



BALLARAT
RENEWABLE
ENERGY
AND ZERO
EMISSIONS



Final Report
BREAZE Energy Efficiency Workshops
Schedule no: OPP-56381

Introduction

From March to June 2023, members of the Ballarat Zero Emissions Alliance met fortnightly to discuss how to assist the Ballarat community in the implementation of the Ballarat Zero Emissions Plan. The concept of Home Energy Efficiency workshops to assist householders to retro fit their homes to improve thermal efficiency was a key topic of discussion. The concept emerged from similar workshops that had been run many years earlier through the Smart Living Ballarat program on a volunteer basis by Joe Boin and John Petheram, two members of the group. With rising energy prices and the cost of living crisis, along with the climate crisis and urgent need to cut greenhouse gases, members agreed there was a public need for free expert advice on energy efficiency.

Importantly for BZEA, this was also in line with implementation of the City of Ballarat's Zero Emissions Plan, Outcome 2. Net Zero Homes - Action 2.1a:

a) Promote support including financial resources for energy upgrades of homes, with a focus on vulnerable community groups and households

Regional Manager, Grampians Community and Partnership Programs, Janene Trickey, attended these initial online meetings and invited us to submit a proposal for the workshops to DEECA for consideration. On 20 June 2023, BREAZE Inc. received confirmation of a \$5,000 grant to run a pilot series of Home Energy Efficiency Workshops, to finish by 29 September 2023.

The subsequent pilot ran from Monday 24 July to 4 September at the Ballarat Tool Library.

As specified in the DEECA Funding agreement, the Workshops were designed to deliver the following objectives:

1. Empower householders with knowledge about how to improve thermal efficiency of their homes, leading to:
 - a. warmer homes in winter and reduced health risk from indoor temperatures below 18 degrees
 - b. Cooler homes in summer and reduced health risk from heatwaves
 - c. Reduced energy bills
2. Promote uptake of government programs including the Power Saving Bonus, Victorian Energy Upgrades and Scorecard assessments
3. Target vulnerable people in the community, those least able to afford energy efficiency upgrades and those whose health is most at risk from extreme weather

Workshop Promotion

Given the importance of commencing the workshops while Ballarat residents were still in the depths of winter, the promotions campaign was necessarily short. We had 1000 postcards designed and printed along with 10 x A3 posters - all of which were hand delivered – with a personal explanation about the Workshops and their intended target group – to 20+ venues across Ballarat including:

- Libraries
- Neighbourhood Houses
- Social Housing Providers
- Senior Citizens Clubs
- Mens Sheds
- Various others

A media release was issued and sent to all media organisations across greater Ballarat. This sparked three radio interviews - two on separate days with Radio 3BA and one with ABC Ballarat plus two newspaper articles - in the Ballarat Times and The Courier.

The Workshops were also quite heavily promoted across BREAZE social media channels - Facebook, Instagram and Twitter. The Facebook promotion included posting on eight separate community Facebook sites, at least twice a week prior to the commencement of the workshops and during the pilot period.

An online booking site for the Workshops was established on Trybooking.com with the link and the QR code generated by this site used in all promotion for ease of access. A contact phone number was also included on the postcard for any interested parties who did not have email or internet access. Two people registered for the workshops via this phone line.

Overall 84 tickets were 'sold' via the Trybooking site. Some of these were to people who returned several times, clearly an endorsement of the usefulness of the content.

Workshop Content

The one and a half hour workshop were structured to lead people into the topic of energy efficiency gradually beginning with the cheap, easy, short term fixes before moving through to the larger investments offering longer term returns. Content included the following:

- How to get the best deal from energy retailers with reference to recent bills and letters received detailing upcoming price rises, which participants were asked to bring to the workshop
- Cost effective DIY easy fixes such as draught-stopping of various kinds and discussion of the best products
- Home insulation - rating standards needed in Ballarat's climate, preferred products, installer mistakes to watch out for and the comparative benefits of ceiling, wall and underfloor insulation.

- Window coverings - the value of heavy drapes and pelmets, honeycomb blinds or double glazing if affordable was clearly demonstrated with images from a Thermal Imaging camera
- Space heating - the energy efficiency of reverse-cycle air-conditioning (RCAC) and the cost benefits of shifting off gas to RCAC, particularly for homes with rooftop solar
- Cooling - the double value of having RCAC, again particularly for homes with rooftop solar
- Water heating - the energy efficiency of hot water heat pumps (HWHPs) and the cost benefits of shifting off gas, old style electric resistance, or solar hot water systems (which are not efficient in the Ballarat winter), to HWHPs
- Rooftop solar - discussion of the benefits and the economics including Solar Vic rebates and STCs
- Other government subsidies and rebates including the Power Saving Bonus, Victorian Energy Upgrade Scheme and Scorecard Assessments plus sources of cheaper loans

Workshop Discussions

The venue, the Ballarat Tool Library, provided a worker-like space, with participants for each session limited to 15. Workshops were quite interactive with participants asking questions throughout the presentation as topics of special relevance to them came up. This general conversational mode meant that everyone learned from each other's questions.

- A number of participants noted the need for a resource site on Energy Efficiency retro fitting with follow up information that was reliable and easy to access
- Getting off gas gradually by adding RCAC to one room at a time – the most commonly used first, as finances allowed – emerged as a common approach
- The enrolment form we asked participants to complete revealed few households had insulation in their walls or floors although draughts through the floor was a relatively common comment
- In discussion on window coverings there was quite a lot of interest in honeycomb blinds and the 3M/Duck film options. Many had been unaware of honeycomb blinds
- Anecdotal evidence referenced bad experiences with the Victorian Energy Upgrade scheme. Some observed there were few if any providers registered with the scheme in Ballarat. This was reputedly due to the amount of paperwork involved. It was also observed that someone who got the draught-stopper package found it was so poorly done the door seals stopped the front door from closing properly, while other seals fell off mere days later, indicating very poor workmanship. Others noted being constantly contacted for a 'package' without any explanation of why it might suit their home. The common theme was that registered installers were more driven to cash-in on the government rebate than respond to householder needs.
- There was also anecdotal evidence regarding Hot Water Heat Pumps (HWHPs) with reports of gasfitters/plumbers claiming Ballarat was too cold and that it was best to simply replace old gas hot water systems with new gas hot water systems. The message of the workshops leaders was clear that this was not so and that HWHPs were

fine for temperatures down to -10C. Several participants noted they had recently had gas replaced with gas.

- Some expressed the need for subsidised Home Energy Audits via the Scorecard scheme, saying the workshop information didn't go far enough for them

Participant Cohort

The Contract required that the Workshop Pilot cater particularly for the needs of vulnerable people:

'To target vulnerable people in the community, those least able to afford energy efficiency upgrades and those whose health is most at risk from extreme weather'

In promoting the workshops emphasis was placed on assistance with cutting costs and keeping warm as the key benefits of energy efficiency - as opposed to focusing on reducing greenhouse gas emissions which was a key motivation for the BZEA.

In the media release we sent out we noted that many people were 'doing it tough' and that energy efficiency was a useful strategy for coping with the 'cost of living crisis.'

We know many Ballarat locals are struggling this winter, due to rising energy prices and cost of living increases. Retro fitting old houses, of the kind many of us have, can be tricky and complicated. Professional advice on energy efficiency can make a huge difference. So we're delighted to have Dale Boucher and Tim Drylie leading these workshops. They both have considerable knowledge and experience to draw on. We urge residents doing it tough, or those for whom winter is particularly disabling, to take up this opportunity. Bring along your energy bills and leave with a plan!

Our postcards and posters and social media posts all reiterated this message.

Data Findings

Participants were asked to complete a Workshop Enrolment Form when they arrived. We explained this was for us to get a better understanding of community needs and to make the case for running another series in 2024. Of those attending 45 completed the Enrolment Form.

As shown in Table 1, 60% of participants came from the two lowest self-selected income ranges combined (with incomes under \$50,000). This indicates success in reaching low income/vulnerable households. Of this 60%, approximately half or 28.9% were in the lowest income range - under \$30,000. It is worth noting too that these ranges often referred to the combined income of couples.

Income range of participants

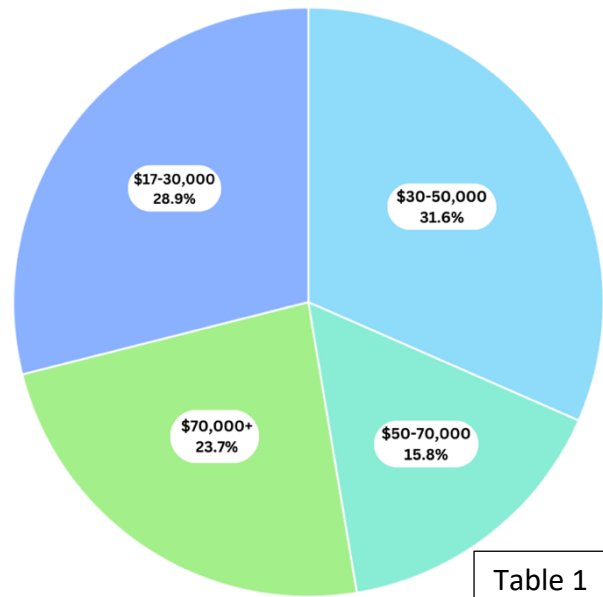


Table 1

Age range of participants

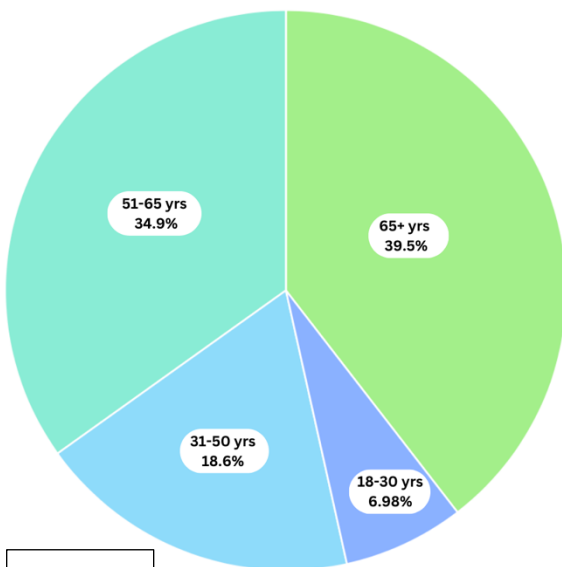


Table 2

Data gathered on the age range of participants (Table 2) indicated 74.4% of the cohort was over 50 years old, and nearly 40% over 65 years old. Certainly we had anticipated that retirees/pensioners would be a key component of the vulnerable group we were targeting. However, the very small percentage of under 30 year olds – 6.98% – indicated that younger unemployed people and those on welfare of other kinds, who fell within our vulnerable target group, had not been reached.

The data collected on participants' current draught-proofing efforts (Table 3) indicated the value of the Workshop information and emphasis on this topic. This was confirmed in feedback with the benefits of these cheap and easy fixes in slowing the escape of warm air now better understood. With more knowledge, participants were both better equipped and more confident about embarking on these home improvements themselves.

Draught-proofing

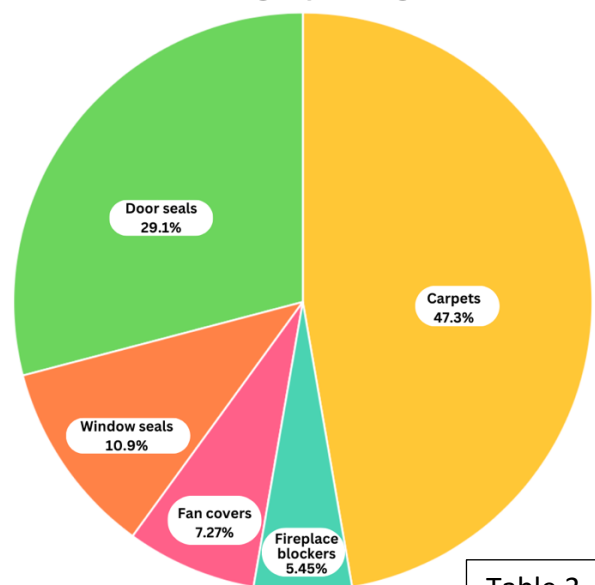


Table 3

Windows

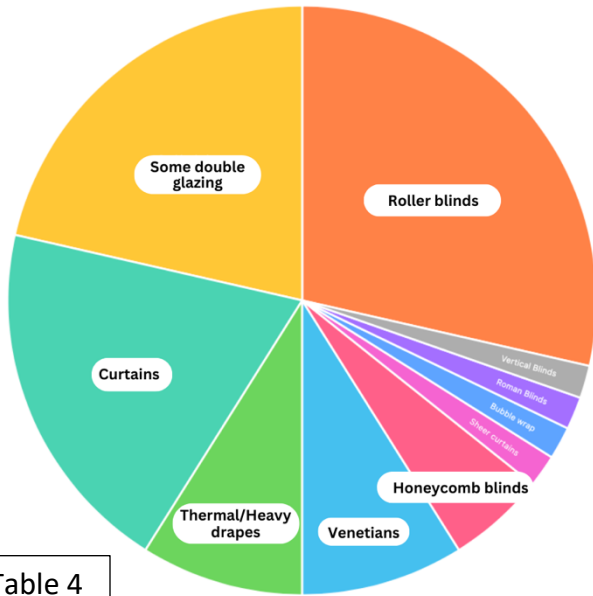


Table 4

In Table 4 (Windows) those who ticked the double glazing box all noted it was only for 'some' windows - signalling awareness of the benefits of double glazing and caution regarding cost. Choices of window covering were various, largely signalling ignorance on heat loss via windows. However, workshop discussion indicated good interest in honeycomb blinds which were news to many, along with the 3M/Duck plastic film, a poor man's double-glazing substitute, and bubble-wrap.

While 60%+ of participants had ceiling insulation, as indicated in Table 5, few had interior wall insulation and fewer - 7.94% - underfloor insulation. Key content in this part of the workshop was that Ballarat homes need insulation to R 6 or higher, while in effect most homes are likely to only have R2 or 3. Gaps and compaction over time were noted. The good news was that it is relatively easy to add to the existing insulation, without having to remove it.

Insulation

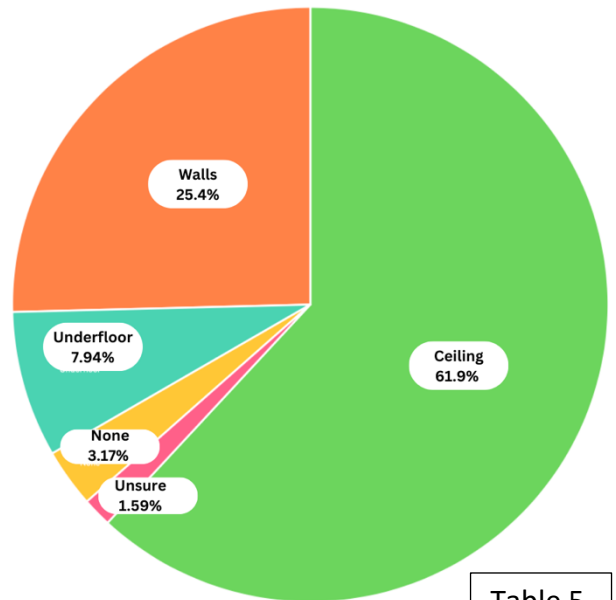


Table 5

Space heating - includes mixed use

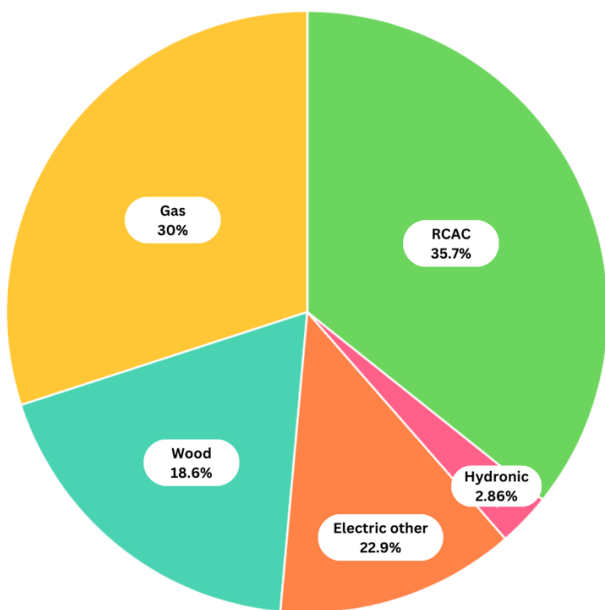


Table 6

While Table 6 (Space Heating) indicates that people are shifting off gas, it is important to note that the transition for many is a very slow one with RACA units installed room by room as funds allow and gas continuing to be used on an as needs basis in the interim. Mixed heating was common with many listing wood, electric and gas as part of their home heating system

As Table 7 indicates most of the participants are still using energy hungry gas or electric resistance water heaters. Workshop explanations given regarding the energy efficiency of hot water heat pumps (HWHPs) was perhaps the most important take-away for many participants. As noted earlier, the point was also made that as regards the Ballarat climate, HWHPs are fine but Solar hot water is best left to warmer climates.

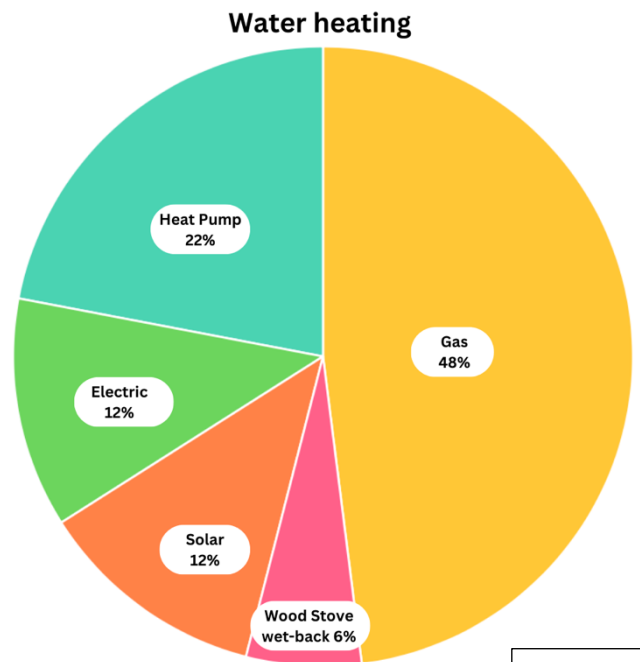


Table 7

Rooftop solar N=39.5% Y=60.5%

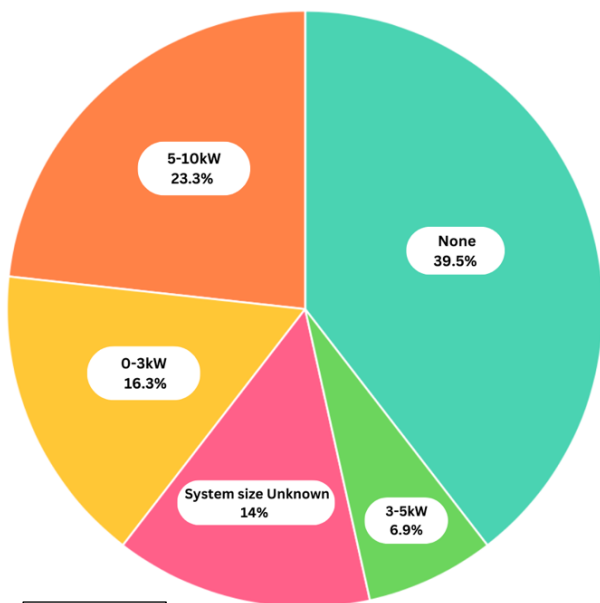


Table 8

Interestingly, Table 8 shows that 60% of the Workshop cohort had rooftop solar. This is atypical. Solar PV take-up in Ballarat is estimated at 17.2% of households - [Network data | CitiPower & Powercor](#)

While many of the participants' solar system were quite small with seven having 1.5kW systems, many noted plans to increase their panels in the near future.

The relatively high proportion of rooftop solar take-up perhaps reflects the values of BREAZE networks – despite our best efforts to reach beyond our usual membership and subscriber base.

Conclusions

The feedback received on the workshops to date indicates they were helpful and appreciated, with all respondents ticking the 'very useful' option on our feedback form. For many it was a topic they knew little about and one comment noted that the information given in the one and a half hours was not enough - 'just scratching the surface'. Another suggested subsidised individual home energy audits were needed to help those who could not afford this service unassisted. Another said, 'It's so useful to have guidance and information solutions from

credible community organisations. Please provide a space to look at each section in more detail. Applauding the workshop as *'an independent voice of authority,'* another noted, *'State Government incentives need to focus on prioritising energy saving activities rather than focusing on individual examples.'* Yet another observed. *'It was a great program. Hope it can continue next year.'* Others commented that they found the workshop experience inspiring and that it would increase their efforts to get off gas.

Data gathered on the workshop cohort indicates the workshops reached their intended target group with low income householders constituting 60% of those who registered for the workshops. However, as the data also indicates, some vulnerable groups were not reached with low income/vulnerable youth clearly under-represented. Additionally, given nobody ticked the 'Rental' box this is another potentially low income group that our promotions didn't reach.

While it is clearly much less easy for a renter to retro-fit their home for energy efficiency, nevertheless, many of the cheap DIY draught-stopping fixes, along with heavier window coverings could well be something that renters feeling the cold and the cost of living crisis would be prepared to invest in. There is also the option of passing through requests with background information on cost benefits to the landlord via the property manager. Given Solar Vic offers rebates for solar on rental properties it may just be the paperwork that is delaying action by some landlords. It might therefore be worthwhile holding separate standalone workshops, even if only online, for special groups like this.

One conclusion is that groups missing from our target demographic - youth and renters - would be better reached via wider networks. Pending funding for workshops in 2024 we will seek City of Ballarat support via their community networks and communications channels.

Secondly, as noted earlier under the Workshop Discussion, participants noted the need for a local trusted resource with information on home energy efficiency retro-fitting. We envisage a centralised local resource site. For example a webpage linked to the City of Ballarat's Climate Action page. A site such as this could detail energy efficiency principles, relevant standards, product types, energy efficient appliances and their ratings and government rebates and subsidies, among other things.

A centralised energy efficiency resource site would be a tremendous help to those households trying to get off gas. Given skyrocketing energy prices, the cost of living crisis and the popular movement for re-wiring the nation, we believe many households will have that ambition.

Thirdly we recommend that the program be continued and expanded in 2024, perhaps delivered in collaboration with the City's network of Neighbourhood Houses with some additional specialist online sessions targeting particular groups.

A decade ago BREAZE volunteers ran similar workshops via the Smart Living Ballarat program. Ten years on climate change is here and we have no time to waste. We know that methane emissions are more damaging than CO2 and that gas is no longer something we can regard as an interim fuel or energy source. Requests for subsidised home energy audits and more information indicate the public appetite for professional expertise.

While volunteers can play a facilitating role, the value and importance of giving the community access to professional advice in this field of energy efficiency, was evident in the workshop Q&A discussions and in the feedback received. We thank DEECA for giving us the opportunity to run this pilot.

Signature

The contents of this Final Report are true and correct in every particular, to the best of my knowledge after having made all due enquiries.

A handwritten signature in red ink that reads "Mary Debrett". The signature is written in a cursive style with a long horizontal stroke at the end.

Name of authorised representative: Mary Debrett

Position title: President

Date: 9 September 2023

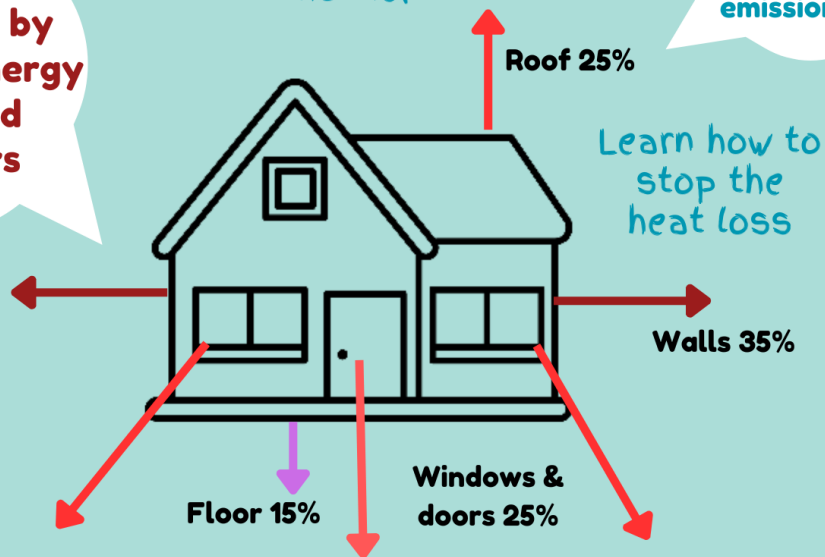
Live in Ballarat? Feeling the cold?

Want to make your home energy efficient?

FREE weekly workshops by Victorian Energy Scorecard Assessors

Is this your home?

Warm up, save on energy bills, and cut emissions



Learn how to save on your heating bills

**Mondays 10-11:30 am, 24 July to 11 September,
Ballarat Tool library, Barkly Square,
25-39 Barkly St, Ballarat East.**

Free book via
trybooking.com/CJTRY



Complimentary morning tea

Phone Book: 4310 6439

**Accredited Victorian Energy Scorecard Assessors
Dale Boucher and Tim Drylie will cover key aspects
of energy efficiency and help residents develop
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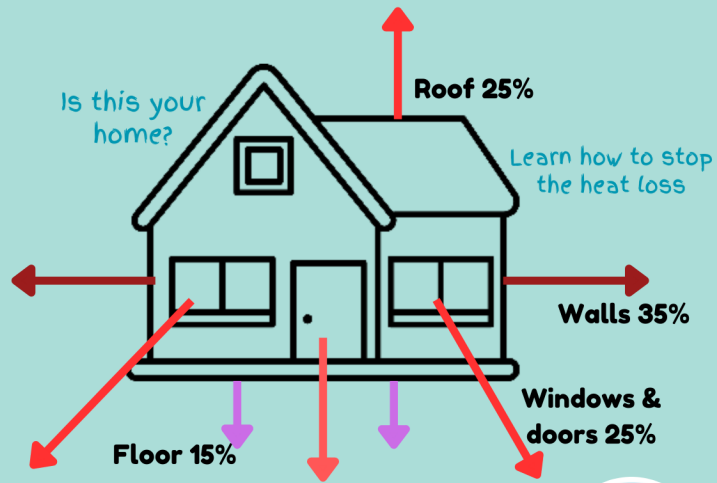
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Funded by Department of Energy, Environment and Climate Action (DEECA)

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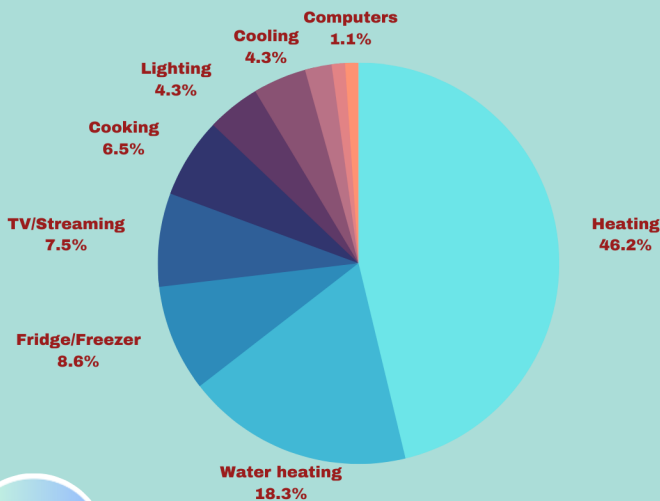
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