5.2
2021	16.4	9.3	4.4
2022	12.3	9.2	4.5

Appendix Table 16. Proportion of households that reported major problem heating accommodation and/or keeping it warm in winter by self-reported income adequacy, HES years ended June 2013 to June 2022

Year	Not enough	Only just enough	Enough	More than enough
2013	26.6	12.3	3.6	2.5
2014	24.1	12.1	3.2	2.1
2015	26.2	11.7	3.8	2.8
2016	20.8	10.6	3.6	1.6
2017	22.2	9.4	4.4	1.7
2018	24.8	11.1	4.0	2.0
2019	25.0	12.4	4.7	2.0
2020	24.0	10.5	3.4	1.9
2021	20.4	9.3	3.3	1.9
2022	20.0	10.0	3.1	1.5

Appendix Table 17. Proportion of households that reported major problem heating accommodation and/or keeping it warm in winter by tenure, HES years ended June 2013 to June 2022

Year	Owned	Not owned
2013	4.7	18.2
2014	4.0	16.7
2015	4.1	17.2
2016	2.9	14.5
2017	3.6	12.9
2018	3.5	14.5
2019	4.0	15.9
2020	3.0	13.4
2021	2.7	11.9
2022	2.9	11.3

Put up with feeling cold a lot

Appendix Table 18. Proportion of households that reported putting up with feeling cold a lot by selected ethnicities, HES years ended June 2013 to June 2022

Year	Māori	Pacific	Total population
2013	16.7	21.9	8.5
2014	14.8	19.1	7.2
2015	14.8	18.8	6.9
2016	11.8	12.4	5.8
2017	9.3	18.9	5.8
2018	11.1	13.6	6.5
2019	13.1	19.7	7.6
2020	10.6	18.1	6.5
2021	9.6	11.6	5.3
2022	9.4	11.6	5.2

Appendix Table 19. Proportion of households that reported putting up with feeling cold a lot by household crowdedness, HES years ended June 2016 to June 2022

Year	Crowded	No bedrooms needed and none spare	1+ bedrooms spare
2016	6.5	8.9	5
2017	16.8	9.9	4.1
2018	13	10.9	4.9
2019	16.8	12.8	5.6
2020	14.6	10.5	5.0
2021	11.3	9.1	4.0
2022	13.4	8.9	3.9

Appendix Table 20. Proportion of households that reported putting up with feeling cold a lot by self-reported income adequacy, HES years ended June 2013 to June 2022

Year	Not enough	Only just enough	Enough	More than enough
2013	28.5	12.5	1.9	0
2014	24.9	10.3	2.4	0
2015	22.1	10.3	2.5	1.1
2016	19.6	9.1	2.9	0.8
2017	22.8	8.8	2.3	0.7
2018	27.3	8.9	3.3	1.5
2019	27.0	11.7	3.5	0.9
2020	25.8	10.5	2.9	1.1
2021	21.7	9.2	2.2	0.9
2022	22.8	8.9	2.3	1.0

Appendix Table 21. Proportion of households that reported putting up with feeling cold a lot by tenure, HES years ended June 2013 to June 2022

Year	Owned	Not owned
2013	4.6	16.2
2014	3.3	14.7
2015	3.5	13.3
2016	2.7	12.1
2017	3.2	10.5
2018	3.1	13.4
2019	3.5	14.8
2020	3.1	12.8
2021	2.5	10.6
2022	2.4	10.9

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