
Integrating energy efficiency & hardship improvements into the Care at Home system

Report for publication

Dr Nicola Willand
Dr Dena Sharrock
Dr Debbi Long



24 February 2019



Table of Contents

1. Executive summary6

2. Acknowledgements8

3. Abbreviations.....9

4. Introduction 10

4.1 Background and rationale 10

4.2 Goals..... 11

4.3 Methodology..... 11

4.4 Partnership context 11

4.5 Research team 12

4.5.1 Dr Nicola Willand 12

4.5.2 Dr Debbi Long 12

4.5.3 Dr Dena Sharrock..... 12

5. Stakeholder review and map 14

5.1 Summary 14

5.2 Introduction..... 14

5.3 Purpose..... 14

5.4 Methodology..... 15

5.5 Results 15

5.6 Health..... 17

5.6.1 Decisionmakers 17

5.6.2 Operations..... 18

5.6.3 Programs 21

5.6.4 Policies 22

5.6.5 Training and consultation 23

5.6.6 Community and advocacy 24

5.7 Climate Change Mitigation/ Energy 26

5.7.1 Decisionmakers 27

5.7.2 Operations..... 28

5.7.3 Programs 31

5.7.4 Policies 34

5.7.5 Training and consultation 35

5.7.6 Community and advocacy 35

5.8 Equity 36

5.8.1 Decisions makers 37

5.8.2 Operations..... 37

5.8.3 Programs 37

5.8.4 Policies 39

5.8.5 Training & Consultation 40

5.8.6 Community and advocacy 40



5.9	Discussion.....	40
5.9.1	Tensions and challenges.....	40
5.9.2	Opportunities	42
5.9.3	Advantages beyond trust.....	44
5.9.4	Future research	44
5.10	Recommendations	46
5.11	Conclusion.....	46
6.	Stakeholder report: challenges and opportunities	47
6.1	Summary	47
6.2	Introduction.....	47
6.3	Objective	47
6.4	Methodology.....	47
6.4.1	Data collection.....	48
6.4.2	Data analysis.....	49
6.5	Results	49
6.5.1	Participants' characteristics.....	49
6.5.2	Participants' experiences.....	51
6.5.3	Practices and programs.....	52
6.5.4	Relevance	53
6.5.5	Tensions and challenges.....	55
6.5.6	Opportunities	63
6.5.7	Sustainability	70
6.5.8	Alternatives.....	73
6.5.9	Pathways.....	74
6.5.10	Categories of perception	80
6.6	Discussion.....	81
6.7	Conclusion.....	83
7.	Care provider report.....	85
7.1	Summary.....	85
7.2	Purpose.....	85
7.3	Methodology.....	85
7.3.1	Data collection.....	85
7.3.2	Data analysis.....	86
7.4	Results	86
7.4.1	Participant information.....	86
7.4.2	Client process charts.....	87
7.4.3	Experiences with of energy hardship.....	91
7.4.4	Current actions addressing energy hardship, opportunities to address it and needs	92
7.5	Conclusion.....	97
8.	The Model.....	98



- 8.1 Risk identification98
- 8.2 Response99
- 8.3 Referral99
- 8.4 People-centric energy initiatives.....99
- 8.5 Integrating solutions to Energy, Equity and Care99
- 9. Risk identification tools and resource pack 101**
- 9.1 Summary..... 101
- 9.2 Purpose..... 101
- 9.3 Definition of risk..... 101
- 9.4 Risk identification tools..... 101
- 9.4.1 The ideal situation: risk identification through the Care at Home assessments..... 101
- 9.4.2 Energy-related health vulnerability tool..... 102
- 9.4.3 Potential identifiers of energy poverty..... 103
- 9.4.4 National Screening and Assessment Form – Home Support Assessment 103
- 9.4.5 Risk identification checklist..... 104
- 9.5 Protocol for risk management..... 106
- 9.5.1 Recognition 106
- 9.5.2 Response 106
- 9.5.3 Referral..... 106
- 9.6 Resource Pack..... 106
- 9.6.1 Lists of opportunities..... 106
- 9.6.2 Additional material 106
- 10. Panel discussion at the RMIT Engaging for Impact event 111**
- 11. Discussion 112**
- 12. Conclusion..... 113**
- 13. References..... 114**



Table of figures

Figure 1 Preliminary stakeholder map 16

Figure 2 Display column in the Ringwood Library, showing a guide to the CHSP (middle brochure on the left), in September 2018. Source: First author26

Figure 3 Stakeholder map showing the three domains and levels of influence of the organisations which were invited to participate. Each blue dot represents one organisation. 49

Figure 4 Stakeholder map showing domains and levels of influence of the organisations which participated in the stakeholder interviews. Each red dot represents a national organisation. Each black dot represents a Victorian organisation.50

Figure 5 Coverage of the term vulnerable (with stemmed words, no spread to paragraphs) in stakeholder interviews55

Figure 6 Stakeholder map showing links between organisations as lines.....67

Figure 7 Venn diagram showing the organisations that were nominated as the five most interested and five most influential stakeholders. Organisations in the intersection represented likely promoters. Larger font signifies multiple nominations. 76

Figure 8 Final stakeholder map with organisations suggested by participants 77

Figure 9 Client process chart Nexus Primary Care – Part 1..... 88

Figure 10 Client process chart Nexus Primary Care – Part 2..... 89

Figure 11 Client process chart MHA Care..... 90

Figure 12 A diagram of the Model that may guide the integration of energy efficiency and hardship initiatives into the Care at Home system. 98

Table of tables

Table 1 Overview of recruitment numbers and representative domains of participating organisations.....50

Table 2 Levels of influence of participants50

Table 3 Overview of participants 51

Table 4 Risk identification checklist 105

Table 5 Opportunities to reduce energy costs through medical energy concessions..... 108

Table 6 Opportunities to reduce energy costs through optimisation of energy contracts and energy concessions 109

Table 7 Opportunities to reduce energy costs through home improvements 110

1. Executive summary

“Aged care is in transition.”
(Legislated Review of Aged Care 2017 2017, p. 6)

“The overwhelming message was the call for Australia to adopt a single, nationally agreed plan to manage the transition to a lower emissions economy.”
(Finkel et al. 2017, p. 3)

“The [electricity] transition should be achieved in an affordable, equitable and inclusive manner, to ensure that low-income and disadvantage households are not left behind or do not pay disproportionately more for the transition.”
(ACOSS 2018, p. 4)

This project was conducted during a time in which the aged care sector was undergoing a reform process and its quality of services was already the subject of a Royal Commission (ACRC 2019). It was also a time in which the issue of climate change mitigation proved politically contentious, when the political focus turned to energy affordability, and political parties used the subsidy of solar photovoltaic microgeneration systems as election promises (ABC News 2018; Australian Associated Press 2018; Fedorowysch 2018; Wahlquist 2018). At the same time, community groups and the government became increasingly concerned about energy equity and the disadvantaged position of renters (*Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill* 2018) and the community (ACOSS et al. 2018; ACOSS, BSL & TSI 2017; Rowe & Maddocks 2018).

During this time of political change, concern about the quality of care of older people and a growing voice among the community for higher residential energy efficiency standards, this project explored the concept of integrating energy efficiency and energy hardship initiatives into the Care at Home system. The project aimed to provide a better understanding of how the Care at Home system may relieve energy hardship and improve the wellbeing among older Australians.

The Care at Home system comprises of nationally consistent assessment, referral and support services for older and frail Australians who wish to remain living independently in their homes. The Care at Home system aims to promote the wellbeing of older Australians and includes home modification services. About 280 000 Australians over 65 years suffer energy hardship. Energy hardship is the inability to provide for basic energy-related needs such as heating or cooling, with often adverse consequences for the health and wellbeing of vulnerable groups such as older or frail people. This is caused by the combination of poor thermal performance of homes, rising energy prices and low income. Their vulnerability is exacerbated by low awareness of energy concessions and retrofit subsidies, limited capabilities in negotiating the energy market, and a process that relies largely on self-identification of needs and risks, which is poor among this population group.

Research has revealed that improving the energy efficiency of homes of older Australians promises co-benefits for householder wellbeing and the environment. The effectiveness of an energy hardship program may be enhanced by addressing energy practices, helping to negotiate optimal energy contracts and facilitating access to concessions. Trust in home care providers encourages the uptake of energy efficiency and hardship initiatives, yet the current Care at Home system does not include this. This project addresses this gap. The project involved a desktop stakeholder review, interviews to explore stakeholder perceptions of the idea and an ethnographic study of the organisational processes of two Care at Home service providers.

This project showed that on the ground staff caring for older people and policy advisors and program managers responsible for a low carbon energy transition and improved social equity, recognised energy hardship among older Australians as a problem, which should be given urgent attention to ensure that this population group was given equitable and inclusive access to energy-dependent and health-relevant services. Energy and a front-line Care at Home provider with experience in energy initiatives for older people saw the linking of the Care at Home system with energy efficiency and hardship initiatives as an opportunity to improve social equity despite the challenges of retrofits. Equity stakeholders perceived the proposed endeavour as an ideal which required a better



understanding of the reality of vulnerable, older people. Health advocacy stakeholders, however, saw it as a distraction from dealing with the broader challenges of an ageing population. Nonetheless, all participants offered suggestions on how perceived challenges could be addressed in an efficient and effective manner. Raising awareness in the community, fostering collaborations and generating evidence for possible solutions were regarded as important steps in establishing a political agenda and tackling energy hardship through synergies across programs.

The study of the organisational processes of two care provider organisations produced a visual map of the client journey through the system, starting at the referral to My Aged Care to the assessments and support services. The interviews with a broad spectrum of care workers revealed that symptoms of energy poverty were noticed. However, the responses by the care providers were limited by a lack of knowledge of energy-related financial or behavioural assistance. Care workers desired comprehensive information material and links to services in hard copy and digital form.

The project produced a Model demonstrating how energy efficiency and hardship initiatives could be integrated into the Care at Home system through a risk identification, response and referral approach. The National Screening and Assessment Form may be used to assess householder capabilities to negotiate the energy market, screen for energy hardship and identify inadequate thermal conditions. Assessors may respond by linking vulnerable householders to energy counsellors, who may develop an Energy Support Plan based on a Residential Efficiency Scorecard home energy audit and check contracts and eligibility for concessions. Energy counsellors may also support householders in the implementation of this Plan, i.e. assist with retrofits, concession application, negotiation of contracts and provide energy advice. An Energy Supplement may provide financial support without drawing on Care at Home health care funds. This integration of energy initiatives into the Care at Home system may be supported by public awareness campaigns tailored to seniors to promote self-referral, by equipping health professional to identify energy hardship and to refer patients to services and by making energy initiatives more person-centric. Participating care providers were provided with a resource pack to tackle energy hardship immediately on a local level. For the future, integrated solutions linking energy, equity and care may need to be developed to reach vulnerable people who do not benefit from Care at Home.



2. Acknowledgements

This research has received funding through a Research Translation Seed Fund by the Strategic Innovation Unit of RMIT University, Melbourne, Australia. The project was supported by the project partners, the Australian Government Department of Environment and Energy, the South East Council Climate Change Alliance, Moira Health Alliance and Nexus Primary Care.

The RMIT research team gratefully acknowledges the following persons who have assisted the team in preparing a successful Seed Fund grant application, provided invaluable contributions and insights for the various components of the research. The team is also indebted to all participants who shared their experiences and expertise but who wished to remain anonymous.

Person	Organisation (in alphabetical order)
Virginia Hoy	Australian Government Department of Environment and Energy
Kevin Chadwick	Australian Government Department of Environment and Energy
Damian Sullivan	Brotherhood of St Laurence
Liam Cranley	Brotherhood of St Laurence
Nicole Richards	Brotherhood of St Laurence
Sophia Petrov	COTA Australia, National Aged Care Alliance
Judy Gregurke	COTA Australia, National Aged Care Alliance
Kerry Connors	Energy Consumers Australia
Michael Hogan	Moira Health Care
Wendy Farrall	Moira Health Care
Suzanne Miller	Nexus Primary Care
Bronwyn Allen	Nexus Primary Care
Lisa Glover	Nexus Primary Care
Bronwyn Allen	Nexus Primary Care
Wendy Reardon	Nexus Primary Care
Christian Bell	Nexus Primary Care
Tanya Christie	Nexus Primary Care
Barbara Moss	Nexus Primary Care
Claire Raeburn	Nexus Primary Care
Julie Albert	Nexus Primary Care
Dr Reza Mohammed	RMIT University
David Swift	RMIT University
Noah Eisen	RMIT University
Ass. Prof. Zhen Zheng	RMIT University
Dominique La Fontaine	South East Councils Climate Change Alliance
Dan Pleiter	South East Councils Climate Change Alliance
Adam Shalekoff	Sustainability Victoria
Anja Albach	Tabulam & Templer Homes for the Aged
Ricarda Rammanhor	Tabulam & Templer Homes for the Aged

Table continues on next page.



Person	Organisation
Veronica Greenfield	Uniting Kildonan
Emma O'Neill	Victorian Council of Social Service
Veronica Perera	Victorian Council of Social Service
Lucy Alinson	Victorian Department of Health and Human Services
Kathryn Lucas-Healey	Victorian Department of the Environment, Land, Water and Planning
Martin Jones	Victorian Department of the Environment, Land, Water and Planning

3. Abbreviations

- ACCC Australian Competition and Consumer Commission
- ACAT Aged Care Assessment Teams
- ACT Australian Capital Territory
- AER Australian Energy Regulator
- ASBEC Australian Sustainable Built Environment Council (ASBEC)
- ATA Alternative Technology Association
- CAHA Climate and Health Alliance
- CALD Culturally and linguistically diverse
- CAV Consumer Affairs Victoria
- CDC Consumer (or Client) Directed Care (CDC)
- CHSP Commonwealth Home Support Programme
- COAG Council of Australian Governments
- CSHC Commonwealth Seniors Health Card
- EEC Energy Efficiency Council
- HACC Home and Community Care
- HCP Home Care Package
- LLLB Living Longer Living Better
- MEFL Moreland Energy Foundation
- MAC My Aged Care
- NEPP National Energy Productivity Plan
- NSAF National Screening and Assessment Form
- RAS Regional Assessment Service
- RTA Residential Tenancies Act
- SECCCA South Eastern Councils Climate Change Alliance
- U3A University of the Third Age

4. Introduction

This report describes the background, design and outcomes of the early phase of an endeavour to address energy hardship among older people through a multi-disciplinary coordination of health, equity and energy services. This report is the output of an RMIT University-funded Seed Fund project for research translation. The Seed Fund aims to assist researchers in developing strong links with external organisations, support large research grants and attract investors (RMIT 2018). In 2018, the Seed Fund offered up to \$25 000 and supported interdisciplinary efforts. Project had to be completed within six months (RMIT 2018).

4.1 Background and rationale

This project aimed to translate the findings of Dr Nicola Willand's PhD thesis and related research into practice.

Over a quarter of a million older people in Australia are income-poor, vulnerable to rising energy prices and may compromise their health by curbing heating or cooling in their home¹. Research shows that small retrofits, education on mindful energy practices, optimisation of energy contracts and access to energy concessions may mitigate the burden of energy costs, increase comfort and enhance the psychosocial benefits of the home initiatives (Cooper et al. 2016; Lynch et al. 2016; SECCCA 2016). Currently in Australia, planning and implementing retrofits, learning about energy saving practices, negotiating the energy market and advocating for energy concessions are dependent on the individual's awareness, capabilities, self-initiative and local supply of services, which may disadvantage some older people (Willand & Horne 2018).

Taking energy retrofit advice is a question of trust. Several research projects have shown that trust in home care providers encourages the uptake of energy efficiency and hardship initiatives (Russell-Bennett et al. 2017; SECCCA 2016; Willand 2017). Framing energy matter around immediate social matters such as health has also proven to assist in recruiting participants (Russell-Bennett et al. 2017). Hence, integrating energy efficiency and hardship services into the Care at Home system promises triple benefits for health, equity and the environment. To date, this research evidence has not been translated into policy or practice.

The Care at Home system services over three quarters of a million Australians nationwide (AIHW Gen 2018b). The Care at Home system is one form of Commonwealth funded aged care services for Australians over 65 years, comprising the Commonwealth Home Support Programme and Home Care Packages. Home support and home care differ in the types of services, the amount of money available to the older person and the funding agreements with the federal government. However, both programs aim to support older Australians to live autonomously and independently in their own homes under the key principles of wellbeing and reablement. These services address physiological, mental and social health needs and include assistance with home maintenance and modification such as ramps and rails (My Aged Care 2018a). However, home energy retrofits such as insulation or assistance with energy contracts are not included as eligible service products. This project addressed this gap in practice by trying to integrate energy efficiency and hardship improvements into the services that support older Australians to live at home independently.

Such a collaboration between the Care at Home system and energy efficiency and hardship initiatives would constitute a partnership between the health and energy sectors, which would be novel in Australia, but has been tried in other countries. In the context of a lower carbon energy transition, there is an emerging interest in social impacts and the affordability, accessibility and equity of access to necessary energy services in Europe as well as in Australia. In Europe, similar to the development in Australia, neo-liberal energy policies in the 1990s and the

¹ Estimation derived from the combination of Azpitarte, Johnson and Sullivan (2015) and Census 2011 data.

Azpitarte, Johnson and Sullivan (2015) used 2011 data of the representative HILDA survey to estimate that 8.47 per cent of households in Australia had fuel costs above the median level and a residual income after fuel expenditure below the official poverty line (Table 4.2). In 39.24 per cent of these households, the head of the household was over 65 years of age (Table 4.5). In 2011, there were 8.42 million households in Australia (ABS 2015).

Hence, it was calculated that in 2011, 280 841 Australians over 65 years of age classified as being fuel poor according to this low income- high energy cost definition. The prevalence may be higher as some of these households may include one or more additional persons over 65 years.



low carbon energy policies in this century have led to increased energy prices and inequitable distribution of the burden and social exclusion (Bouzarovski & Tirado Herrero 2017). Since 2016, European member states have been given the responsibility of defining, collecting data and monitoring energy poverty and vulnerability and of implementing energy efficiency measures designed to mitigate vulnerability (Romero, Linares & López 2018). Energy and fuel poverty indicators differ from state to state as do governmental responses. A common approach seems to be the support of social and health sector organisations and community groups to identify and assist households who are vulnerable to energy hardship (Bailey & Hodgson 2018; Bajomi & Gosztonyi 2016; Scarpellini et al. 2017; Social Innovation to Tackle Fuel Poverty 2018). Collaborations between the energy and health sector to support households with chronic respiratory problems with health-supporting energy efficiency measures has also proven successful in the USA (De Souza, Evans-Agnew & Espina 2019).

4.2 Goals

As an RMIT Research Translation Seed Fund, the project aimed to stimulate collaborations between academics and industry that is needed for successful knowledge translation. Knowledge translation has been defined as “methods for closing the gaps from knowledge to practice” (Straus, Tetroe & Graham 2009, p. 165). Previous knowledge translation between public health and the housing and energy sectors is rare.

The project had three goals. The project’s ultimate goal was to discover new ways of protecting older people from energy-related health and wellbeing problems. It also aimed to investigate how some of the responsibility of recognising and addressing energy hardship could be transferred from the individual to the community. And lastly, it tried to explore how advantage could be taken of the opportunities presented by the Care at Home system to address energy hardship among older Australians in an equitable, effective and efficient manner.

The project imagined a future in which the Care at Home system was improving the wellbeing of older Australians and benefitting the environment. Framing retrofit activities around warmth, energy costs and control of the home has shifted the perceived significance of energy retrofits from carbon emissions reduction to health, comfort and caring, offering additional incentives to the uptake of retrofits. Designing an efficient assessment and referral schedule for older Australians has upscaled the uptake of residential energy efficiency retrofits, optimised energy contracts and led to appropriate householder practices. The relief of energy hardship has supported older Australians to live in their home independently for longer. It has improved their quality of life, reduced health costs and lowered carbon emissions.

4.3 Methodology

This project drew on the iterative knowledge-to-action framework (Straus, Tetroe & Graham 2009). It highlights the need to develop decision-making tools that are sensitive to local contexts and the involvement of a diversity of stakeholders in the process to promote implementation across the varied levels of decision-making (Straus, Tetroe & Graham 2009). In response, this project adopted a combination of stakeholder engagement to identify opportunities for integrating energy efficiency and hardship initiatives into the Care at Home system and organisational ethnography in two care providers’ offices to identify current practices and needs of resources. Stakeholders were identified through a desktop review of organisations and agencies involved or interested in Care at Home, energy efficiency and energy equity. The care provider organisations were invited to be part of this project during the grant application phase. The project was approved by the RMIT College Human Ethics Advisory Network (CHEAN) at the College of Design and Social Context, Approval No. CHEAN B 21650-08/18.

4.4 Partnership context

During the grant application phase, the research team sought Expressions of Interests for the project from the perceived most important policy stakeholders, the Australian Government’s Minister of Aged Care and the Minister for the Environment and Energy, one or more care service providers as frontline organisations who would be most affected and may be most interested in the project’s aim, and the South East Councils Climate Change Alliance (SECCCA) as an interested organisation as this project built on the methods used in SECCCA’s Energy Saver Study (SECCCA 2016). At this stage, the project was focused on the Commonwealth Home Support



Programme (CHSP), as the researchers were ignorant of the distinction between home support and home care in the Ageing in Place programs.

The South East Councils Climate Change Alliance supported the project. The research team contacted six service provider organisations in regional and metropolitan Melbourne. Two providers did not respond, two declined, and two regional organisations, Moira Health Care Alliance and Nexus Primary Care, accepted the invitation with 24 hours. The enthusiastic response from these service providers revealed the appetite among on-the-ground service teams in learning more about how they may assist their clients in energy related matters and collaborating in the development of policy and programs. The flagging of heat stress in one of the support letters suggested that this service provider was more concerned about heat related health effects than the risk from cold homes in winter.

The Department of Environment and Energy responded positively to the email sent to the Minister within three weeks and promoted the project to Energy Consumers Australia, who expressed their interest. Follow-up calls to the Minister of Aged Care's office revealed details on the assessment process. The expression of interest call was forwarded to the Department of Health, which assessed and decided on the response, which the Minister then sent to RMIT. In a letter, the Minister of Aged Care responded in the negative after six weeks with the following justification:

CHSP entry-level support is underpinned by a 'wellness approach', which is about building on older people's strengths, capacity and goals to help them remain independent and to live safely at home and in their community. While services provided under the CHSP include home maintenance and modifications, these services are intended to maintain the person's functional independence so that they can continue to live and move safely about the house. Unfortunately the project proposal you have detailed in your correspondence does not meet the specific programme objectives as described within the CHSP Programme Guideline and Programme Manual/ [...] (The Hon Ken Wyatt 2018, personal communication)

Hence, the project partnership consisted of the Australian Government Department of Environment and Energy, the South East Council Climate Change Alliance, Moira Health Alliance and Nexus Primary Care.

4.5 Research team

4.5.1 Dr Nicola Willand

Lecturer, School of Property, Construction and Project Management, RMIT University

Dr Willand is an acknowledged architectural expert on residential energy efficiency and health. Her thesis proposed a holistic low carbon transition strategy addressing home construction, energy efficiency assessments, energy sales, social equity and public health. She brings to the proposal her experience relating to housing policy, energy hardship and Ageing in Place. Her role will include collaboration with all levels of stakeholders, data collection and analysis.

4.5.2 Dr Debbi Long

Senior Lecturer, School of Global, Urban and Social Studies, RMIT University

Dr Long is a health anthropologist with an established track record in organisational analysis and research translation. Her work with ISCR, TAC, WorkCover QLD and HNE Health focused on the identification of clients at risk, available (case management) interventions and appropriately embedding intervention strategies and has resulted in significant quality improvement innovations. Her role will be to develop effective organisational embedding of assessment and intervention protocols.

4.5.3 Dr Dena Sharrock

Researcher



Dr Sharrock has a PhD in health anthropology and brings a wealth of experience from her corporate background and organisational research in the natural health, tourism and leisure sectors. Her role was to carry out ethnographic research and analysis of the structures, functions, goals, and practices of participating home care provider organisations.

5. Stakeholder review and map

5.1 Summary

In preparation of the stakeholder interviews, a preliminary stakeholder map was drawn up based on a desktop review of individuals, organisation and agencies that were deemed likely to be affected by or interested in the integration of energy efficiency and hardship improvements into the Care at Home system. Based on the focus of the Care at Home system on the consumer or client, the map showed three domains or aims each section divided into six levels of influence on the decision of the householder or client. The map presented 32 stakeholders in the Health, 24 stakeholders in the Climate change mitigation or Energy domain and 15 stakeholders in the Equity domain.

To facilitate the context of the stakeholder interviews of Section 6, stakeholders and their relationships were reviewed via a desktop research. The review revealed that integrating energy efficiency and hardship initiatives into the Care at Home system has the potential to reach 800 000 current clients and a quarter of all households in Australia. Older people advocacy groups were starting to recognise energy affordability as a problem among their members, however, energy in the sense of fuel or electricity was not considered in the Care at Home context. Energy affordability, rather than climate change mitigation, was also emerging as a political concern at the federal and Victorian state government level. However, there were few national residential energy efficiency programs for existing homes. These were mainly state-based. The Equity sector was actively campaigning for the protection of energy-vulnerable people and supporting intervention trials of some Energy organisations.

The desktop review identified potential challenges to the idea of integrating energy efficiency and hardship initiatives into the Care at Home system as well as advantages beyond the trust of householders in their care worker, which had initiated the proposed linking of services. The challenges included the conflicts between the streamlined, nationally funded and governed Care at Home system and the fragmented and unequally distributed efforts to tackle climate change and energy affordability. Opportunities included cross-domain consensus on the need to improve the energy efficiency of rented properties and the first initiatives combining aspects of energy and health. Advantages of the proposed integration included the promise of better recognition of fuel hardship among older people and more equitable access to energy assistance.

5.2 Introduction

In preparation for the stakeholder interviews, a preliminary stakeholder map was produced by the researchers through a desktop review. This preliminary stakeholder map helped the identification of stakeholders and guided the discussions during the stakeholder interviews on the perceived influence and interests of the various groups in the project idea.

Stakeholders play a significant role in knowledge translation (Sauerborn, Nitayarumphong & Gerhardus 1999; Straus, Tetroe & Graham 2011). The term stakeholder has been defined as “any group or individual who can affect or is affected by the achievements of the organization’s objective” (Edward 1984, p. 46). Stakeholder engagement promises a better understanding of the perspectives of the various groups, professions and disciplines, and the context for proposed changes to better identify possible opportunities for the implementation, application, acceleration and upscaling of initiatives. Stakeholders in this project were individuals or organisations people who were deemed likely to be affected or interested in the integration of energy efficiency and hardship improvements into the Care at Home system.

5.3 Purpose

The purpose of the preliminary stakeholder map was to identify and document key stakeholders and their roles in striving for health, climate change mitigation and social equity, to facilitate the purposive sampling for the stakeholder interviews. The map also assisted in discussing the relationships among the varied bodies during the stakeholder interviews, and to identify gaps so that a comprehensive stakeholder map could be produced. The preliminary stakeholder map visually represented the key organisations and people who might be involved in or shape the decision-making processes that will be needed to integrate energy efficiency and hardship initiatives into the Care at Home system.



5.4 Methodology

The preliminary stakeholder map was produced in two steps. First, the two chief investigators conducted a brain storming session to identify the various people, organisations or bodies who might be affected or interested in the integration of energy efficiency and hardship improvements into the Care at Home system and to define the categories to group them. The proposed stakeholders were based on the researchers' industry knowledge and on a scoping research on Google, using combinations of the search terms "stakeholders", "ageing in place", "Australia", "care at home", "policy" and "program". Secondly, the project partners and those parties who had expressed an interest in the project were asked to suggest any stakeholders. These were also included in the map. For the review, information about the type and function of the organisations was sought on the Internet and summarised. In order to identify to which extent the three domains were already linked, the stakeholder websites were searched for key terms such as energy and health.

5.5 Results

The stakeholder map has been designed based on the current approach to Care at Home services of Consumer (or Client) Directed Care (CDC). Hence, the client or customer was placed in the centre of the map. Based on the three aims of the project of health, climate change mitigation and equity, the map was divided into three colour-coded sections or domains. Purple represented the health aim, green stood for climate change mitigation and orange for social equity. For brevity's sake, in this report, the domain of Climate Change Mitigation is also called the Energy domain.

Each section was subdivided into six arcs, representing six ranked levels of influence. Types of stakeholders with the highest level of influence on the decision of the client were placed closest to the centre, with the presumed levels of influence in the arcs. The Rankings of the levels of influence from highest to lowest level were:

- Decisions of the customer
- Practices in the operations (assessment and delivery)
- Programs, referring to current initiatives set by governmental, non-governmental or private bodies that aim to promote the three aims of the project, namely health among older Australian, carbon emissions reduction and social equity.
- Policies, referring to policy makers, advisors and government departments.
- Training & Consultation. Training addressed the education of employees, service providers and assessors. Consultation included advice to policy makers and program designers.
- Community & Advocacy. Community represented civil society organisations. Advocacy referred to services dedicated to achieving the optimal outcomes for consumers or clients.

The map (Figure 1) presented 32 stakeholders in the Health, 24 stakeholders in the Climate change mitigation or Energy domain and 15 stakeholders in the Equity domain. The research community was excluded on purpose, as the focus of the research was on research translation rather than on promoting new research or building a research network.

The following sections describe the stakeholders and any information that may be relevant to the project. This list is not intended to be exhaustive but to cover the roles and preoccupations of the main agents and agencies who may influence or be affected by an integration of energy efficiency and hardship assistance into the Care at Home system.

Non-CW service providers – Non-Commonwealth supported service providers
 CHSP – Commonwealth Home Support Programme
 COTA Council on the Ageing
 RAS Regional Assessment Service
 ACAT Aged Care Assessment Teams

DELWP - Department of the Environment, Land, Water and Planning
 RES assessors – Residential Efficiency Scorecard assessors
 ASBEC – Australian Sustainable Built Environment Council
 VEU program – Victorian Energy Upgrade program
 NatHERS - National Home Energy Rating System
 VPTA - Victorian Public Tenants Association
 ABCB – Australian Buildings Code Board

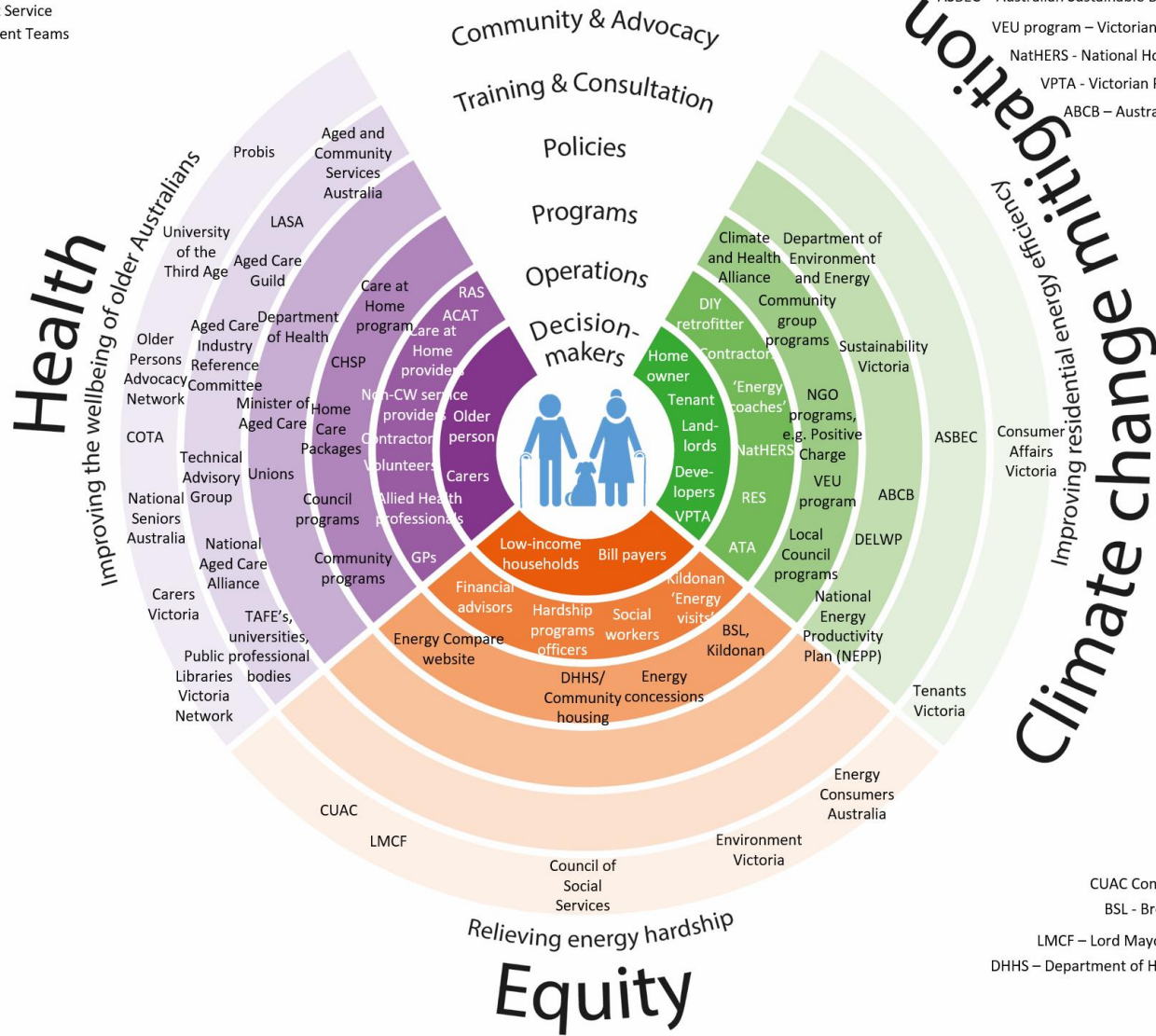


Figure 1 Preliminary stakeholder map

CUAC Consumer Action Law Centre
 BSL - Brotherhood of St Laurence
 LMCF – Lord Mayor’s Charitable Foundation
 DHHS – Department of Health and Human Services

5.6 Health

The Health domain comprised individuals and organisation that were primarily focused on improving the health and wellbeing of older people living independently at home. The map presented 32 stakeholders in the Health domain. Stakeholders in the various levels of influence of the Health domain described here include the following:

- Decisionmakers: Client or customers
- Operations: Care at Home service providers, non-Commonwealth funded service providers, health and allied health professional, home maintenance contractors and three types of assessors
- Programs: Commonwealth Home Support Programme, Home Care Packages and Council programs.
- Policies: Ageing in Place policy, Department of Health and Minister of Aged Care
- Training & Consultation: Service provider peak bodies, Aged Care Sector Committee, National Aged Care Alliance and the Aged Care Industry Reference Committee.
- Community & Advocacy: Council on the Ageing (COTA) Australia, National Seniors Australia, OPAN and other organisations

The review of the stakeholders in the Health domain revealed that the aged care sector is undergoing a reform process and its quality of services is already the subject of a Royal Commission. Almost 800 000 older people are receiving Care at Home. Care at Home is subsidised by the Federal Department of Health, pursues a client centred approach and aims to provide equitable access to services nationwide. Ten times as many people receive the entry level Commonwealth Home Support Program (CHSP) than the higher-level care under the Home Care Packages (HCP) program. Two thirds of care recipients are women. The Care at Home staff is also dominated by women. Both programs include home modifications and maintenance, which include light bulb and air conditioner replacements. Care at Home applicants are first assessed by phone screening and then by a face-to-face assessment at home, which serves to develop a support plan. The assessment and support plans make provision for specialist assessments and services. The main aims of the care support plan are wellness and reablement. The Care at Home is centrally governed by the Department of Health. The Department consults with three service provider peak bodies, a service provider, a community alliance and an industry reference committee. None of these bodies shows concern about energy hardship on their websites and publications. By contrast, energy affordability and the disadvantaged position of renters is an emerging focus of older people advocacy groups, in particular of COTA Australia. Owing to an ageing population, the demand for Care at Home is expected to grow while the funds for Care at Home are expected to decrease. It might be expected that older Australians will have to bear a larger cost of their own care, and that, hence, energy costs may be a growing concern. However, the future Care at Home clientele is also expected to be wealthier and feel more empowered.

5.6.1 Decisionmakers

In the Care at Home system, the main decisionmakers are the clients or older people and their representatives. In the aged care literature, they are referred to as clients, customers or consumers. The current My Aged Care system is based on the paradigm of Consumer (or Client) Directed Care (CDC) with individualised care plans and budgets. Publications of the Department of Health refer to the older person receiving or looking for aged care services interchangeably as the “client”, “customer” or “consumer” as illustrated in the following sentence:

An exit amount is an amount that can be deducted by a home care provider from a consumer’s unspent home care package amount if the consumer leaves their care (either because the client decides to change to another home care provider or the consumer leaves home care). (Department of Health 2017c, p. 29).

and the heading in the Commonwealth Home Support Program (CHSP) Guidelines:

6.2 Client/Customer (Department of Health 2016, p. 24).

Although the term ‘consumer’ refers mostly to the older person, the term may also refer to persons making decisions on the older person’s behalf, as it is defined as “Refers to both existing and prospective recipients of



home care services, and their informal carers and nominated representatives” (Department of Health 2017c, p. 32).

Clients have the most influence on decisions on their care, although their wishes need to align with the needs assessment results as established by the assessment teams. However, clients are not as empowered as assumed and aimed for in the Aged Care system. A recent survey by National Seniors Australia revealed that many older Australians have poor aged care service literacy, little knowledge of the range of services, the nature of consumer directed care and the complaint procedures (Rees, Maccora & McCallum 2018). Future service offers will need to give due consideration to an expected growth in the Care at Home clientele, longer longevity, bigger wealth, a stronger desire to stay in their own homes and bigger confidence in determining their own services are expected (Mavromaras et al. 2017).

5.6.2 Operations

The Operations level of influence of the Health domains includes the Care at Home service providers and assessors, non-Commonwealth funded service providers, health and allied health professional and the home maintenance and modification contractors.

5.6.2.1 *Care at Home service providers*

Care at Home providers fall into two categories of assistance to older people living at home: approved home support (CHSP) providers and approved home care providers. Each service provision is governed by its own service agreement (Department of Health 2018c). CHSP providers have to apply to the Department of Health for a grant to provide certain services (Department of Health 2018c). In addition to the Commonwealth supported programs, care providers may choose to offer additional services or recreational events (Cardozo 2018; Wyatt 2018b). Service providers may offer CHSP or home care packages (HCPs) in isolation or combination. In June 2017, there were 735 home care providers in Australia, with an almost 50 per cent increase in home care providers in the financial year 2016/17 (Department of Health 2017c). Workers in the Care at Home provision include front line or direct care service staff and volunteers.

In 2016 over 130 000 workers were employed in the two home support and home care services in Australia. (Mavromaras et al. 2017). Two thirds of these performed direct care services to older people as part of their regular work. Nine out of ten workers were female with a median age of 52 (Mavromaras et al. 2017). The age of the service staff is relevant for this project, as it may affect their own energy literacy and because in an average of 13 years, these people will be eligible for Care at Home themselves. The longitudinal analysis showed that the median age of employees in home care services is rising. In general, the workforce is regarded as being well-educated and satisfied with their jobs. However, tensions arise between the apparent decrease in the home support and care workforce and the need to almost triple the demand of aged care workers by the middle of the century (Mavromaras et al. 2017). Every second service provider engages volunteers. In 2016, almost 45 000 volunteers worked in the Care at Home services in Australia, assisting direct care staff in social activities or transport of older people (Mavromaras et al. 2017).

The recently released Australia’s Aged Care Workforce Strategy (Aged Care Workforce Strategy Taskforce 2018) has proposed concrete actions which aim to enhance the capabilities and career opportunities of people working in aged care. The Strategy was developed in consultation with workers, care providing organisations and older Australians as consumers (Aged Care Workforce Strategy Taskforce 2018). The Strategy does not refer to energy in the sense of electricity or fuel and does not include the terms ‘heat’ or ‘cool’.

5.6.2.2 *Assessors*

The National Assessment Framework (My Aged Care 2018b) covers the work force, funding, processes, support, reporting and governance of the system. It aims to ensure that assessments and services a nationally consistent, transparent and procedurally fair and monitored (My Aged Care 2018b). Most relevant to this project is the inclusion of “engagement with other government agencies”, “external governance including with consumers, stakeholders and peak bodies” and “engagement with delivery partners” (My Aged Care 2018b, p. 112), which may open up opportunities to introduce new types of services, such as energy retrofit and hardship support. The framework encompasses entry and screening of care seekers through the My Aged Care portal, the assessments



of needs and possibility of financial contributions by the care seeker and the types of services and organisations that offer related support and advocacy.

The My Aged Care (MAC) assessors are key individuals in the assessment of client needs, in the development of support plans and in the referral of clients to support services. The nature of the assessments and duty of the assessors are described in the *My Aged Care Assessment Manual* (My Aged Care 2018b) and summarised below.

The My Aged Care system involves three types of sequential assessments, the client registration and screening through the My Aged Care hotline, the Home Support Assessment by the Regional Assessment Service (RAS) and a comprehensive assessment by Aged Care Assessment Teams (ACATs). The aim of all three assessments is to determine the client's needs. Facilitated by the National Screening and Assessment Form (NSAF), these three assessment types have been streamlined into one process to avoid duplication of questions. The purpose of the NSAF is to inform the client's support plan. This plan is jointly developed by the assessor and the client in accordance with the so-called 'decision support rules':

- *“pathway and eligibility (e.g. the client should be referred for Comprehensive Assessment)*
- *priority (e.g. access to assessment or service is a high priority)*
- *recommended actions (e.g. the client should visit a General Practitioner)*
- *complexity indicators (e.g. the client is living in inadequate housing or with insecure housing or is already homeless)*
- *needs identification (e.g. behavioural concerns)” (My Aged Care 2018b).*

Assessors may refer the client to Commonwealth-funded services, i.e. the CHSP and HCPs, and include information on non-Commonwealth-funded services. It is expected that by 2020 RAS and ACAT assessment workforces will be combined (Aged Care Sector Committee 2016; CHA 2018)..

5.6.2.2.1 *Screening assessors in National Contact Centre*

The first type of assessment is the client registration and screening of older people seeking help by the National Contact Centre. The National Contact Centre has a unique telephone number across Australia. This number is displayed on the My Aged Care website. This assessment is conducted only over the phone. Based on this preliminary assessment of the clients' needs, the assessor decides on the type and urgency of the second assessment. Clients with 'entry-level' needs are allocated a Home Support Assessment, clients with more complex needs are scheduled for a Comprehensive Assessment. In some cases, clients who need specific needs urgently, such as nursing, may be referred to the specific service immediately before the second assessment takes place.

5.6.2.2.2 *Assessors in the Regional Assessment Services (RAS)*

The second type of assessment is the Home Support Assessment by Regional Assessment Services (RAS). These assessments are conducted face to face and generally in the clients' home. In general, the outcome of these assessments is the referral to services of the Commonwealth Home Support program (CHSP). If a client is found to have more complex needs, the client may be referred to a Comprehensive Assessment. An RAS assessment may take up to 21 days after referral.

5.6.2.2.3 *Assessors in the Aged Care Assessment Teams (ACATs)*

The third type of assessment is the Comprehensive Assessment by Aged Care Assessment Teams (ACATs) for clients who have been screened or assessed by the RAS to have more complex needs. In Victoria, the ACAT is called Aged Care Assessment Service (ACAS). ACAT assessments may be jointly conducted with service providers from other disciplines. An ACAT assessment may take up to 36 days after referral.

With the client's consent, assessors may contact representatives of the medical profession, for example general practitioners. Assessors are also expected to know about relevant local services that may not be funded by the Department of Health and “organise access to any Supplementary Assessment Tools”, such as the Mini Nutritional Assessment. The My Aged Care assessments are based on 'wellness and reablement approaches'. These are described as follows:

Wellness aims to promote independence and autonomy. It is based on the concept that even with frailty, chronic illness or disability, people generally have the desire and capacity to make gains in their physical, social and emotional wellbeing

and to live autonomously and as independently as possible. A wellness approach underpins all assessments and applies even the need for assistance is episodic, fluctuates in intensity or type over time, or is of an ongoing nature.

A wellness approach draws on the wellness philosophy to inform a way of working with people. It therefore involves assessment, planning and delivery of supports that build on the strengths, capacity and goals of individuals, and encourages actions that promote a level of independence in daily living tasks, as well as reducing risks affecting the ability to live safely at home. It avoids 'doing for' when a 'doing with' approach can assist individuals to undertake a task or activity themselves, or with less assistance, and to increase satisfaction with any gains made.

***Reablement** aims to assist people to reach their goals and maximise their independence and autonomy. A key distinction from wellness is that reablement involves time-limited interventions targeted towards a person's specific goal or desired outcome to adapt to some functional loss, or regain confidence and capacity to resume activities. (My Aged Care 2018b, p. 27) (Bold font represent the font in the original document.)*

The reablement approach aims to build the client's capabilities, for example, "skills development in using public transport" (My Aged Care 2018b, p. 35). The coordination of services with providers is part of the assessor's tasks. Assessors have a special duty to consider 'people with special needs', including 'people who are financially and socially disadvantaged' and encouraged to link these with other organisations that may offer support.

ACAT assessors may also link clients to other services that may mitigate risk to other vulnerabilities, such as "homelessness, mental health concerns, drug and alcohol issues, elder and systems abuse, neglect, financial disadvantage and cognitive decline and living in a remote location" (My Aged Care 2018b, p. 37). The range of these linking services is broad, as it comprises the provision of information, referrals, service coordination, advocacy on behalf of the client, multidisciplinary service coordination, researching local services for vulnerable people and administration.

5.6.2.3 *Non-Commonwealth funded services providers*

Non-government funded businesses may also offer home support and home care services to older people. If these address personal and physical care, including help with communication, these services are GST-free (ATO 2018).

5.6.2.4 *Health and Allied Health professionals*

Health professionals have a two-directional referral pathway with My Aged Care. Health professionals may refer patients (My Aged Care 2019b) to My Aged Care or the assessment teams may refer clients to health and allied health professionals (Department of Health 2019). Health professionals are doctors and nurses. Allied health professionals include physiotherapists and speech therapists. Most relevant to this project and its focus on the suitability of the home environment seem to be occupational therapists, who "may [...] make or facilitate changes to the work or home environment to make life easier and safer" (DHHS 2019b). The desktop review could not reveal in how far this assessment takes into consideration the thermal home environment.

5.6.2.5 *Home maintenance contractors*

Home maintenance contractors are subcontractors to care providers who conduct home and garden maintenance and home modifications for the CHSP and HCPs. Home maintenance may include "changing light bulbs" (My Aged Care 2018c, p. 118), which may be an opportunity for an energy efficiency improvement. Home modification costs can be up to a maximum of \$1000 (Department of Health 2018c, p. 39). At least one CHSP service provider is already offering the "supply and replacement of low energy light globes" (Otway Health 2018), and at least on home care service provider encourages upgrades of air conditioners (St Ives Home Care 2018). Home modification service providers may not promote retrofit and upgrades either. The peak body for home modification is Home Modifications Australia (MOD.A 2019). Searches of the terms energy, electricity and retrofit did not yield any results. Of particular interest for this project is that COTA Australia, a community organisation representing older Australians and advocating for better energy affordability, offers and endorses its own home maintenance contractor nationwide (Aged Care Guide 2019).



Home modifications attracted criticism in terms of equity and quality in the period before the Aged Care reform. In 2014, under the former Home and Community Care (HACC) program, access to home modifications was more difficult in rural and remote areas than in metropolitan locations due to shortages in licences trades (KPMG 2014). The report on home maintenance and modifications did not contain the term energy. In 2015, ACSA, one of the peak service provider bodies, claimed that “home maintenance and modifications have developed in an ad hoc and inconsistent manner throughout Australia” (ACSA 2015, p. 15), and that there were regional differences throughout the nation due to a lack of political guidance. ACSA expressed hope that the Aged Care reform with a national consistent CHSP would also improve the equity of this service (ACSA 2015). A more recent evaluation of the home maintenance and modification offers deserves investigation.

5.6.3 Programs

The Australian Government offers four types of Aged Care services: home support, home care, permanent or respite residential care and transition care. According to the latest statistics (AIHW Gen 2018b), almost 75 percent of people being assisted through the four government’s Aged Care service receive assistance with living at home (home support or home care). This project focused on the Commonwealth-funded Care at Home program which comprises home support in the form of the Commonwealth Home Support Programme (CHSP) and home care in the form of Home Care Packages (HCPs). In 2017, ten times as many older Australians received homes support (717 874 people) than home care services (71 486 people). In both programs, twice as many women received assistance than men (AIHW Gen 2018b). The demand for home care exceeds the supply. In 2018, the gap was estimated at \$60 million a year gap (Skatssoon 2018).

5.6.3.1 Commonwealth Home Support Programme (CHSP)

The Commonwealth Home Support Programme (CHSP), also simply called “home support” (AIHW Gen 2018a) or “help at home” (My Aged Care 2018d), is targeted at older and frail Australians 65 years or older (50 years or older for Aboriginal and Torres Strait Islander people) who need only a little help to keep living independently in their homes and to remain socially active despite their physiological and/or mental health problems. The latest statistics from 2017 show that almost three quarter of a million people in Australia received home support (AIHW Gen 2018b). Services covered under the CHSP is considered “entry-level care” (AIHW Gen 2018a), which includes “domestic assistance, transport, meals personal care, home maintenance and modifications, social support, nursing and allied health” (My Aged Care 2018b, p. 72). The annual CHSP service costs per client are expected to remain below \$8000 (My Aged Care 2018b).

The CHSP incorporates four sub-programs. Community and Home Support helps facilitate independent living at home. Care Relationships and Carer Support offer respite care. Assistance with Care and Housing for people at risk of homelessness and Service System Development for additional offers that are “designed to support, develop and strengthen the service system and the sector” (Department of Health 2017a, p. 8). According to the CHSP Manual, this sub-program may include an activity that aims at “strengthening the capacity of CHSP service providers to deliver quality services that are responsive to client needs, including clients with diverse needs” (Department of Health 2018c). This professional development program may be an opportunity for the integration of energy services, if this sub-program may facilitate activities to relieve energy hardship.

5.6.3.2 Home Care Packages (HCPs)

Home Care Packages are targeted at older and frail Australians who are 65 years or older (50 years or older for Aboriginal and Torres Strait Islander people) and who need more intensive care that those covered in the CHSP. The latest statistics from 2017 show that over 70 000 people in Australia received home care (AIHW Gen 2018b). Clients are assessed into four levels, which are distinguished by the maximum amount of funds and type of needs. Level 1 offers \$8000 of assistance for social and physical needs. Level 2 offers \$14 500 of assistance for social, physical and medical needs. Level 3 provides up to \$ 32 500 to address social, physical, medical and psychological needs. The highest level 4 covers help for clients with social, physical, medical and psychological needs who are also considered vulnerable up to \$49 500 per year (My Aged Care 2018a). The allocation of HCP funds is not restricted to a list of services but may be allocated depending on the need and preferences of the client. Additional financial help is available in the form of supplements. These aim to cover extra costs associated with care of people with dementia and cognitive impairments, in need of an oxygen concentrator, enteral feeding and assistance for financial hardship. A viability supplement recognises additional expenses by service providers in rural and regional areas (Department of Health 2018c). The metropolitan-regional imbalance in distribution of medical services is addressed by using the Australian geographical classification system Modified Monash Model



rates (Department of Health 2018b). Although HCP services are centrally funded, there seems to be a diversity and lack of transparency in the quality and pricing of services (COTA Australia 2018). COTA Australia has called for the publication of fees to facilitate informed consumer choices (COTA Australia 2018).

5.6.3.3 Council programs

In addition to the Commonwealth funded initiatives, Councils may offer their own programs to support older people in their community. For example, Meals on Wheels is a service that also aims to facilitate independent living at home. It is primarily offered through local councils and partially subsidised with \$3.23 per meal by the Victorian Government's Department of Health and Human Services. Councils perform their own eligibility assessments. Eligible clients pay between \$6.00 and \$10.00 per meal (Meals on Wheels Victoria 2018). Councils may also offer small grants to support social and education activities and events for seniors (Strathbogie Shire Council 2018a).

5.6.4 Policies

The stakeholders in the policies level of influence include the Minister of Aged Care and the federal Ageing in Place policy.

5.6.4.1 Ageing in Place policy

The Australian aged care system is governed by the Aged Care (Living Longer Living Better) Act 2013 (*Aged Care (Living Longer Living Better) Act 2013. No. 76, 2013. Includes amendments up to: Act No. 126, 2015 2013*), which precipitated the Living Longer Living Better (LLLBB) reforms which started on 1 July 2014. This reform gave consumers more flexibility and control over their services and increased their scope by placing the decisions into their own hands. The Act highlights the need for equitable access to services nationwide. The Act acknowledges indigenous and Torres Strait Islanders, people from culturally and linguistically diverse (CALD) backgrounds, socially and financially disadvantaged groups and people living in remote or regional areas as "people with special needs" who require equitable access (*Aged Care Act 1997. Compilation No. 67, pp. Section 11-13*). Future developments of the aged care system will aim to empower consumers to make informed choices, to increase their freedom in the selection of the type of services and in the choice of service providers (Aged Care Sector Committee 2016).

Currently consumers carry only a fraction of the costs of the home care services. A review of the system in 2016, recommended that to support a growing ageing population, consumers would need to pay for a higher percentage of the costs (*Legislated Review of Aged Care 2017 2017*). Relevant for this project is that an increase in home support costs will reduce the householders' budget for energy and is likely to exacerbate energy hardship. However, the review did not include the issues of 'energy' or 'electricity'.

5.6.4.2 Department of Health and the Minister of Aged Care

Since 2016, Aged Care in Australia is managed and funded centrally by the Australian Government Department of Health. Minister Ken Wyatt, the current Minister for Aged Care, sits within the Australian Government Department of Health. Care at Home is only one form of Commonwealth funded aged care services for older Australians. The aged care system is undergoing changes or 'reforms' with the aim to provide consumers more choice and control and to be more sustainable in response to the growing ageing population. The need for reform was expressed in a 2011 report *Caring for older Australians* by the Productivity Commission (Productivity Commission 2011a, 2011b). This report presented a systematic inquiry into existing aged care structures and recommendations for regulatory and funding mechanisms to support older people in residential and community care with special consideration to the cultural and geographical diversity of this population group. The report did not raise energy or electricity costs or accessibility as possible concerns for older Australians.

After a change in prime ministers in August 2018, Ken Wyatt has continued to serve as Minister for Aged Care and Indigenous Health, while adding Minister for Senior Australians to his title. In their first speeches after the formation of the new cabinet, Prime Minister Scott Morrison, Health Minister Greg Hunt and Minister Wyatt stressed aged care as one of the Department's priorities. In October 2018, the Australian Government announced a Royal Commission into Aged Care Quality and Safety (Prime Minister of Australia 2018).



The federal Department of Health has to date shown little interest in this idea of offering services that address energy efficiency and hardship among older Australians through the Care at Home system. In preparation for the Expression of Interest for the RMIT Seed Fund grant application, the then and current Minister of Aged Care Hon Ken Wyatt was contacted and his in-kind support for the project was requested. The request was forwarded to the Department of Health, which decided on the appropriate response. The Hon Ken Wyatt declined the invitation. He explained that the “CHSP entry-level support is underpinned by a ‘wellness approach’, which is about building on older people’s strengths, capacity and goals to help them remain independent and to live safely at home and in their community” and that “the CHSP include home maintenance and modifications”, which “are intended to maintain the person’s functional independence so that they can continue to live and move safely about the house”. Our invitation to support the project was declined on the basis that “the project proposal [...] does not meet the specific programme objectives as described within the CHSP Programme Guidelines and Programme Manual...” (The Hon Ken Wyatt 2018, personal communication). However, objectives 1, 7 and 8 of the CHSP seem to be well aligned with the aims of energy efficient and hardship initiatives, as they stress quality of life, independence and a holistic view of client needs:

- 1. Provide high-quality support, at a low intensity on a short-term or ongoing basis, or higher intensity services delivered on a short-term or episodic basis, to frail older people to maximise their independence at home and in the community, enhancing their wellbeing and quality of life.*
- 7. Facilitate client choice to enhance the independence and wellbeing of older people and ensure that services are responsive to the needs of clients.*
- 8. Provide a standardised assessment process which encompasses a holistic view of client needs. (Department of Health 2018c, p. 7)*

The declination of invitation to participate in this project suggests that the Department of Health may have little awareness of the causes and effects on energy hardship and cold or hot homes on the wellbeing of older Australians, and the physiological and psycho-social benefits of improved thermal performance of their homes.

5.6.5 Training and consultation

The Training & Consultation level of influence comprises the service provider peak bodies and aged care industry bodies. Amongst others, the Department of Health receives advice from the service provider peak bodies, the Aged Care Sector Committee, the National Aged Care Alliance and the Aged Care Industry Reference Committee.

5.6.5.1 Service provider peak bodies

Australia has three service provider peak bodies: Aged & Community Services Australia (ACSA), Leading Age Services Australia (LASA) and The Aged Care Guild (“the Guild”). When exploring their websites, searches using the terms “energy” and “electricity” were performed to identify in which ways these issues were discussed.

Aged & Community Services Australia (ACSA) (<https://www.acsa.asn.au/>) is the leading peak body supporting over 700 church, charitable and community-based not-for-profit organisations that provide accommodation and care services to older Australians. ACSA is a national entity representing providers across Australia in metropolitan, regional, rural and remote regions, through sector leadership, support and advocacy (ACSA 2019). A Search of the ACSA website of the terms “energy” and “electricity” at the time of writing (January 2019) did not yield and results related to energy services.

Leading Age Services Australia (LASA) (<https://lasa.asn.au/>) is a national peak body that supports and advocates for aged care service providers and retirement living facilities across Australia in metropolitan, regional and rural areas. Over half of LASA members belong to the not-for-profit sector, a third are for-profit businesses and one in ten are government providers (LASA 2019a). LASA offers affiliate memberships aimed to promote the businesses’ profiles among the members (LASA 2019b). One of these affiliates is a national distributor of solar photovoltaic systems (LASA 2019e). LASA also offers a bulk buy scheme for commercial solar PV systems (LASA 2019c). A similar offer targeted at householders was not evident. The term “electricity” was found on one website in which the opportunities of smart homes and “automation for lighting and electricity” in the care of people with dementia were commended (LASA 2019d).



The Aged Care Guild ("the Guild") (<http://www.agedcareguild.com.au/>) is an association of eight of the largest private residential aged care providers in the sector, including two publicly listed companies. The website did not have a search function.

5.6.5.2 *Aged Care Sector Committee*

The Department of Health receives advice from the Aged Care Sector Committee, a selection of stakeholders representing consumers, carers, employees, service providers, and government departments (Department of Health 2018a), the Aged Care Financing Authority, the Aged Care Sector Committee and the National Aged Care Alliance (*Legislated Review of Aged Care 2017 2017*).

In 2014, energy was discussed with regards to the definition of 'significant refurbishments' of residential aged care facilities. Representatives of the aged care industry had sought clarification whether "sustainability measures in relation to energy, waste and water" were included. The final definition did not include the term (Department of Health 2014). Another reference to energy referred to income tests for older home care scheme. The calculation of the client's income had to exclude any energy supplements (Department of Health 2017b).

5.6.5.3 *National Aged Care Alliance*

The National Aged Care Alliance (NACA) (<http://www.naca.asn.au/>) represents the aged care sector industry. The 51-member organisation includes large aged care providers, the peak bodies of allied health professionals and consumer groups, such as COTA. NACA has an Aged Care Reform Advisory group called 'Home Support Service Group 5 - Home Maintenance and Modifications'. Energy is not evident as one of their priorities.

Before the aged care reform in 2013, NACA conducted a consumer survey on the scope, quality, costs and outcome of home maintenance and modifications, goods and equipment. Questions on modifications addressed changes designed to improve the safety of the home and the consumer's independence. "Changing light bulbs" was listed under home maintenance without reference to the type of light bulbs (NACA 2013, p. 18). A positioning paper on the quality of housing for older people also failed to mention energy or electricity costs as a factor contributing to the suitability and affordability of homes (NACA 2018b). The paper highlights, though that the number of low-income renters among older people households is projected to increase. The implementation of the Liveable Housing Design Guidelines was recommended. These guidelines aim to improve access for people of all life stages and adaptability to changing life stages. Although the guidelines refer to the performance requirements of the National Construction Code in terms of outcomes such as fire safety, they do not include the terms energy, electricity or efficiency (LHA 2017). Similarly, the 2018 report on assistive technology to support older people used the term "energy" only with meanings of physical energy (NACA 2018a, p. 61).

5.6.5.4 *Aged Care Industry Reference Committee*

The Aged Services Industry Reference Committee (<https://www.aisc.net.au/irc/aged-care-industry-reference-committee>) is a recently founded industry body with the mandate to develop vocational and higher education training for aged care employees. It is envisaged that working groups will address specific issues (AISC 2018). Reference to energy within this particular industry reference committee was not easily discoverable on the website.

5.6.6 *Community and advocacy*

The Community & Advocacy level of influence comprises organisations that represent older Australians and assist or interact regularly with older members of the community. Energy is an emerging issue on the agendas of the Council on the Ageing (COTA) Australia and National Seniors Australia.

5.6.6.1 *Council on the Ageing (COTA) Australia*

COTA Australia is the national consumer peak body for older Australians. Its members are the eight state and territory COTAs (Councils on the Ageing), which have around 30,000 individual members and more than 1,000 seniors' organisation members, jointly representing over 500,000 older Australians. COTA Australia is represented on the Australian Energy Regulator (AER) Consumer Consultative Group, the Energy Information Presentation and Customer Engagement Reference Group, as well as the National Energy Consumer Roundtable. COTA Australia has also received a grant by Energy Consumers Australia to support COTA's consumer rights agenda on energy (COTA Australia 2019b). COTA Australia acknowledges the problem of affordability and the requirement of energy for older people's health and wellbeing:

One of the current, major focuses of our consumer rights work is energy. Energy issues are an important and growing concern for our constituency of older Australians. Affordability is a critical concern for older consumers, particularly for the large percentage who are on low, fixed incomes and heavily reliant on energy supply to maintain their health and wellbeing. (COTA Australia 2019b)

A COTA Australia survey in 2015 revealed that only one in five respondents had switched energy retailers in the previous two years, as they thought that offers were similar and because they felt uncertain about the benefits of switching (Yates 2017). In response, COTA Australia has made practical recommendations to the Australian Energy Regulator. These included:

- Energy Fact Sheets in simple, non-technical English, in an accessible format and with unambiguous and partly pictorial information, which are designed in collaboration with the end users,
- Comparison energy rates in on energy bills and in information materials.
- Technological solutions to facilitate access to energy consumption data and comparative information
- Improvement of access to information by offering alternatives to online information (Yates 2017).

COTA Australia supports mandatory minimum housing standards (COTA Australia 2017). COTA Australia has also recommended a better coordination of energy efficiency initiatives among jurisdictions and a single point resource offering all information and streamlined services (COTA Australia 2019a). In a nationally representative survey of Australians aged 50 or above, almost three out of four respondents desired COTA to advocate for better affordability of services, such as energy, internet and phone communication. The prevalence of this proposed lobbying was high among vulnerable households and women (Newgate Research 2018).

5.6.6.2 National Seniors Australia

National Seniors Australia is another older consumer organisation. It has with 130 000 members and lobbies for the needs of older and retired people nationwide (National Seniors Australia 2019). National Seniors undertook a survey and interviews to capture the experiences of people receiving care at home. Most respondent were satisfied with their care services (McCallum, Rees & Maccora 2018). The report did not identify assistance in energy affordability or efficiency as a gap that should be addressed. The report highlighted that “older Australians have a consistent preference for high levels of human contact and communication, which will need to be retained, whatever technological assistance is used” (McCallum, Rees & Maccora 2018, p. 5). However, National Seniors Australia is also currently running an ‘energy affordability’ campaign. The organisation supports the ACCC’s recommendation of a default market offer and tries to convince the government to link the energy supplement available to pensioners to energy prices (National Seniors Australia 2018). Energy efficiency was not mentioned.

5.6.6.3 OPAN

OPAN (<http://www.opan.com.au/about/>) is a national not-for-profit organisation that has been advocating, informing and educating the older Australian population on access to and their rights within the Commonwealth aged care system. The scope of OPAN includes the Commonwealth Home Support Programme services (CHSP) and the Home Care Packages. OPAN is funded by the Australian Government as part of the National Aged Care Advocacy Program (NACAP) and represents organisations in nine state and territories. Services are offered free of charge. OPAN is an established organisation with a wide reach and strong lobbying competences. It has recently received funds to continue their work on elder abuse (Wyatt 2018a). As elder abuse may occur within and outside care facilities, this indicates that the scope of the work of OPAN may extend beyond Commonwealth funded aged care support services to energy hardship among older Australians. However, at the time of writing, the search term ‘energy’ did not yield any results on the OPAN website. In Victoria, OPAN delivers its services through the Elder Rights Advocacy group (ERA) (<http://era.asn.au/>).



5.6.6.4 Other organisations

Other organisations who regularly engage with older Australians include the University of the Third Age (U3A), and public libraries. The University of the Third Age offers courses to help empower and engage older Australians. While the U3A in Melbourne does not offer a course on residential energy efficiency but on green or renewable energy (U3A 2019a, 2019b, 2019c).

Public Libraries in Australia offer many free talks and resources and may be used to disseminate information on energy efficiency and hardship assistance. As a precedent, in the ACT, libraries make available the Home Energy Action Kit, a package of measuring devices and guidelines to self-assess and improve a household's energy and water use (Actsmart 2018). The Ringwood library offers a guide to the CHSP to their visitors (Figure 2).



Figure 2 Display column in the Ringwood Library, showing a guide to the CHSP (middle brochure on the left), in September 2018. Source: First author

5.7 Climate Change Mitigation/ Energy

The domain of Climate Change Mitigation or Energy comprises individuals and organisation that are primarily focused on reducing residential carbon emissions by improving the energy efficiency of homes through material or physical changes. Improving the energy efficiency of existing homes can play a notable role in achieving Australia's carbon reduction goal. The residential sector has been estimated to account for 9-13 per cent of Australia's (ABS 2010; Centre for International Economics 2007; Climate Works 2013) and 17.5 per cent of the state of Victoria's total greenhouse gas emissions (George Wilkenfeld & Associates Pty Ltd 2008), with the existing building stock having the biggest potential for energy reduction in the residential sector (Climate Works 2013). Due to the lack of energy improvement obligations for existing homes apart from major additions and alterations, the implementation of energy conservation measures is dependent on the willingness of property owners (Willand & Horne 2013). However, worldwide and in Australia, residential refurbishment rates are falling short of expectations (Dyrbol & Aggerholm 2011; Stieß & Dunkelberg 2013; The Allen Consulting Group 2004; Weiss, Dunkelberg & Vogelpohl 2012).

A successful strategy to upscale low carbon energy efficiency improvements has to address the complex landscape of low carbon refurbishments (Murphy, Meijer & Visscher 2012; Weiss, Dunkelberg & Vogelpohl 2012). The socio-technical landscape of retrofits consist of various professional and social stakeholders and their practices, regulations, funding programs, the energy quality of homes and appliances, energy prices, improvement costs, and the meaning of home (Willand & Horne 2013). Home energy assessments and financial



incentives are indirect policy instruments that can “empower people to make a decision, facilitate action or remove or diminish barriers” (Willand & Horne 2013). Hence, a variety of stakeholders need to be successfully engaged and accessed. The map presented 24 stakeholders in the Climate Change Mitigation or Energy domain. Stakeholders in the various levels of influence of the Climate Change Mitigation domain described here include the following:

- Decisionmakers: Home owners and landlords
- Operations: Residential Efficiency Scorecard (RES) assessors, Renew Energy Consultants, NatHERS Assessors, NABERS assessors, Ecologic self-assessment, Liveability Features Property Appraisal and other tools.
- Programs: Australian Government Low-income Energy Efficiency Program (LIEEP), Federal energy programs, Federally funded information material for older Australians, Victorian Energy Upgrade program, Victorian Energy efficiency improvement trials, local council programs and the Climate and Health Alliance (CAHA)
- Policies: National Energy Productivity Plan (NEPP), Independent Review into the Future Security of the National Electricity Market (Finkel report)
- Training & Consultation: Australian Sustainable Built Environment Council (ASBEC)
- Community & Advocacy: Consumer Affairs Victoria (CAV), Energy Efficiency Council (EEC).

The review of the stakeholders in the Energy domain revealed that one in four households include a person who may be eligible for Care at Home and hence, may be targeted with information and measures on energy efficiency and hardship. Despite strong advocacy from the buildings and energy industry and academia, the federal government shows little leadership on climate change mitigation and little interest in increasing the energy efficiency of homes. Hence, energy efficiency initiatives for existing homes are mostly state based and vary in target groups and scope. The state of Victoria shows a strong interest in building evidence on the social and health benefits of improved residential energy efficiency. While there are various assessment tools for existing homes in Australia, the Victorian Residential Efficiency Scorecard (RES) promises to be the most likely one to be developed into a national tool. The growing number of older renters means that landlords need to be engaged in improving the quality of their properties.

5.7.1 Decisionmakers

In decisions around the physical materiality of homes, the main decisionmakers are the dwellings owners, i.e. the owner occupiers and landlords. According to the 2016 Census, about every fourth households had a reference person over 65 years (ABS 2017). Hence, Care at Home could touch almost a quarter of all homes in Australia. About three quarters of older Australians live in their own homes and are strongly attached to it (Productivity Commission 2015). But in 2016, 13 percent of the homes with a reference person aged 65 or older were rented homes (ABS 2017). Almost every third state and territory housing dwelling contained a reference person of 65 years or older (ABS 2017). The prevalence of renters among older Australians is expected to rise (ACSA 2015). The number of low-income renters among older people households is projected to exceed 400 000 by 2026 (NACA 2018b). Rental stress, which means spending more than a third of the pension on rent, is common, with single older households being affected the worst (Anglicare Australia 2018; HAAG 2017). Rental stress exacerbates the negative impact of rising energy prices and energy hardship.

Tenants are particularly vulnerable to energy hardship as they tend to be on a low income, live in homes with poor thermal performance and as they lack the agency and power to make physical changes to their dwellings. Due to the split incentive and a tax system that only acknowledge repairs but does not reward building improvements by landlords (*Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018*), landlords have been less likely than home owners to take up voluntary, even low cost measures (EEC 2016).

There are no mandatory energy efficiency standards for renters in Australia. Residential tenancy regulations are governed by the states. Mandatory rental energy efficiency standards are supported by energy professionals, providers and researchers of the Energy Efficiency Council (EEC) (EEC 2016). The recent proposedly *Treasury*



Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018 aims to motivate landlords to improve the energy efficiency of rented properties through tax offsets for energy efficiency assessments and energy efficiency improvement measures (*Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018*). In Victoria, the Residential Tenancies Act was reformed in 2018. It now includes a provision that renters may demand a functioning heating system in their homes (CAV 2018a). The Act was supported by The One Million Homes Alliance, which “brings together Victoria’s leading environment, social justice, local government and consumer organisations who share a commitment to a just transition to a sustainable society, where all Victorians enjoy equitable access to efficient, healthy housing and affordable clean energy” (Environment Victoria 2019). Although the Act does not mandate energy efficiency, Environment Victoria has interpreted the changes as the first step towards mandatory energy efficiency standards in all rental properties in Victoria (Environment Victoria 2018). With regard to public housing, in Victoria, the Department of Health and Human Services tries to counteract rising energy prices by voluntarily mandating higher than required energy efficiency standards for new housing. New public housing in Victoria has to be built to a higher energy efficiency standard, i.e. 7 NatHERS star ratings, than the mandatory 6 star rating (DHHS 2016).

In lieu of prescriptive housing quality standards, the Australian government provides tenants with behavioural recommendations that relate to appliance use practices, temperature settings and spatial heating and cooling restrictions, and the non-invasive measure of installing a water saving shower rose (DoEE 2018f). However, some of the guide for renters’ recommendations are questionable in the context of older and frail people and Australia’s has diverse climate zones. For example, the guide recommends: “In winter, set your heating thermostat between 18 to 20°C. In summer, set your cooling thermostat between 25 to 27°C”. These settings do not agree with the temperature range recommended by the World Health Organisation Europe for older and sedentary people of 21°C and 24°C (WHO 1987, 2018). In addition, in hot climate zones in Australia, thermal preferences may vary, e.g. (Williamson, Coldicutt & Penny 1991). The statement “For every 1°C you increase your heating and cooling you increase your energy use by around 5 to 10%”, lacks scientific evidence. As end energy use is a function of at least the difference in temperature between inside and outside, the thermal performance of the envelope and the efficiency of the space conditioning device, general predictions of energy savings from changes in indoor temperatures should be avoided. The suggestion “when you’ve got the air conditioner or heater on, close off the rooms you’re not using by shutting internal doors” implies a spatially restrictive use of the dwelling. In the European energy poverty literature, this is interpreted as a coping mechanism, e.g. (Brunner, Spitzer & Christanell 2012), as a regrettable symptom of heating stress. Hence, this official recommendation appears to normalise energy poverty. It also fails to recognise that the other non-heated or conditioned rooms will be used eventually, which may expose householders to inadequate temperatures and present a health risk to susceptible people. In addition, the recommendation to “try a draught 'snake' to stop air escaping under doors” may create a tripping hazard in the homes of frail people (Willand, Maller & Ridley 2017). “Putting on extra layers of clothing” may lead to so many layers to keep warm that is no longer socially acceptable (Willand, Maller & Ridley 2017).

The Centre for Liveability Real Estate also publishes a guide for renters to save energy. The Rent Smart guide contains recommendations for non-evasive material changes and behavioural energy tips as well as assistance with communication with landlords (The Centre for Liveability Real Estate 2013). The Rent Smart guide also recommends zone heating.

5.7.2 Operations

Operational service delivery providers in the Energy domain include building contractors, so-called energy coaches and home energy auditors or assessors. This report focuses on the assessments and assessors.

Energy audits are diagnostic tools that provide a summary of the energy efficiency of dwellings. They may assess the material quality of the building, the efficiency of heating, cooling, lighting and other home appliances and householder energy behaviours in isolation or combination. They may also offer recommendations on how energy may be saved.

Energy audits are popular information policy tools as they may drive retrofits (Willand & Horne 2013). The Sustainable Business Australia has recommended that ‘the Australian Government should focus on developing financial incentives and innovative instruments that would “continue and accelerate subsidization of energy auditing of buildings” (Senate of Australia Environment and Communications References Committee 2018, p. 96). In the recent proposed *Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018*, tax offsets may be claimed for residential energy assessments using a NatHERS accredited tool, NABERS



or the Liveability Features Property Appraisal (*Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018*).

5.7.2.1 Residential Efficiency Scorecard (RES) assessors

Residential Efficiency Scorecard (RES) assessors are energy experts accredited by the Victorian Department of Land, Water, Environment and Planning to rate home according to the Residential Efficiency Scorecard (DELWP 2018d). The Residential Energy Efficiency Scorecard is an initiative by the Victorian government. It is a voluntary home energy rating tool for new and existing homes which assesses the efficiency of a home based on its simulated energy consumption costs. The assessment considers the thermal quality of the building envelope, heating and cooling appliances, hot water system, lighting and micro-generation. The home rating is on a scale from 0 (least energy efficient) to 10 (most energy efficient). It also provides an assessment of the dwellings' thermal performance in summer and offers recommendations on how the energy efficiency of the home may be improved (DELWP 2018d). Assessment of the winter performance of the home is not highlighted.

The house audit takes about two hours and costs between \$300 and \$500, "depending on the assessor, your home, your location and the complexity of the assessment" (DELWP 2018b). The Moreland Energy Foundation's (MEFL's) Positive Charge initiative conducts RES assessments for \$400 (Positive Charge 2018d). The website does not provide information on how location and other factors affect the price of the assessment and whether regional and rural householders may be disadvantaged in accessing these assessments. At the time of writing (August 2018), the DELWP website listed 15 accredited private assessors. Only two of the assessors would potentially cover the areas of the two partnering Home Care providers, i.e. Andrew Armstrong, offering assessments in "other areas by negotiation" and John Shearer being available "statewide" (DELWP 2018b).

At the time of writing, some local councils, such as Banyule, were offering RES assessments for free through MEFL's Positive Charge program with the proviso that the householders were "willing and able" to implement at least two recommended "low cost" material retrofits or upgrades. This grant was available to home owners and tenants who had obtained the permission of their landlord to make changes (Positive Charge 2018a). The terms "willing and able" and "low cost" were not further defined. Apartment dwellers were not eligible. The offer was going to be terminated once the grant funding of \$15000 was exhausted. Hence, about 38 households were able to benefit from this offer.

The Victorian RES is likely to be rolled out nationwide (COAG Energy Council 2017). A recent commercialisation report suggested that the tool would be a useful retrofit decision-making tool for public and community housing landlords and for energy retailers to assess hardship households (Point Advisory 2018). Surveyed stakeholders had suggested that the tool should be made available nation-wide and be used for possible mandatory disclosure of a dwelling's energy costs at the point of lease or sale of dwellings (Point Advisory 2018). It has already been trialled in South Australia (Aliento 2018).

5.7.2.2 Renew Energy Consultants

Renew Energy Consultants conduct the Renew Energy Consults. Renew, formally the Alternative Technology Association (ATA), is a not-for-profit environmental organisation with its seat in Melbourne. Renew is offering home energy audits called 'Energy Consult' based on measured households energy data. The consultation takes place on the phone or by Skype and takes about one hour. The consultations aim to help householders with the design, choice, sizing and pricing of solar photovoltaic systems. A consultation costs \$275 for non-Renew members and \$199 for Renew-members. Interested householders have to complete a pre-consultation survey on their current energy bills and obtain their electricity smart meter data if available and may download a Solar Electricity Booklet (worth \$5.00) prior to the consultation (Renew 2019).

5.7.2.3 NatHERS assessors

NatHERS Accredited Assessors are home energy assessors who use the National House Energy Rating Scheme (NatHERS) to rate the simulated energy demand of detached houses, townhouses and apartments. The NatHERS ratings are available nationwide. The rating is on a scale from 0 stars (worst) to 10 stars (best). At the time of writing in August 2018, in Victoria new homes and those undergoing extensive additions had to achieve a minimum of 6 stars. The star rating only takes into consideration the thermal performance of the building envelope, i.e. the walls, windows, roofs and floors, and makes certain assumptions about occupancy, occupant



heating, cooling and ventilation behaviours and heating and cooling set points (NatHERS protocol). The efficiencies of the space conditioning system and lighting or fuel choice are not considered. The rating is based on the normalised annual space conditioning energy demand per square metre of the floor area with some adjustment for the size of the building. Energy demand for heating and cooling are weighted equally in the output. The rating is based on the design of the home. There are no mandatory compliance checks of the as-built quality, and compliance problems have been revealed (Pitt & Sherry & Swinburne University of Technology 2014). Hence, the rating does not reflect energy costs or greenhouse gas emission intensity. In the *Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018* NatHERS assessments have been listed as one of the three residential energy assessments for which tax offsets may be claimed (*Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018*).

5.7.2.4 NABERS assessors

NABERS is a national building rating tool which is administered by the NSW Office of Environment and Heritage and supported by the federal and all state governments. NABERS facilitates the assessment and performance of offices, office tenancies, data centres, hotels, shopping centres and apartments. Performance criteria vary according to the type of building. For example, for offices rating tools are available to assess the performance of energy, water, waste and indoor environmental quality (NABERS 2018c). However, for apartment buildings, only the energy and water use of the common spaces (NABERS 2018a). With regards to detached homes, the NABERS website suggest two NABERS initiatives, the NABERS Energy Explorer and the NABERS Rating Calculator. However, the latter is not applicable to houses or apartments, but only to offices, hotels, shopping centre and data centres.

NABERS Energy Explorer is marketed as “a health check on your home energy use” (NABERS 2018b). It is a voluntary rating that is free of charge and can be performed by anyone with access to a household’s gas and electricity data for the previous 12 months and the Internet. The assessment is done online. The sample report for the example of a hot water system presents the estimated energy use, annual consumption costs and greenhouse gas emissions, suggests 14 replacement options with estimated upfront costs, operational costs for the first year and greenhouse gas emissions as well as no-cost behavioural recommendations with estimated annual energy cost savings (NABERS 2018b). The information on capital costs and cost savings can be used to calculate pay back periods. The behaviour change suggestions may have to be reviewed for appropriateness in the context of older people (Willand, Maller & Ridley 2017). For example, closing off rooms that are not in use (DoEE 2018g) is likely to lead to unevenness of temperatures and possibly cold shock (Willand, Maller & Ridley 2017).

5.7.2.5 Ecologic – self-assessment

Ecologic is an online web application that can be used to audit homes and generate recommendations for retrofits and solar PV installations. The tool has been designed and is managed by a private company Ecologic Apps. The website claims that the company is collaborating with Positive Charge (cf. Section 5.7.3.6). Inputs required include the address, occupants, building age and construction details and appliances. The footprint of the building is drawn on a photo from Google Earth. Energy and water use data is possible but not necessary. The output is an ‘action plan’, which is a report that compares the energy consumed with similar households or properties and provides recommendations on how to reduce energy consumption with costs and payback time (Ecologic 2019).

The tool offers three types of assessments. ‘Home’ is targeted to householders, facilitating self-assessment and reporting options for saving costs and increasing comfort. The ‘Pro’ version is targeted at energy professionals and requires a 10-20-minute on-site audit. The data is sent to a platform in the cloud which models and simulates the thermal performance of the building envelope as well as the consumption from appliances. The results provide information on energy efficiency initiatives. However, it is not clear if the application is functioning. A trial run by the first author on 30 August 2018 froze during the simulation process, which should “typically take around 40 seconds”. A second attempt was not undertaken. The ‘Pro’ tool is aimed at energy auditors and building performance assessors, architects and building designers, builders and tradespeople, real estate agents and property assessors, HVAC installers and providers and solar HW/PV installers and providers.



5.7.2.6 *Liveability Features Property Appraisal*

The Liveability Features Appraisal Checklist is managed by The Centre for Liveability Real Estate, which is owned by the Commonwealth Scientific and Industrial Research Organisation (CSIRO). The Checklist contains 17 criteria and compares the dwelling against benchmarks to present a consistent national standard (The Centre for Liveability Real Estate 2018b). Relevant criteria for the assessment of thermal performance of dwellings are the interplay of climate zone, orientation, cross ventilation, zoning, insulation, density of building materials, windows, shading or sun control, efficiency of lighting, heating, cooling and hot water systems, solar photovoltaic systems (The Centre for Liveability Real Estate 2018c). The tool is currently being trialled in the ACT. Liveability Features Property Appraisal are offered by trained real estate agents free of charge. Details on the metrics of the Checklist were not readily available online.

5.7.2.7 *Other tools*

There are also other state specific home energy audit tools (The Centre for Liveability Real Estate 2018a). One of these is the ACT's Home energy self-assessment kit, which is distributed through local libraries, and contains a "power meter to measure energy consumption and running costs of appliances, an infrared thermometer to measure fridge, freezer and hot water temperatures, a compass to identify the orientation of the home and passive solar heating opportunities, a stopwatch to measure shower and tap flow rates and instructions on using the equipment and worksheets to calculate your home energy efficiency" (Actsmart 2018).

5.7.3 Programs

Stakeholders in the Program level of influence of the Energy domain include the representatives of state and local retrofit and upgrade programs. It was beyond the scope of this project to describe all programs. As this project was based in Victoria, this report focuses on federal and Victorian initiatives.

5.7.3.1 *Australian Government Low-income Energy Efficiency Program (LIEEP)*

The Low-income Energy Efficiency Program (LIEEP) was a federally funded program between 2012 and 2016, which aimed to

- *"trial and evaluate a number of different approaches in various locations that assist low income households to be more energy efficient"*
- *capture and analyse data and information to inform future energy efficiency policy and program approaches."* (DCCEE 2012).

The program funded 20 projects with diverse target groups that were considered vulnerable or disadvantaged across Australia. Benefits experienced by the householders included lower energy bills, better comfort and improved living conditions. Householders also gained better energy literacy and felt less stressed (Russell-Bennett et al. 2017). An overview of the LIEEP projects (Russell-Bennett et al. 2017) identified three distinct customer segments with regards to behaviour change initiatives, 'New to Energy', Energy without Effort' and 'Stressed about Energy'. Older, fuel poor households are likely to fit the last, the 'Stressed About Energy' category.

Relevant to this project, the LIEEP overview highlighted that energy initiatives must consider contextual conditions. For example, 'New to Energy' customers, who had limited knowledge of energy related matters, were likely to be cohorts in extreme climate zones and regional or remote areas or those of culturally and linguistically diverse (CALD) and indigenous cohorts. The LIEEP projects also found that there were sensitivities in cultural differences around gender and age. For example practices around energy was considered 'women's business' in indigenous and refugees households (IES 2016; QCOSS, MDA & MEFL 2016), women were in charge of establishing energy saving practices among children in NSW (Cooper et al. 2016), training of new mothers as energy officers increased their energy and financial literacy in Victoria (Yang et al. 2016). Matching energy officers to the gender and age of potential participants was important (IES 2016).

5.7.3.2 *Federal energy programs, i.e. appliance labelling schemes*

Current federal programs are listed on the rebates website of the Department of the Environment and Energy (DoEE 2018e). Programs designed to support householders in making informed choices are the energy rating labels (Energy Rating 2018b) and the associated appliance energy rating app (DoEE 2018a), a light bulb energy-



efficiency app (DoEE 2018c). Householders can also search by states and priority, i.e. energy, water. However, at the time of writing, some programs were linked incorrectly² or allocated incorrectly to states³.

5.7.3.3 Federally funded information material for older Australians

Several LIEEP projects targeted older Australians. Information material specifically designed for this population groups were developed. For example, SECCCA's Energy Saver Study produced videos called 'Using a fan for indoor cooling' and 'Dress for the weather' (SECCCA 2016), which are available online (SECCCA 2019). Similarly, the Energy + Illawarra project produced videos called 'Personal cooling', 'Active cooling' with a fan, 'keeping comfortable', 'Fridges', appliance 'Star ratings', 'Lighting' 'the Laundry', 'Hot Water', 'Cooking', 'Heating' (Energy + Illawarra 2019).

In addition, the federal Department of Energy also publishes a *Senior's guide to energy saving* online and in hard copy on request (DoEE 2018g). It contains behavioural advice and lists further resources for hardship programs, renters and assistance for consumer rights issues. However, some of the advice may not be suitable for vulnerable sub-cohorts of this population group.

5.7.3.4 Victorian Energy Upgrade program

The Victorian Energy Upgrade (VEU) program is program administered by the Victorian Department of Environment, Land, Water and Planning and offers discounts to households and business on energy retrofits and upgrades.

It is "a market-based scheme designed to promote the uptake of energy efficiency improvements in residential and non-residential premises" (Department of State Development Business and Innovation 2014, p. ii) by funding energy efficiency measures at no or little capital cost to the property owner. The priority in objectives is placed on promoting the efficiencies in electricity and gas consumption and "investment, employment and technology development in industries that supply goods and services which reduce the use of electricity and gas by consumers" (Department of State Development Business and Innovation 2014, p. iv). A 2014 review of the program, which was then called the Victorian Energy Efficiency Target, stated that the priority of the Victorian government has shifted from greenhouse gas emissions reductions to energy cost savings (Department of State Development Business and Innovation 2014, p. v). In 2016, carbon emissions savings was again the first priority in keeping with the Victorian Energy Efficiency Target Act 2007 (ESC 2016b).

Households are offered products and installations by authorised providers for free or for a reduced cost. At the time of writing in August 2018, supported activities for households were upgrades of domestic water heaters, space heating and cooling systems, televisions, freezers, fridges, clothes dryers and pool pumps, shower roses and light bulbs and draught proofing retrofits as well as stand-by power controllers and electricity in-home displays (DELWP 2018c). In contrast to the Residential Energy Efficiency Support schemes in South Australia, the VEU does not consider need, income or vulnerability, but takes a democratic distributional approach offering rebates to all applicants.

5.7.3.5 Victorian energy efficiency trials

The Victorian government is currently running three retrofit trials: the Victorian Healthy Homes program (Sustainability Victoria 2018), the Energy Smart Public Housing Project (DHHS 2019a) and the Affordable Retrofits Program (DELWP 2018a). All these programs are targeting vulnerable, low income households.

Victorian Healthy Homes program (Sustainability Victoria 2018) is trying to establish evidence for the health impacts and economic benefits of retrofitting the homes of chronically ill people. The Energy Smart Public Housing Project is trialling space conditioning upgrades and behaviour change interventions among public housing renters and evaluating energy savings (DHHS 2019a). The Affordable Retrofits Program is testing the uptake of subsidised retrofits (DELWP 2018a).

² The 'Financial assistance to buy energy-efficient appliances', a no-interest loan scheme, is advertised to be available nationwide. The link leads to the website of the Tasmanian energy-efficient product assistance loans (TEELS) (<https://www.energy.gov.au/rebates/energy-efficient-product-assistance-loans>), which is only available in this state.

³ The 'Renewable power incentives (solar, wind and hydro)' is shown as being available in all eight states and territories, although the link reveals that is only offered in Tasmania.



5.7.3.6 *Local council programs*

Some local councils offer their own residential energy efficiency grants, such as Banyule's offer of free RES assessments (Positive Charge 2018a). Moreland council in metropolitan Melbourne is one of the leaders in promoting energy efficiency among households. Moreland council works closely with the Moreland Energy Foundation (MEFL). MEFL has a demonstrated interest in energy justice (Rowe & Maddocks 2018).

Positive Charge is an initiative by the Moreland Energy Foundation that offers education, advice and help with implementations of initiatives for householders and organisations. It is the closest to a one-stop-shop, as desired by COTA Australia (COTA Australia 2019a), the authors could find. Positive Charge offers plain language technical information on retrofit measures, provides estimates on retrofit costs and recommends preferred local suppliers, for example for draught proofing (Positive Charge 2018b). Technical information and referral to assessments and preferred suppliers is available for solar photovoltaic panels, insulation, draught proofing, lighting, hot water heat pumps and reverse cycle air conditioners. Technical information is available for lighting, domestic hot water systems, and electricity from renewable sources or "green power". A link to the Victorian government's online tool to compare the offers of energy providers (www.energymadeeasy.gov.au) is provided.

In addition, the Positive Charge website offers tips on energy saving heating and cooling retrofits, behaviours and coping mechanisms (Positive Charge 2018c). The website highlights the health risks of heat stress and refers readers to health services (Positive Charge 2018c). Health risks of cold homes are not mentioned. Behavioural initiatives are also recommended for the use of appliances. Renters are provided with recommendations for non-invasive and behavioural measures.

Positive Charge has partnerships with 17 local councils in and around Melbourne (Positive Charge 2018a). Mitchell Shire, Strathbogie Shire, Murrindindi and Moira Shire Councils, where the two partnering Care at Home service providers are located, were not among these.

5.7.3.7 *Local council programs in the areas of the partnering service provider organisations*

Scoping reviews were conducted on the home webpages of the four local Council areas of the participating care service providers, using the search term "energy". Mitchell Shire had carbon emission reductions goals for the council's own operations and links to energy information and education resources from various government and research organisations' websites (Mitchell Shire Council 2018). Energy programs or grants for households were not apparent.

Strathbogie Shire's 'Bogie Bulk Buy' is a council-led solar PV panel bulk buy program with the solar provider Cherry (Strathbogie Shire Council 2018b) which has been replicated in the other two relevant councils of Murrindindi (Murrindindi Shire Council 2018) and Moira Shires. The program is administered by the Yarra Energy Foundation, a NGO in the City of Yarra in Melbourne, and benefits charitable community groups through a solar PV donation scheme (<http://www.bogiebulkbuy.com.au>). The Council also advocates for a "DIY energy audit" and recommends the use of energy efficiency appliances as the most cost-effective measure (Strathbogie Shire Council 2018c).

The website of the Moira Shire Council informs residents of the mandatory 6 Star NatHERS standard for new dwellings and extensions, general tips on how to save energy, energy literacy, and provides links to governmental websites and independent resources such as the Alternative Technology Association (ATA; now Renew) for an energy consultation.

5.7.3.8 *Climate and Health Alliance (CAHA)*

The Climate and Health Alliance (CAHA) is an Australian organisation which joins health researcher, educators and practitioners of varied disciplines in advocating for policy change to address the risks of climate change to human health. It is the only initiative known to the authors that demonstrates a successful collaboration between the Energy and Health domains.

In June 2017, the Climate and Health Alliance (CAHA) published the Framework for a National Strategy on Climate, Health and Well-being for Australia (CAHA et al. 2017). The framework was developed in consultation with stakeholders from the health and policy sectors and suggests seven areas of policy action to be implemented at all three levels of government. The goal is to create "a fair and environmentally sustainable national policy framework that recognises, manages and addresses the health risks of climate change and promotes health through climate change action" (CAHA et al. 2017, p. 6). The framework is underpinned by seven principles that address issues of basic human rights, i.e. 1. The right to health, distributional justice, i.e. 5. Intragenerational and



intergenerational equity, procedural justice, i.e. 8. Citizen engagement, and preventative strategies, i.e. 6. Minimising and managing risk (CAHA et al. 2017, p. 6). With regards to the policy recommendations, most relevant to this project are the first, second, fourth and fifth areas of policy action, as they highlight the need for ongoing climate change mitigation efforts with co-benefits in health, a focus on vulnerable groups, public and professional capability building and interdisciplinary and cross-governmental collaborations:

1. *Health -Promoting and Emissions-Reducing Policies: Policies that reduce the risks to people's health and well-being while simultaneously reducing greenhouse gas emissions.*
2. *Emergency and Disaster-preparedness: Supporting the identification of vulnerable populations and gaps in infrastructure in order to adequately prepare for the impacts of climate change.*
4. *Education and Capacity Building: Educating and raising awareness of the health impacts of climate change within the health workforce, and the wider Australian community.*
5. *Leadership and Governance: Establishing effective governance arrangements which facilitate horizontal and vertical collaboration in implementing climate change and health initiatives at the national level, and advocating and demonstrating leadership internationally on action to address the health impacts of climate change. (CAHA et al. 2017, p. 10).*

CAHA is also an active advocate for residential energy efficiency. In the recent Senate Committee *Current and future impacts of climate change on housing, buildings and infrastructure*, CAHA recommended increased efforts in retrofitting buildings to mitigate heat stress from a warming climate (Senate of Australia Environment and Communications References Committee 2018). CAHA is also collaborating with the National Climate Change Adaptation Research Facility (NCCARF) in leading the development of a Health and Wellbeing Climate, Adaptation Plan (H-CAP) for the Queensland Department of Environment and Science. The Discussion Paper underlines the importance of reducing greenhouse gas emissions reduction to achieve climate change resilience (NCCARF & CAHA 2018).

5.7.4 Policies

Climate change mitigation and energy policies in Australia are fragmented. State governments, such as in Victoria, show stronger initiatives than the federal government. State governments may try to influence the federal government through the Council of Australian Governments (COAG) Energy Council, a forum which comprises members of all states, territories and the Commonwealth government (DoEE 2019).

5.7.4.1 Federal policies

As a signatory to the Paris agreement (United Nations 2015), Australia has committed to reduce its greenhouse gas emissions by 2030 by over a quarter based on the 2005 levels, amongst other mechanisms, by improved energy productivity (DoEE 2015). However, federal proposals to curb greenhouse gas emissions have been ill-fated and have led to the downfall of several prime ministers in the last ten years (Hudson 2018). Since the last federal election in 2016, energy policy has been the responsibility of the Department of Environment and Energy (DoEE). Energy policy encompasses effort towards climate change mitigation and energy security. The DoEE oversees the funding agencies the Australian Renewable Energy Agency (ARENA), focused on the promotion of renewable energies, and the Clean Energy Finance Corporation (CEFC), facilitating financial investment into low-carbon technologies (IEA 2018). The DoEE receives advice and recommendation by the independent Climate Change Authority (CCA). The CCA conducts legislative reviews as requested by the Minister and commissions its own research based on the *Climate Change Authority Act 2011* (CCA 2018). Although greenhouse gas emissions reduction efforts have not been abandoned, since August 2018 the responsibilities for energy and the environment have been distributed over two ministers, and the Government's and the new Minister for Energy Angus Taylor's main concern has shifted to tackling rising energy prices (Taylor, A 2018; Williams 2018). By contrast to European countries, Australia does not have a clear target or pathway for low or zero energy or carbon buildings (IEA 2018).

5.7.4.1.1 National Energy Productivity Plan (NEPP)

National Energy Productivity Plan (NEPP) is of relevance to this project, as it calls for consumer empowerment and the protection of vulnerable energy customers. In 2015, the Council of Australian Governments (COAG) Energy Council published the National Energy Productivity Plan (NEPP) setting out actions to meet the Australian



Government's target to increase Australia's energy productivity by 40 per cent until 2030. Energy productivity was defined as "(doing more using the same or less energy) includes energy efficiency, along with other ways to reduce energy costs" (DoEE 2018b). The NEPP provides evidence for the trend to prioritise energy affordability over greenhouse gas emission reduction. In the NEPP, carbon emission reductions are listed as the last of the three objectives (Australian Government COAG Energy Council 2015). The NEPP aims to lower energy costs by improving consumer knowledge of energy pricing and offering choices (Australian Government COAG Energy Council 2015). The NEPP acknowledges the need to assist vulnerable householders by calling for "support best practice services for vulnerable consumers" (Australian Government COAG Energy Council 2015, p. 6).

5.7.4.1.2 *Independent Review into the Future Security of the National Electricity Market (Finkel report)*

The Independent Review into the Future Security of the National Electricity Market, also called the Finkel report after its main author chief scientist Dr Finkel, was a work commissioned by the COAG Energy Council and delivered in 2017. The Finkel report is of relevance to this project as it highlighted inequities in the Australian low carbon transition. The report suggested that "consumers are at the heart of the transition", and that there should be a combination of improved energy efficiency, demand management and residential micro generation (Finkel et al. 2017). The Finkel report also called for proactive policies by retailers to protect vulnerable and low-income householders (Finkel et al. 2017). It acknowledged that householders in multi-storey buildings are vulnerable due to their limited options of improving energy productivity (Finkel et al. 2017). It also suggested building on the findings of the LIEEP projects on how to access and assist vulnerable householders (Finkel et al. 2017). The COAG Energy Council agreed on the recommendations of the Finkel report in June 2017.

5.7.4.2 *State policies - Victoria*

State governments, including the Victorian government, actively encourage retrofits of the housing stock for climate change mitigation and adaptation. Health and equity are expressed outcome of *Victoria's Climate Change Framework*. Assistance for disadvantaged people is an integral part of the vision:

Our cities, towns and regions will be climate-resilient and achieve net zero emissions, and will provide all Victorians with a liveable, healthy and prosperous place to live. Disadvantaged groups will be helped to adapt to climate change impacts (DELWP 2016, p. 26).

5.7.5 Training and consultation

The Training & Consultation level of influence in the Energy domain in this map comprises only Australian Sustainable Built Environment Council (ASBEC).

5.7.5.1 *Australian Sustainable Built Environment Council (ASBEC)*

ASBEC is a peak body for industry and building industry related organisations who are promoting sustainability in the Australian built environment. ASBEC has called for a clear vision for low carbon buildings, developed a strategy to move towards for zero carbon buildings by 2050 and supports mandatory disclosure for residential buildings (ASBCE & Climate Works Australia 2018). ASBEC believes that improving the energy efficiency of buildings has benefits for householder health and resilience and has called for stricter building codes (ASBCE & Climate Works Australia 2018).

5.7.6 Community and advocacy

The Community & Advocacy level of influence in the Energy domain comprises organisations that represent and lobby for consumers on the topic of residential energy efficiency. Residential energy efficiency is part of the agenda of Consumer Affairs Victoria (CAV) and the Energy Efficiency Council (EEC).

5.7.6.1 *Consumer Affairs Victoria (CAV)*

Consumer Affairs Victoria (CAV) is part of the Victorian Department of Justice and Community Safety. CAV oversee the development, governance and education on consumer legislation (CAV 2019). CAV also advises consumers on energy matters. This focusses on energy contracts, though, and less on energy efficiency products or services. CAV has devoted a separate category to "energy products and services" (CAV 2018b), with advice of consumer rights and links to further governmental resources on buying solar PV panels, comparing and switching



energy retailers, door knocking salespersons and phone marketing campaigns, including the Victorian Energy Saver website.

5.7.6.2 *Energy Efficiency Council (EEC)*

The Energy Efficiency Council (EEC) is an association of energy researchers, providers and professional consultants that advocates for policies which reduce energy demand (EEC 2016). In 2016, the EEC called for a scaling up of support for vulnerable households in matters of energy (EEC 2016). Most relevant to this project, already in 2016, the EEC advocated for collaborations among governments, social service organisations and energy retailers to improve access for vulnerable households and facilitate implementation of measures (EEC 2016). The EEC also supports mandatory rental energy efficiency standards (EEC 2016). According to the EEC, regulations governing the energy efficiency of homes should be expanded to aspects of health and safety (EEC 2016).

5.8 Equity

The domain of Equity comprises individuals and organisation that are primarily focused on the meaning of energy services in contemporary lives and improving access to affordable energy. Equity is one tenet of energy justice and includes aspects of vulnerability (Jenkins et al. 2016). Energy equity addresses access to affordable and reliable energy services taking into consideration spatial, temporal and social diversity (Hall, Hards & Bulkeley 2013; Walker, Simcock & Day 2016). Justice addresses the distribution of energy costs and benefits and the minimum or normative standards of living (Hall, Hards & Bulkeley 2013; Sovacool & Dworkin 2015). Vulnerability in an energy context is mostly used in connection with fuel poverty and health outcomes (Hall, Hards & Bulkeley 2013) and may be defined as a function of sensitivity, exposure and resilience.

Energy justice also addresses the concepts of procedural justice and recognition (Jenkins et al. 2016). In the absence of a working definition of energy poverty or affordability in Australia, it is difficult to quantify the prevalence or impact of energy poverty.

The map presented 15 stakeholders in the Equity domain. Stakeholders in the various levels of influence of the Equity domain described here include the following:

- Decisionmakers: Low income, older energy bill payers
- Operations: Kildonan 'Energy visits', Brotherhood of St Laurence and financial counsellors.
- Programs: Australian Government Energy Made Easy website, Victorian Energy Compare website, energy retailers' hardship programs, energy concessions, and the Energy Brokerage Pilot.
- Policies: Energy hardship guidelines and the Victorian Energy Retail Code
- Training & Consultation: no organisations focused on training and consultation with regards to energy hardship were identified
- Community & Advocacy: Energy Consumers Australia (ECA), Australian Council of Social Services (ACOSS) and community and charity organisations.

The review of the stakeholders in the Energy domain revealed older people may be particularly vulnerable to energy hardship due to low disposable income, limited capabilities and as they are unlikely to self-identify. However, early identification is considered important in designing effective assistance. Most information on energy use and market offers is available online excludes older people with low digital literacy. Energy concessions vary from state to state. At the time of writing, at least one social service providers in Melbourne was offering energy assistance, but partnerships between social and energy services seemed to be rare. New legislation demands transparent hardship programs and processes by energy retailers in the near future. In the meantime, community and advocacy groups are jointly calling for higher energy efficiency standards, minimum standards for rented properties and more political willingness and action to protect vulnerable people from energy hardship.



5.8.1 Decisions makers

Low income, older bill payers are vulnerable to energy hardship with little opportunities to mitigate the problem and its impacts. In Australia, homes with sub-standard thermal performance are more likely to be occupied by low-income households, whose lack of financial resources and agency present a significant barrier preventing them from retrofitting their homes (DCCEE 2013; Garnaut 2008). Low wealth households are also less likely to be without solar electricity generation and hot water system than other households (ABS 2013). Low income also seems to predict using a fridge that is 10 years or older, and thus less efficient than new one (ABS 2010). In addition, low-income households spend a higher proportion of their expenditure on heating, cooling and electricity than any other income group (ABS 2011a), are more likely to experience financial stress (ABS 2011b), and are likely to be disproportionately affected by rising energy prices (Simshauser, Nelson & Doan 2011). The Australian Government recognises that low-income households may compromise on adequate heating in winter (DCCEE 2013), which may present a health risk.

Older people are particularly vulnerable to rising energy prices. Older people tend to spend more time at home, are likely to have chronic illnesses that demand careful regulation of their thermal environment and have limited skills and failing capabilities to engage in the energy market (National Seniors Australia 2017; Willand & Horne 2018). Although asset-rich, older Australians may be low in disposal income (*Legislated Review of Aged Care 2017 2017*), which limits their capacity in retrofitting their homes or upgrading their appliances. Older people may also be disadvantaged in receiving help from energy hardship programs, which require self-identification (AER 2015). From a business point of view, the increasing number of customers defaulting on payment is considered a challenge by retailers. Early identification is regarded key in effective assistance (AER 2015)

5.8.2 Operations

Operational service delivery providers in the Equity domain include counsellors for energy hardship. This report focuses on the Kildonan 'Energy visits'.

5.8.2.1 *Kildonan 'Energy visits'*

The community service organisation Kildonan Uniting Care offers so-called 'Energy Visits' to help householders manage their energy costs. These 'Visits' can be actual visits with householders or may be conducted on the telephone (Kildonan Uniting Care 2018b). The Kildonan website claims that "the majority of our services can be accessed from metropolitan Melbourne through to north regional Victoria" (Kildonan Uniting Care 2018a). The Kildonan offices are located in metropolitan Melbourne, Epping, Broadmeadows and Shepparton. They are about 45min to an hour's drive away from the location of the two partnering Care at Home providers in Broadford and Yarrowonga.

5.8.2.2 *Brotherhood of St Laurence (BSL)*

The Brotherhood of St Laurence (BSL) is a not for profit organisation working for social justice. BSL is also research active in the energy efficiency and hardship focus area (ACOSS et al. 2018; ACOSS & Brotherhood of St Laurence 2018; ACOSS, BSL & TSI 2017; Azpitarte, Johnson & Sullivan 2015). BSL has led a LIEEP project (Sullivan et al. 2016) and is a delivery partners in the Victorian Affordable Retrofits Program (DELWP 2018a) and the Energy Brokerage Project (The Hon Lily D'Ambrosio 2018).

5.8.2.3 *Financial counsellors*

More older Australians than ever before are in housing stress and are looking for financial help (Taylor, D 2018). The My Aged Care website recommends financial counselling and advice resources (My Aged Care 2019a). Many care services providers have in-house financial counsellors, who may refer clients to energy hardship programs

5.8.3 Programs

The Australian Government and the Victorian Government offer websites for energy consumers to compare energy contracts and to find the optimum offer.

5.8.3.1 *Australian Government Energy Made Easy website*

The Australian Government Energy Made Easy website (<https://www.energymadeeasy.gov.au/>) is a digital tool to help find the optimum energy contract for electricity and gas in isolation or combination. The website also offers



tips on how to switch and how to reduce energy costs by behavioural adjustments. When a Victorian postcode is entered, the website refers readers to the Victorian Energy Compare website.

5.8.3.2 *Victorian Energy Compare website*

The Victorian Energy Compare website (<https://compare.energy.vic.gov.au/>) is an online tool to help find the optimum energy contract for electricity and gas in isolation. The website also has a small link to the 'Manage my energy' website (<https://www.energy.vic.gov.au/Manage-my-energy/>), which offers energy saving tips and advice on how to prevent and stay safe during power outages.

5.8.3.3 *Energy retailers' hardship programs*

Energy retailers are obliged to offer customers who have difficulties paying their bills assistance before disconnection. Processes must provide for self-identification and identification by the retailer (AER 2015). Hence, householders who have difficulties paying their energy bills may ask their retailers for help and assistance. In response to a hardship program review in 2015 by the Australian Energy Regulator (AER), which found diversity in the nature of the retailers' hardship programs, ranging from behavioural advice to audits, retrofits and upgrades (AER 2015), in November 2018, the AER has published new guidelines for the ACT, Tasmania, South Australia, New South Wales and Queensland. These guidelines oblige retailers to make transparent their processes of identifying vulnerable customers early, articulate the rights of customers in hardship programs, ensure that customers have an optimum energy contract and offer energy saving education and audit programs (AEMC 2018a).

5.8.3.4 *Energy concessions*

Energy concession provide income support to low income and disadvantaged households to assist in paying electricity, gas and other domestic fuel bills. As access to energy is considered essential, energy concessions fall under community service obligations (Industry Commission 1997). Energy concessions are offered by the federal and state governments. The Australian Government offers holders of the Commonwealth Seniors Health Card a so-called fortnightly Energy Supplement of \$14.10 for singles and \$10.60 for couples (Australian Government Department of Human Services 2018c). Eligibility of the Commonwealth Seniors Health Card (CHSC) is means tested (Australian Government Department of Human Services 2018a). However, pensioners who claimed a CHSC after March 2017 are no longer eligible for the Energy Supplement (Australian Government Department of Human Services 2018b). Although National Seniors Australia claims as their achievement that the current Coalition government supports the reinstatement of the Energy Supplement for people reaching pension age now (National Seniors Australia 2018), the rules had not changed by the time of writing (October 2018) (Australian Government Department of Human Services 2018b).

The second federal government's energy concessions is the Essential Medical Equipment Payment. The Essential Medical Equipment Payment offers a maximum flat rate of \$157 each year for people who is deemed to have disproportionately high energy consumption costs due to illness-related extraordinary heating and cooling needs and due to eligible life support machines (Department of Human Services 2018).

The type and extent of energy concessions vary among states. There are five different energy concession models: flat-payment, percentage-based, income-based, consumption-based and price-based concessions (QCOSS 2014). In 2014, in most states in Australia, energy concessions took the form of a flat rate payment, that is a fixed amount that is applied as a discount to the household's energy bill (QCOSS 2014).

Victoria offers a wide range of concessions. Some are offered to all people with a Health Card, some offer help for very high bills, some try to protect from expensive fuel option, some take into account that specific medical conditions and life support machines require extra heating, cooling and electricity. The Medical Cooling Concession is available for people who have impaired thermoregulations because they suffer from multiple sclerosis, lymphoedema, Parkinson's disease, fibromyalgia, post-polio syndrome/poliomyelitis or motor neurone disease. The Medical Cooling Concession (DHHS 2018b) can also be used to offset illness-related heating costs in winter, although the concession is only paid during the summer months. The concession includes impaired thermoregulation due to medication and may be available on people taking blood thinners (DHHS 2018b). The Life Support Concession which offers relief from the electricity costs of running life support machines may be claimed in addition to the national Essential Medical Equipment Payment (DHHS 2018a). Victoria still seems to be the only state that currently offers energy concessions on a percentage basis, that is a discount of a fixed percentage of the total bill (consumption and connection costs) (NTCOSS 2017).



Energy concessions are not without criticism. In 2014, the Queensland Council of Social Service (QCOSS) summarised problems across energy concession programs:

- *failure of concessions to keep pace with rising energy prices ;*
- *lack of policy clarity about the objectives of concessions and whether they are targeted at the right people;*
- *inconsistencies in approaches and outcomes for households across jurisdictions;*
- *failure of concessions to provide adequate and equitable assistance alongside technological and market reforms. (QCOSS 2014, p. 4)*

The Queensland Councils of Social Services (QCOSS) has developed best practice principles that should guide concessions schemes. The proposed design principles are clarity, adequacy, equity, adaptability and transparency. Proposed implementation principles are accessibility, complementary assistance cost effective delivery, accountability and review mechanisms. In the context of this project, which addresses rising energy prices and the limited capabilities of some older people to retrieve information from the Internet, the following design principles appear particularly relevant:

Adaptability: *concessions should be adaptive in order to accommodate changing market developments (prices and price impacts resulting from market developments and new pricing structures) and changing community needs*

Accessibility: *concessions should be easily accessible to eligible persons or households*

Complementary assistance: *concessions should be delivered as part of a package of measures to maximise their effectiveness*

Cost effective delivery: *concessions should be delivered cost effectively (QCOSS 2014, pp. 32-33)*

5.8.3.5 Energy Brokerage Pilot

During the project duration, the Victorian government announced a further program addressing the limited capabilities of some people to find the optimum energy contract. The Energy Brokerage Pilot project (The Hon Lily D'Ambrosio 2018) is delivered in partnership with the Brotherhood of St Laurence. It uses energy brokers to help householders with language difficulties, limited Internet access or literacy or confidence to access the Victorian Energy Compare website and switch to a more advantageous energy contract. Consultations may be at group events, at home or on the phone.

5.8.4 Policies

The policies most relevant to this project were the new energy hardship guidelines published by the Australian Energy Regulator (AER), (AEMC 2018a) and the Victorian Energy Retail Code (ESC 2019). Australia does not have policies or targets for reducing energy poverty like European countries. Industry, research and the community sector have called for government action on energy poverty (ACOSS & Brotherhood of St Laurence 2018; ACOSS, BSL & TSI 2017; Chester & Morris 2011; KPMG 2017; Nelson et al. 2019).

5.8.4.1 Energy hardship guidelines and the Victorian Energy Retail Code

In November 2018, the Australian Energy Market Commission (AEMC) published new guidelines to protect consumers who have difficulties paying their bills from disconnection (AEMC 2018b). According to the new rule, energy retailers have to develop and publish their hardship policies with information how customers in hardship will be identified and assisted. In response, in December 2018, the Australian Energy Regulator (AER) published an issue paper on energy hardship guidelines (AER 2018), which invites comments on how consumers should be informed of their rights and how consumer should be supported. Comments were invited until 14 January 2019.

Victoria has its own Energy Retail Code. Since 1 January 2019, this Code contains Part 3 Assistance for residential customers anticipating or facing payment difficulties" (ESC). The Victorian Code also sees disconnection as a "last resort" and also asks retailers to offer "practical assistance" in the form of the most cost-effective tariff, energy management advice. Energy retailers have to proactively offer assistance to customers who are in arrears of at least \$55 (ESC). The Code does not specify how the energy assistance must be



delivered. Experience in energy awareness programs has shown that many vulnerable households need individual and in-person assistance (Rowe & Maddocks 2018).

5.8.5 Training & Consultation

The authors were not able to identify organisations involved in training and consultation around energy poverty.

5.8.6 Community and advocacy

The Community & Advocacy level of influence in the Equity domain comprised organisations that promote a 'fair go' and social justice.

5.8.6.1 *Energy Consumers Australia (ECA)*

Energy Consumers Australia (ECA) is an independent body created by COAG to research, represent and support the needs of energy customers (ECA 2019). Most relevant for this project, Energy Consumer Australia is funding energy experts within the state COTA branches (COTA Australia 2019a). During the course of the project, ECA also started the 'How to make a PowerCall' campaign, encouraging consumers to call their retailers and ask for a better contract, enquire about concessions and hardship programs through an online step-by-step guide (ECA 2018). Energy Consumers Australia has also supported research on the health and wellbeing benefits of improved energy efficiency (Acil Allen Consulting 2017).

5.8.6.2 *Australian Council of Social Service (ACOSS)*

The Australian Council of Social Service (ACOSS) is the peak body of community service providers and advocates for better social equity and justice (ACOSS 2019). ACOSS and its Victorian state branch are actively campaigning for mandatory standards for rental properties (Environment Victoria 2019) and against fuel poverty (ACOSS 2017, 2018; ACOSS & Brotherhood of St Laurence 2018; ACOSS, BSL & TSI 2017).

5.8.6.3 *Community and charity organisations*

In an open communiqué to the COAG Energy Council in December 2018, other community and charity organisations have also called for a more targeted approach to energy efficiency subsidies with focus on vulnerable households, higher energy efficiency standards for new homes and minimum standards for rental properties (ACOSS et al. 2018; St Vincent de Paul Society & Consulting 2016). The call for action was supported by numerous non-governmental stakeholders in the Energy domain, such as Moreland Energy Foundation and ASBEC.

5.9 Discussion

This part of the project has reviewed known stakeholders who may influence or be affected by an integration of energy efficiency and hardship assistance into the Care at Home system. This desktop review has revealed tensions between the domains of Health and Energy and potential challenges that need to be addressed in efforts of forming joint actions between caring for older people and better energy efficiency.

5.9.1 Tensions and challenges

The challenges identified in the desktop review address the political will to tackle climate change on a federal level. A lack of leadership at a national level makes any streamlining of assessment, services, practical and financial support and collaborations with the integrated Care at Home system a challenge.

5.9.1.1 *Climate change mitigation is politically contentious*

To obtain federal government support for the idea of integrating energy efficiency and hardship into the Care at Home system, it may be advantageous to rename the climate change mitigation domain to energy affordability. Climate change mitigation has proven to be politically contentious. Efforts to reduce greenhouse gas emissions have been to the detriment of several Australian prime ministers in the recent past, and in the last cabinet changes, ministerial responsibility has been divided into the environment and energy. As the new Minister for Energy has given priority to energy price reductions, framing the initiative around energy affordability, rather than climate change mitigation, may receive a better response from the top levels of the Australian Government.



5.9.1.2 *Limited regulations on energy efficiency and affordability of existing or rented homes*

The limited regulations on energy efficiency and affordability of existing or rented homes means that energy efficiency initiatives among landlords and in existing homes is a voluntary endeavour. Considering that three out of four older Australians live in their own homes, every tenth rented home is headed by a person over the age of 65 and that one out of five older Australians live in public housing, programs that upscale the energy efficiency of existing and rented homes may benefit the large majority of older people. However, mandatory energy efficiency standards in Australia address only new homes, the energy efficiency of existing homes is not assessed, promoted or incentivised, and there are no minimum standards for rented dwellings that could protect low income tenants. In addition, rental standards are state-based, which makes a harmonisation of initiatives a challenge.

5.9.1.3 *Misalignment of governing jurisdictions*

The governance, funding and delivery of the Care at Home system and of climate change policy are not aligned. This may make the political collaborations difficult. The Care at Home system is characterised by a homogenous process. It is centrally managed by the Department of Health. The Aged Care Roadmap (Aged Care Sector Committee 2016) and National Assessment Framework (My Aged Care 2018b) cover the work force, funding, processes, support, reporting and governance the My Aged Care system. The Aged Care Roadmap is based on the principles of a nationally consistent, transparent, monitored and procedurally fair system. By contrast, efforts to reach the national climate change target are fragmented and governed by a pluralistic system. Although there is national target to reduce greenhouse gas emission, there is no clear vision or trajectory for buildings by the Australian Government. The energy efficiency of existing homes is not promoted or incentivised at a federal level. The only national programs for existing homes and targeted at home owners are information tools such as the appliance labelling schemes, behavioural energy saving tips and information for renters. Other programs are managed on state and local government levels and are offered by public and private entities and by for- and not-for-profit organisations for free, with rebates or at full fee, and there no attempt at harmonisation. This pluralistic nature of energy initiatives makes it a challenge for householders or interested care service providers to select appropriate, reliable, quality-controlled energy conservation tools and services.

5.9.1.4 *Different understandings of the term “energy”*

The desktop review revealed that the meanings of the term energy differ between the Health and Energy domains. In the Aged Care literature, energy is used in the sense of vitality and the client’s physiological energy (cf. NSAF User Guide (My Aged Care 2018c)), for example in the CHSP Manual

- *referral to an occupational therapist (to identify energy conservation strategies and/or suitable equipment to promote functional independence)(Department of Health 2018c, p. 23)*

and in the “task simplification and energy conservation for managing housework” (My Aged Care 2018b, p. 35). This finding suggests that stakeholders for both domains may need to develop a common language and understanding of the term, and that shared publications will require clear definitions and applications of the term.

5.9.1.5 *Little energy information targeted at older people*

The review found that there was little information on energy designed for older people which could be used to raise awareness in a program that tries to integrate energy into the Care at Home system. The health care support plans are tailored to the characteristics and needs of the older client. Specialist input is an option, which may be an opportunity to introduce energy counsellors. However, as older people are the main decision makers with regards to energy initiatives, they need to perceive energy improvements as important and beneficial services. Information on energy problems and mitigation options is a prerequisite for the demand of such services. However, low digital literacy prevents some older people from accessing such information online. There also seems to be little hard copy or face to face information, and not all existing energy saving tips may be suitable to frail or chronically ill persons.

5.9.1.6 *Plethora of home energy assessment tools*

The plethora of home energy assessment tools makes it difficult to select one for a nationally harmonised endeavour. The Care at Home system has a nationally consistent assessment tool that includes free screening and two more detailed assessments face to face and at the client’s home depending on the complexity of the needs. By contrast, there are numerous home energy assessment and audit tools, with diverse governance



ranging from a national rating tool for new houses to NGO assessments of existing homes, with a diversity of data input requirements that cover bills, the building envelope and behaviours, with differences in costs, ranging from free assessments to over \$950, varying requirements for assessor qualifications, ranging from self-assessments to accredited assessors, and varying availability, ranging from all locations with Internet to metropolitan Melbourne. The Victorian Residential Efficiency Scorecard is the tool which is most likely to reach a national coverage for existing homes.

5.9.1.7 Non-person-centred energy advice

In contrast to the Care at Home support plans, home energy advice is not tailored to the householders. The Care at Home assessments focus on the needs of the individual and address the social, physical, medical and psychological needs of the older persons. The independently assessed needs provide the basis for the level of home support and care funding. By contrast, home energy assessment advice is based on a variety of predetermined technical criteria and provides a diversity of outputs, such as a rating, estimated annual energy use, costs and greenhouse gas emissions, the design, size and type of solar PV system, retrofit and upgrade recommendations or behavioural recommendations. These outputs may not fit the needs, desires or requirements of the householders.

5.9.1.8 Inequities in financial and practical retrofit support

While the Care at Home support plans are designed around the same, consistent objective in all regions of Australia, access to retrofit services and subsidies is unequally distributed in Australia. The Care at Home programs aim to increase or maintain levels of independence, safety, accessibility and wellbeing with all their support services (Department of Health 2018c). It has set ranged of financial support for minor and major home modifications and facilitates access to specialist services. By contrast, householders who are seeking help with retrofits must depend largely on their self-initiated and self-coordinated efforts. There are currently no federal subsidies or rebates for residential retrofits and upgrades. State or local council-specific subsidies and rebate schemes vary, as does the availability of community programs.

5.9.1.9 Inequities in income support for energy costs

While client funding for Care at Home services, which represents income support for health and wellbeing, is determined by federal regulations, income support for energy costs varies across Australia. The funds for Commonwealth Home Support Programme and the Home Care Packages are allocated according to an independent assessment of the client's needs. With the CHSP, each provider has client contribution policies, which may lead to inconsistent prices and services (COTA Australia 2018). However, the allocation of HCPs follows rules and is means tested. By contrast, there are no nationally consistent income support schemes for energy in Australia. The federal, flat rate Energy Supplement is no longer available to new pensioners, and state-specific energy concessions vary in type and amount, which leads to inequity. There do not seem to be policy goals or accessibility aims for energy concessions on a national basis.

5.9.1.10 Uncertainty about demand for energy assistance among older Australians

It is not clear to which extent older Australians desire practical assistance with energy efficiency and affordability.

Although a survey of COTA members have requested help with the affordability of energy (Newgate Research 2018), the survey did not provide information on the type of assistance. COTA and the ECA highlight the need for equitable access and control over energy for older Australians (Russell-Bennett et al. 2017; Yates 2017), however, these issues were not identified in a survey conducted by National Seniors Australia on consumer experience of aged care (McCallum, Rees & Maccora 2018). This may have been because assistance with energy is currently outside the scope of aged care services received at home and not expected by the consumers. On the other hand, older Australians still seem to be getting acquainted with the new My Aged care system and to learn how to navigate and use it most effectively (Rees, Maccora & McCallum 2018).

5.9.2 Opportunities

Opportunities revealed by the review highlight that support for consumer rights and energy equity, in particular with regards to rented accommodation, is growing in the community, and that there is an emerging interest for health as an opportunity and justification for tackling climate change.



5.9.2.1 *Focus on consumer rights in Health and Energy domain*

In both the Health and Energy domains, policy efforts focus on empowering consumers. In the Health domain, the Living Longer Living Better reform established the principle of Consumer Directed Care aimed at giving care clients more flexibility, control and choice over their care services. In the Energy domain, the National Energy Productivity Plan (NEPP) aims at “improving consumer knowledge of energy prices and offering choices”. Even though this aim in the NEPP only addresses the price of energy and not energy efficiency, it represents an important step towards empowering consumers around the energy of their home. A policy focus on consumers presents an opportunity to develop efforts which give due consideration to the diverse knowledge and capabilities of older Australians.

5.9.2.2 *Frameworks for collaboration and first initiatives*

Opportunities for collaboration between the Health and the Energy domains have been revealed in the National Assessment Framework and the National Energy Productivity Plan (NEPP). The National Assessment Framework calls for interdepartmental collaboration (My Aged Care 2018b), which may open up opportunities to introduce new types of service. In addition, increased energy needs due to illness are already recognised and addressed in energy concessions for people with medically-evidenced extraordinary energy needs, including heating and cooling requirements on a federal (Department of Human Services 2018) and state level (DHHS 2018a, 2018b). In the Energy domain, the NEPP opens up new avenues for activities by calling for support for vulnerable householders. There also seems to be cross-sectoral agreement among advocacy groups that collaborations, partnerships and in general expansion of programs targeting vulnerable households to improve their energy burden is needed (CAHA et al. 2017; EEC 2016). Suggestions have been made that concerted efforts should connect different levels of government, energy retailers and community organisations (EEC 2016). There is also increased recognition of the health and wellbeing benefits of improved energy efficiency in Australia (Acil Allen Consulting 2017) and effort to build interdisciplinary evidence (Sustainability Victoria 2018) and a first framework to promote health through climate change action (NCCARF & CAHA 2018).

5.9.2.3 *Unified support for improvement of rental standards*

There is wide support for mandatory rental energy efficiency standards across the various sectors, for example by the Energy Efficiency Council (EEC) (EEC 2016), the peak bodies in the Equity sector (ACOSS et al. 2018) and Health advocacy organisation Council on the Ageing (COTA Australia 2017).

5.9.2.4 *Commodification of Aged Care*

The commodification of Aged Care may promote the uptake of energy efficiency and hardship assistance into some individual care provider’s portfolio of services. Consumer Directed Care is based on a market-driven approach, in which the choice lies with the consumer. In this competitive market, energy assistance may provide unique selling point to attract customers.

5.9.2.5 *Scope of home maintenance and modification already contains some energy efficiency measures*

Although the typical examples for home modification are ramps and rails, the home maintenance and modification rules already contain some energy efficiency measures in the form of light bulb replacements. This measure may be an opportunity to start conversations with householders around energy efficiency, to educate householders on the various types and efficiencies of light bulbs and to recommend choices that may save energy. As lighting accounts for 12 per cent of residential greenhouse gas emission in Victoria (Victorian Government Department of Sustainability and Environment 2006). Switching to more efficient lights may half the cost of lighting (DoEE 2018d). An app may assist in choosing more efficient bulbs and calculate their savings (Energy Rating 2018a). The exchange of halogen light bulbs with LEDs may be offered free of charge under the Victorian Energy Upgrade program (DELWP 2018c). At least one CHSP service provider is already offering the “supply and replacement of low energy light globes” (Otway Health 2018). Hence, the upscaling of lighting upgrades may benefit the environment and the householders’ energy cost burden. In addition, at least one service provider of Home Care packages is suggesting the replacement of the air conditioner (St Ives Home Care 2018), which could reduce the 26 per cent of total greenhouse gas emissions in home attributed to heating and cooling.



5.9.3 Advantages beyond trust

The review of the stakeholders also revealed advantages of the integration of energy efficiency and hardship initiatives into the Care at Home system beyond the householders' trust in the care providers, which represented the rationale for the project. These advantages were in the three tenets of energy justice and economic benefits.

5.9.3.1 *Better equity in accessing energy assistance nationwide*

Linking energy efficiency initiatives into the Care at Home system promises to improve access across regions and to create synergies around cultural sensitivities. Care at Home services are available nationwide, in all states and territories and geographical regions. By contrast, the review of the stakeholders has shown that energy initiatives, concessions and access to optimum energy contracts were distributed unequally geographically and across population cohorts, and that some people may be missing out. The Care at Home system also serves all cultural and ethnic groups and takes consideration of "people with special needs", which include indigenous and Torres Straight Islanders, people from CALD backgrounds and socially and financially disadvantaged groups {, 1997 #14@11.3}. Thus, the Aged Care system acknowledges cultural sensitivities and has guidelines and experience in how to address these (My Aged Care 2018b). Indigenous and Torres Straight Islanders, people from CALD backgrounds and socially and financially disadvantaged groups also need special consideration with regard to access to energy efficiency education and services (Russell-Bennett et al. 2017). By contrast to the Aged Care sector, knowledge on cultural sensitivities among energy professionals is only emerging (IES 2016; QCOSS, MDA & MEFL 2016). Integrating energy matters into the care and support of groups with special needs would be an efficient and effective way of reaching these population groups.

The Care at Home system also provides nationally consistent, means tested income support for health and wellbeing expenditures. By contrast, income support for energy in the form of energy concessions and retrofit subsidies is different in type and extent from state to state and not always means tested. Integrating energy assistance into the everyday care of older people may help in reaching minority groups, facilitate the harmonisation of energy concessions and reach householders in a more equitable manner.

5.9.3.2 *Better recognition of fuel hardship among older people*

Linking energy efficiency initiatives into the Care at Home system also promises to improve the recognition of vulnerable people. The Care at Home system uses a nationally consistent assessment tool to identify the type and severity of needs of older people. This tool could be extended to include questions on the adequacy of energy services and burden of energy costs. Considering that older people may not be aware of energy-related assistance and are unlikely to self-identify as fuel poor, an integration of a few energy hardship related questions would assist in early identification of vulnerable households.

5.9.3.3 *Reduction of public expenditure*

Linking energy efficiency initiatives into the Care at Home system also promises to reduce public expenditure through lower energy concessions, building on existing services and infrastructure and by harmonising energy assessment tools. Helping older householders to reduce their energy costs would reduce public expenditure for energy concessions, at least in Victoria. As the energy bills for these householders are subsidies through energy concessions on a percentage basis, for every \$1 saving in energy bills, the Victorian government would save 17.5 cents in energy concession expenditure. Hence, retrofits could be offered for free or at substantial discount.

5.9.4 Future research

Future research identified by the desktop review include needs assessments and economic benefit calculations for regulatory impact statements and more in-depth research on the possible influence of gender and types of effective interventions

5.9.4.1 *What are the 'energy services for health and wellbeing' needs of older people in Australia?*

There is little information on the 'energy services for health and wellbeing' needs of older people. Based on the Needs Assessment Guide (Australian Government Department of Health & Public Health Networks 2015), a needs assessment should be conducted to explore householder perceptions, experiences, desires and needs across geographical regions, sub-groups and health conditions, and to investigate to what extent and in which ways the "independence, safety, accessibility and wellbeing" of older Australians (Department of Health 2018c) is



linked to energy affordability and to identify priorities and options to improve energy productivity among this growing population group.

5.9.4.2 What are the needs of service providers concerning energy services and workforces?

Similarly, there is little information on the needs of service providers concerning energy services and relevant workforces. Research on how service providers may envisage and prefer the integration of energy efficiency and hardship initiatives into their services should cover different locations, provider types and climatic regions. Some information on the needs of service providers in regional Victoria is presented in Section 1.

5.9.4.3 What is the influence of gender in energy efficiency decisions?

It is not known whether and how the overrepresentation of women receiving home support or care may manifest in decisions around energy at home. Twice as many women than men are care recipients (AIHW Gen 2018b). Decisions around energy efficiency improvements or hardship in the house may address physical changes, energy contracts or energy practices. Decisions around energy efficiency improvements or hardship require technical knowhow, financial literacy and energy literacy as well as agency. Hence, for the offer of energy services through the Care at Home services to be successful, older women will need to understand how heat flows through building envelopes, how energy is used in their everyday lives, how improvements may benefit their wellbeing and what to consider in energy contracts to make informed decisions on the recommendations of energy assessments and to have the power to enforce them at home. The disproportionate number of women receiving Care at Home services and the possible traditional division of tasks between the genders may exacerbate the vulnerability of female older Australians. It is possible that women were and still are less involved in the physical maintenance or retrofits of their houses and have lower financial literacy than their male counterparts. Hence, they may be less inclined or willing to accept retrofit initiatives or be critical of energy bills.

However, little is known about gender differences in energy and energy-related financial literacy. Energy literacy may be understood as the “broad content knowledge of affective and behavioral dimensions as well as the competency that people need to make wise choices and commit to energy conservation” (Chen, Liu & Chen 2015, p. 201) and to include the aspects of “energy concepts, reasoning on energy issues, low-carbon lifestyle, and civic responsibility for a sustainable society” (Chen, Liu & Chen 2015, p. 201). Some research suggests that women and girls in many developed nations have less knowledge on energy related issues than their male counterparts. This may be due to lower levels of technical knowledge among women (Aguirre-Bielschowsky 2013). However, research in Australia has found that women in New South Wales were in charge of establishing practices around energy at home (Organo, Head & Waitt 2013). Lower level of energy literacy may also affect retrofit decisions. Research in Switzerland has found that there is a significant positive relationship between financial literacy and investment in energy efficiency (Brent & Ward 2018). Internationally and in Australia, women seem to be less knowledgeable in financial matters than men (Harrison 2016; Wilkins & Lass 2018). And at least across a few European countries, women have been found to have a lower level of energy-related financial literacy (Blasch et al. 2018). Yet, robust research is needed on levels of energy literacy among older women and how this may shape energy related decisions. Such understanding is needed to shape educational materials and modes of delivery to address their needs, preferences and practices. And within the wider context, the question of how women consider the quality of the home, modifications and behaviours when planning for retirement and beyond deserves investigation.

5.9.4.4 What may be effective interventions approaches?

Little is known about what is needed to trigger material improvements, contract switches or behaviour changes among older Australians. Older Australians are more likely to avoid new debts, be resigned about their financial situation than younger ones and be more risk averse, which may make care recipients reluctant to invest in retrofits and upgrades or actively pursue better contracts (Financial Literacy Foundation 2007). Older women are more likely to have a desire to learn about how to save and better manage money but be resigned about their financial situation than younger ones and be risk averse than men (Financial Literacy Foundation 2007). In the LIEEP projects, retrofits were delivered free of charge, however, free measures may not be a sustainable model considering the growing older population. Hence, there is a need to investigate the demand and willingness to pay for energy efficiency interventions among older people.



5.9.4.5 *What may be the economic benefits on the integration of energy assistance services into the Care at Home system?*

In addition, an economic assessment of interventions trials is needed to establish the wider economic benefits of efforts to improve the energy productivity among this population group (health and employment) to support regulatory impact assessments.

5.10 Recommendations

Based on these findings, we recommend collaborations between Health and Energy at the federal level of government, a vertical alignment of energy policies and programs to achieve national consistencies and the harmonisation of appropriate, reliable, quality-controlled energy conservation and affordability tools and services, more political and program focus on the energy efficiency of existing and rented homes, and the development and appropriate distribution of materials and guidelines specifically for older Australians.

5.11 . Conclusion

The mapping of the stakeholders and a desktop review of their roles has revealed challenges that may hinder and opportunities that may support the integration of energy efficiency and hardship initiatives into the Care at Home system. The review has highlighted the gaps in the federally governed and streamlined Aged Care system and the limited leadership by the national government on residential energy efficiency for existing buildings, which is manifest in limited vertical coordination of policies and initiatives, a lack of alignment of federal and state policies and geographical inequities in energy concessions, retrofit and upgrade subsidies and information and education. This misalignment in leadership and governance hinders cross-collaborations between the Health and Energy domains. The Equity domain is strongly aligned with the Energy domain as manifest in shared publications, research partnerships and political activism. In the Health advocacy level of influence, energy efficiency is an emerging issue, particularly with regards to the protection of renters.

6. Stakeholder report: challenges and opportunities

6.1 Summary

Linking energy efficiency and energy hardships initiatives into the Care at Home system requires cross-sectoral and cross-disciplinary efforts. This phenomenographic research component of the Seed Fund explored the perceptions of stakeholders in the three domains of Energy, Health and Equity, to obtain a realistic impression of the viability and practicality of the idea. Key principles of project evaluation guided the semi-structured interviews. Thirteen participants representing eleven organisations across all three domains participated. The study revealed three variations in the stakeholders' perceptions of the planned endeavour. Energy and a front-line Care at Home provider with experience in energy initiatives for older people saw the project as an opportunity to improve social equity despite the challenges of retrofits. Equity stakeholders perceived the project as an ideal which required a better understanding of the reality of vulnerable, older people. Health advocacy stakeholders, however, saw this project as a distraction from addressing the broader challenges of an ageing population. Nonetheless, all participants offered suggestions on how perceived challenges could be addressed in an efficient and effective manner. Raising awareness in the community, fostering collaborations and generating evidence for possible solutions were regarded as important steps in establishing a political agenda and tackling energy hardship through synergies across programs.

6.2 Introduction

The desktop review of the stakeholders, presented in Section 5, supported the premise of the project that the Health and Energy domains are not formally connected to simultaneously address energy-related determinants of health. Care at Home organisations focused on serving older people's physiological and psychological needs guided by distinct assessment and eligibility criteria. They were not mandated to address the wellbeing of the individual in connection with energy usage in the home environment.

The preliminary stakeholder map identified groups who might be shape the decision-making processes needed to integrate energy efficiency and hardship initiatives into the Care at Home system. The map served to engage stakeholders to gain a better understanding of as many perspectives as possible on the intersection of health care and energy among older Australians.

6.3 Objective

Stakeholder engagement in this project had the purpose of facilitating "linkage and exchange" (Lomas 2000) between 'knowledge producers' and 'knowledge users' as a prerequisite of successfully and efficiently moving from research to practice (Davison 2009). With regards to "exchange", in this project consultation of key stakeholders aimed to identify the stakeholders' perspectives on integrating energy efficiency and hardship initiatives into the Care at Home system. With regards to "linkage", the communication with stakeholders was designed to break down barriers between the researchers, practitioners and policy makers, and to identify knowledge gaps, future research needs and methods, as well as possible communication channels and alliances for advancing knowledge translation across the varied domains and levels of decision-making (Graham 2012).

The aim of the stakeholder interviews was to gain an understanding of the operational contexts and perceptions of stakeholders who could influence or would be affected by the integration of energy efficiency and energy hardship initiatives into the Care at Home system. By collecting critical insights from an interdisciplinary body, the objective was to identify challenges and opportunities for the proposed integration of initiatives and to identify potential sources of funding and research linkage partners.

6.4 Methodology

The study used a phenomenographical approach to explore the conceptions of the multi-disciplinary and multi-sectoral stakeholder organisations. Originally developed for educational research, phenomenography explores the variations in understanding of a phenomenon among different groups of people (Larsson & Holmstrom 2007). It has since been used in varied relevant disciplines, such as research on knowledge translation in public health (Visram, Goodall & Steven 2014) and stakeholders' conceptions of safety in construction (Novais, Ruhanen &



Arcodia 2018; Torner & Pousette 2009). By contrast to a phenomenological approach, the focus in phenomenographic research is on the collective rather than on the individual. Phenomenography helps to convey the common experiences, conceptions or perceptions of a phenomenon within a group and to compare and contrast these to those of other groups of people in order to find categories of description or relationships that are linked logically and often hierarchically (Akerlind 2012).

6.4.1 Data collection

Interviews are the predominant data collection tool in phenomenographic research (Bowden 2000). In this study, semi-structured interviews were used to cover as many aspects as possible of a possible project trialling the integration of energy efficiency and hardship programs into the Care at Home. The questions were guided by the OECD principles for the evaluation of development aid (OECD DAC 1991, 2010, 2018). These principles seemed appropriate as a pilot research project trialling the integration of energy efficiency and hardship initiatives into the Care at Home system would be a co-operative exercise to inform future policies and programs.

In keeping with the phenomenographic approach (Bowden 2000), the recruitment of participants was purposive and aimed at capturing the diversity of perceived stakeholders. Initial invitations were guided by the preliminary stakeholder map and continued through snow-balling as interviewees suggested further organisations. The initial invitation wave presumed that federal governmental ministers were the most influential stakeholders. Community organisations and those who had contacted the researchers in response to a Conversation article on energy poverty (Willand, Horne & Moore 2018) were imagined to be the most interested stakeholders. Program delivery agencies were selected as the stakeholders that might be most affected. Hence, initially, the invitations targeted known policy and program decision makers in the energy and health domain and included community and advocacy groups who had shown their interest in the project. When the response from the health domain proved slow, the invitations were extended to additional community and advocacy groups in the health domain. Invitations to participate in the research were sent to a total of 25 stakeholder organisations. The invited stakeholders covered all three domains and five of the six levels of influence. Service providers, as the organisations who seemed to be highly interested and might be most affected, were not targeted, as they were covered by the ethnographic research (cf. Section 1). The perceptions of older Australians receiving care at home and their individual carers were not pursued individually in this research but collectively through the community and advocacy organisations (Figure 3).

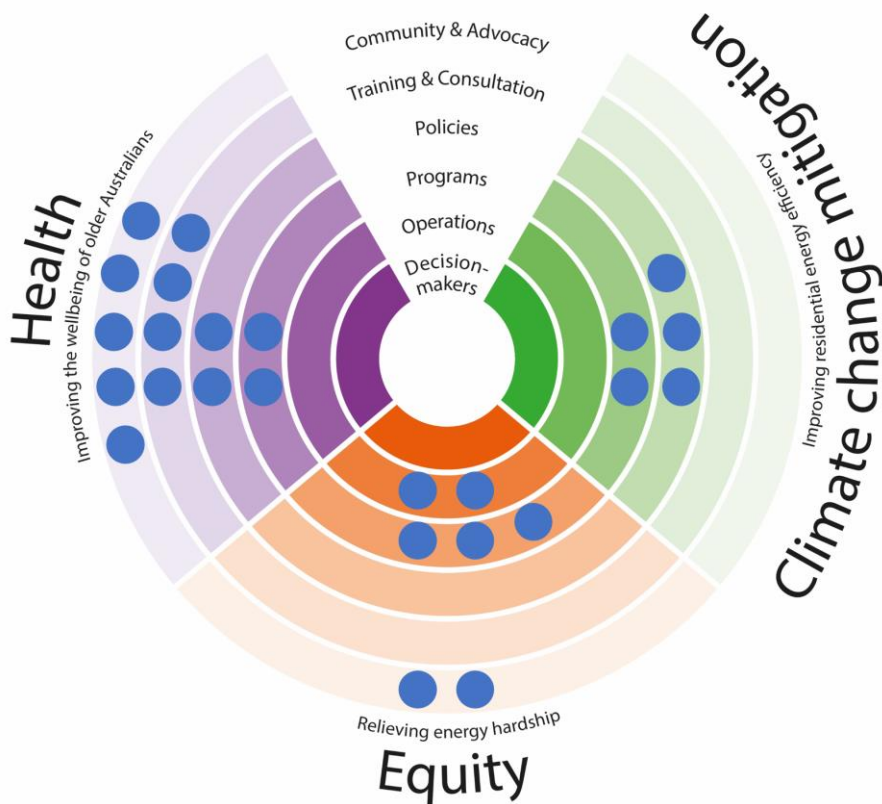


Figure 3 Stakeholder map showing the three domains and levels of influence of the organisations which were invited to participate. Each blue dot represents one organisation.

6.4.2 Data analysis

The interviews were analysed by the same researcher who conducted the interviews (NW). The transcripts were coded using the qualitative data analysis software NVivo version 11 until inductive categories (Bowden 2000) emerged. In this study *a priori* topics of interest were used to capture variations in stakeholder perceptions, before meanings were inferred. In the first stage, the coding framework followed the themes of the interview guide. In the second stage, the codes were grouped deductively in terms of their meanings as challenges, opportunities, pathways and alternatives. Information was analysed within and across the stakeholder domains and levels of influence, exploring commonalities and differences. Categories of perceptions emerged from the descriptions of the meanings. Trustworthiness was enhanced through member checking. One participant provided feedback on the results.

6.5 Results

6.5.1 Participants' characteristics

Ten interviews were conducted with 13 individual participants representing eleven organisations and four of the six levels of influence. Five organisations had declined the invitation. Nine organisations had not responded by the time of writing despite reminders by email and phone calls (18 December 2018) (Table 1). Five participating organisations were operating on a national basis, six were from Victoria.

Overview of recruitment numbers and representative domains of participating organisations

Domain	Invited	participated	declined	no response
--------	---------	--------------	----------	-------------



Energy	5	4	1	3
Equity	6	3	0	0
Health	14	4	4	6
sum	25	11	5	9

Table 1 Overview of recruitment numbers and representative domains of participating organisations

Of the 13 participants, the largest cohort represented community and advocacy organisations (Table 2). Four participants worked in the policy sector. Of all three policy domains, only Energy was represented (Figure 4). Three organisations were represented by two participants. One participant represented two organisations. The gender distribution was biased towards women, with 10 out of the 13 participants being female. Table 3 presents an overview of the participants. Pseudonyms indicate the participants' representations of the three domains and the levels of influence.

Level of influence	Number of participants
Community & Advocacy	5
Training and Consultation	1
Policies	4
Programs	1
Operations	3

Table 2 Levels of influence of participants

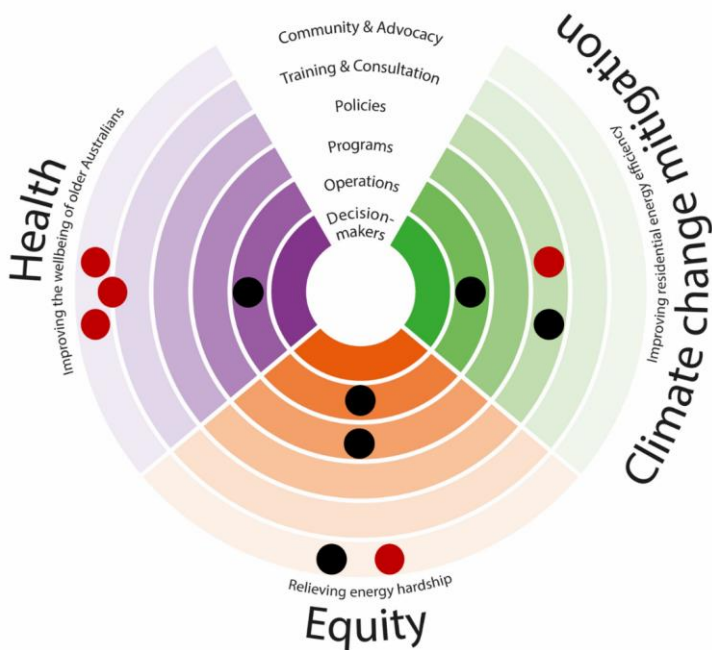


Figure 4 Stakeholder map showing domains and levels of influence of the organisations which participated in the stakeholder interviews. Each red dot represents a national organisation. Each black dot represents a Victorian organisation.

Pseudonym	Levels of influence	Jurisdiction	Position	Time in this role
Energy 1	Policies	National	Senior Policy Advisor	2 years



Energy 2	Policies	National	Senior Policy Advisor	1.5 years
Energy 4	Operations - Retrofits	Victoria	CEO	2 years
Energy 5	Policies	Victoria	Senior Policy Advisor	not provided
Energy 6	Policies	Victoria	Senior Policy Advisor	2 years
Equity 1	Community & Advocacy - Social and community sector	Victoria	Policy Advisor	2 years
Equity 2	Community & Advocacy - Social and community sector	Victoria	Policy Advisor	7 weeks
Equity 3	Operations - Social and financial services	Victoria	Program Manager	1.5 years
Equity 4	Programs - Subsidised housing	Victoria	Principal Manager	11 years
Equity 5	Community & Advocacy - Consumers	National	Associate Director	3 years
Health 1	Community & Advocacy - Older Australians	National	Senior Policy Officer	1.5 years
Health 1	Community & Advocacy - Aged Care	National	Senior Policy Officer	1.5 years
Health 2	Advocacy, Training & Consultation - Care at Home	National	Principal Advisor, service provider peak body	1.5 years
Health 3	Operations - Care at Home	Victoria	Program Manager	7 years

Table 3 Overview of participants

The interviews were conducted within 28 days between 3 and 31 October 2018 face to face on the RMIT University campus or over the telephone. Interviews took between 34 and 128 minutes with an average of 77 minutes. The interviews were audio-recorded and transcribed by an Australian professional transcription service. The researcher who had conducted the interviews (NW) checked the transcriptions for accuracy. Seven participants edited and approved their own transcripts. Seven of the 13 participants chose to have their names, organisations and initiatives to be disclosed in the research outputs. Six participants preferred the default option of having their privacy and anonymity protected. As Australia's energy, equity and care sectors are small, all organisation names and the gender of all participants have been hidden in this document to protect all participants' privacy and to highlight commonalities and differences between the groups of people rather than those between individuals.

6.5.2 Participants' experiences

At the beginning of the interviews, all participants were asked to describe their current experiences with the Care at Home system, home energy efficiency and energy affordability. The interviews revealed that there was an asymmetry in the experiences across the domains. While all participants from the Health domain were familiar with the concept of energy retrofits and affordability, Energy and Equity stakeholders had no or very limited knowledge of the operational contexts of the Care at Home system and its organisations.

The question about current experiences across the three domains was designed to gauge the extent to which stakeholders had empirical knowledge of the policies, practices and operational aspects of the other two domains. None of the Energy or Equity participants had had any experience with the Care at Home system or its programs, neither in their professional or personal lives. Some participants asked the interviewer immediately for a brief



description of the Care at Home system and showed their genuine interest for the home support and home care programs. One Energy organisation was aware that service providers were “trusted intermediaries” who could facilitate the communication and reception of messages and information. The organisation had contemplated using Home and Community Care (HACC) workers as energy efficiency program delivery agents before the introduction of My Aged Care. The organisation had decided against it due to concerns about overburdening the front-line staff by adding more tasks into the already limited time they were allocated to provide care for the householders. One Equity participant had some experience with health services in a previous role in the National Disability Insurance Scheme (NDIS) and indirectly with older people in the coordination of aged care services. However, all Energy and Equity participants had experience with vulnerable people, such as those on low incomes or public housing tenants.

By contrast, Health participants were familiar with the concepts of residential energy efficiency and affordability in the energy domain either through work or private experiences. One Health Community & Advocacy participant mentioned two of the three approaches to interventions, i.e. improvements to the thermal envelope and optimisation of energy contracts and reflected on decisions around roof top solar PV systems from personal experience. However, the conversation did not touch on energy practices. One Health operations manager had been involved in one of the LIEEP projects that had used HACC workers to deliver energy retrofits and behaviour change programs and drew on the observations and lessons learnt in this project.

The third Health participant, a representative of a service provider peak body, had second-hand experience from two cases in which linking Care at Home and energy initiatives had been attempted and failed. In one case, the Department of Health had been asked about the use of Home Care Packages (HCP) funding to install solar PV panels for an older householder. The other case involved the request to use the HCP funds to pay for heating bills. The funds had been used to purchase a new heater, however the client refused to pay for the operational heating costs. Both the investment in microgeneration and the fuel cost support requests had been denied as electricity and heating expenditure were regarded as living expenses and as such not eligible to be supported through the HCP. The purchase of the heater seemed to have been legitimate. This participant did not mention any personal experience with retrofits. However, the participant was also aware of the failures in the delivery of the government’s insulation scheme in 2011 (Hanger 2014).

6.5.3 Practices and programs

The second question required participants to describe the organisations’ current practices and programs that addressed caring for older people, home energy efficiency and affordability. The interviews did not provide evidence of any current energy efficiency or hardship initiatives focused on older people or that any such initiatives were already linked to the Care at Home system. Many of the Energy and Equity stakeholders were partnering in programs aimed to improve energy efficiency and hardship, which included, but did not necessarily focus on, older people. Health stakeholders did not report collaborations with Energy and Equity programs, even where these services were available within the same organisation. Advocacy around energy issues specific to older people was shown to be emerging. This activism seemed to highlight problems with the accessibility of information tools and energy contracts to older people rather than poor housing quality.

Both Energy and Equity stakeholders reported on energy efficiency and affordability programs for low income households which included older Australians. The completed federal LIEEP program and ECA’s Power Shift projects were mentioned as well as the current Victorian retrofit initiatives, such as the Healthy Homes project, the Energy Smart Public Housing Project, the Affordable Retrofits and Energy Brokerage Pilot projects and the Solar Homes programs. All Victorian projects included the assessment of homes using the Residential Efficiency Scorecard and took advantage of the Victorian Energy Upgrade program. The Victorian projects were trialling predetermined - as opposed to customer preferred or tailored - measures, such as thermal retrofits, appliance installation or upgrades and behaviour change education in isolation or combination. Most relevant for this project, the Energy Brokerage Pilot project was trialling accessing older people through the Older Person’s High-Rise Program, a community health initiative that assists older public housing tenants in Melbourne (health.vic 2018). Outside of these programs, the existing public housing stock was gradually being retrofitted and upgraded with consideration of tenants’ wishes where technically possible. Advice on energy saving behaviours was offered through local housing offices. Local housing officers also referred public housing tenants to information on energy made available by state and federal governments on the Internet.

The interviews revealed that within social service organisations collaborations between the domains of Energy and Equity were routine, however the Health domain was excluded. Organisations with a variety of social services to meet the needs of the community reported cross-directing clients between energy and financial counsellors.



Referrals from Care at Home service branches seemed to be missing. Some Equity and Energy stakeholders reported that community services organisations, such as Kildonan, were delivering hardship programs for energy retailers and distributors. According to the shared anecdotes, Kildonan's approach to assisting householders through energy advisors took a practice-based approach. Examples concerning older customers were the installation of a pet door to reduce involuntary energy loss through a permanently open door and the facilitation of safe access to a garden clothes line to reduce the utilisation of a clothes dryer. Energy retailers were funding Kildonan's energy and financial inclusion services and some installations and upgrades of appliances. Kildonan used its own energy auditing tool and trained its own assessors. When asked, stakeholders were not aware of referrals from any of Kildonan's or Brotherhood of St Laurence's Care at Home branches to internal energy audit or advice services.

Stakeholders representing the Health domain took care to explain the details of the Care at Home policies and programs. COTA was named as an organisation that had started advocating for older Australians in terms of energy, recognising that for some people switching providers was confusing due to limited digital literacy. Reading and understanding energy bills was difficult due to the language used. Interest in improving the thermal envelope was not mentioned. One participant of an organisation representing older Australians was not aware of energy related advice being covered in the members' magazine.

The interviews revealed one emerging collaborative initiative instigated by the Equity domain to address the special needs of older people in terms of energy at the advocacy level. Energy Consumers Australia was sponsoring Energy Advocates in every state branch of COTA to build capacity in this older person's advocacy organisation. These Energy Advocates were advising businesses on how to communicate with older people. According to the participants, these targeted businesses did not include energy retailers. Information on this new initiative did not seem to have been well known yet, as the representatives of two Health Community & Advocacy organisations did not mention it.

The response of the Health stakeholder representing one of the three service provider peak bodies was markedly different. In this organisation, the challenges around older people and energy were not on the agenda. In preparation for the interview, the participant had read the researcher's journal article on energy justice (Willand & Horne 2018). In this participant's experience the main purpose of home modifications was the prevention of falls and enablement of physical functionality as assessed by Occupational Therapists. The participant was not aware of fall risks associated with energy practices, such door snakes. The peak body had been active in seeking clarification by the Department of Health on the intent of "large modifications" as the interpretation by consumers and individual providers differed. The participant expected the Department to issue guidelines. This organisation advocated for a National Ageing Strategy that would encompass diet, lifestyle and housing. In this participants' opinion, energy was an aspect of housing, and housing was to be included in a holistic approach to ageing. This perspective was distinct from the responses of other stakeholders as it questioned the premise that most people wanted to remain living in their older, inefficient family homes. In this organisation's perspective, moving home was to become a normal part of planning for old age.

6.5.4 Relevance

Asked about to which extent the linking of initiatives of caring for older people and improving home energy efficiency and energy affordability suited the priorities and policies of the stakeholders' organisations, the study found support among Equity, Energy and care provider operations stakeholders. However, on the level of Health advocacy, that is organisations representing older people and a service providers peak body, energy-related problems were regarded as a minor issue.

Energy, Equity and Health-operations stakeholders stated that linking initiatives of caring for older people and improving home energy efficiency and energy affordability was well aligned and suited to their organisations' priorities and policies which addressed vulnerability, age, health risk and community responsibility. Policy advisors suggested that for very large policy organisations with a range of major and minor policy agendas, helping older people with energy hardship had only a small priority. One Energy policy advisor referred to the staff engaged in issue around the larger topic of energy efficiency as a "cabal of people". This expression implied that there was a small group of skilled and passionate staff working together in a continuous way for a shared aim which may at times have been overlooked by topics with higher priority within the organisation. It may, hence, be interpreted as a success that energy vulnerability as a general concept had made it onto the political agenda as evidenced by the establishment of departmental sections charged with exploring opportunities to address the problem of energy hardship. It was also manifest in the creation of Energy Consumers Australia as a distinct advocacy group focusing on consumer protection and assistance. For the departmental units charged with caring



for vulnerable householders, the project’s endeavour was regarded as very relevant. Similarly, for the Equity and Health community organisations delivering energy programs, the attempt to link health care and energy services was regarded as pertinent, and they recognised the link between energy services and health outcomes. It was also well linked to the organisations’ perceived responsibility to improve the quality of life of those most in need. The project was also regarded as well suited to the policies of the Equity advocacy, program and operations organisations and important due to its collaborative approach linking financial problems around energy with health and wellbeing.

The response from the stakeholders representing the Health Advocacy level of influence was more cautious. One representative of an advocacy organisation for older people stressed that energy was one of its “strategic priorities” and attested a lot of interest in it. The participant quoted from publicly available statements. In these, energy affordability and equity were linked to “choice and control” over energy costs, recognising their wellbeing benefits, but with less emphasis on housing quality, comfort or physiological health. The participant was also a member of an advisory group, which met regularly with the Department of Health on Aged Care policy. The participant questioned that linking energy initiatives into the Care at Home system was the most fitting approach due to the novelty of the My Aged Care (MAC) system which hindered any additional innovations:

So I think you need to realise that we are about halfway through a very ambitious program of reform [...] So there are things that are messy, and there are things that are frustrating, and there are things that are inconsistent. But in the longer term, what we're aiming for, is a consistent, equitable system where consumers have control. And, I don't know, introducing things that might diverge from that goal or others – I mean, do they become a priority?– and I think energy efficiency is a priority. It might not be a priority within the context of the aged care system, it might be there's a different avenue to make it a priority. (Health 1 – Community & Advocacy)

For the Health participant representing a peak body of service providers, energy was not a priority. Priorities for this organisation lay with broader issues around sustainable funding of aged care services and about long-term planning for an ageing society. In this participant’s response, energy hardship was framed as a financial problem which might best be addressed with incentives outside the Care at Home system.

The discourse of these two Health Advocacy stakeholders contained fewer anecdotes of energy hardship symptoms or vignettes of benefits through energy efficiency assistance than that of other participants. The emphasis on vulnerability of older people in the priority and thought processes among Energy, Equity and the Health - Operations stakeholders seemed supported by a quantitative analysis of references made to vulnerability (Figure 5). Managers involved in the daily operations of energy and care programs mentioned the term most often. The participants of organisations representing older Australians and service provider peak bodies used the term the least. The only use of the term ‘vulnerable’ people in the final statement by one of these participants suggested social desirability bias.

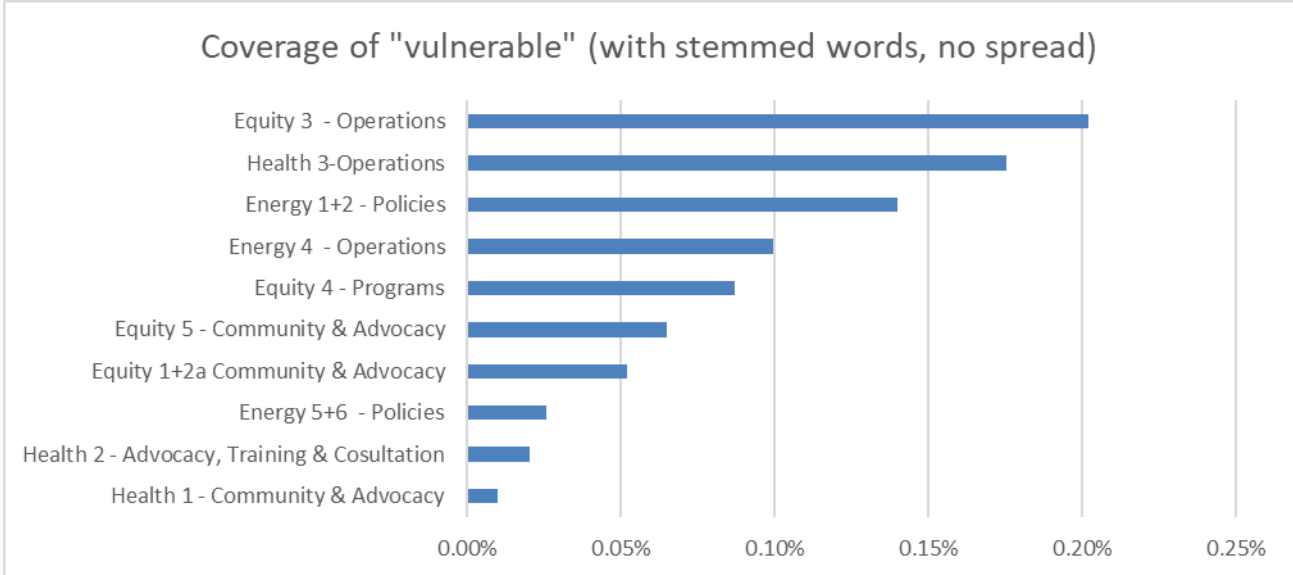


Figure 5 Coverage of the term vulnerable (with stemmed words, no spread to paragraphs) in stakeholder interviews

6.5.5 Tensions and challenges

When asked about tensions that surrounded a possible linking of caring for older people, energy efficiency and equity, stakeholders listed challenges pertaining to the initiatives within their own domains, that is retrofits and the My Aged Care system and to possible tensions that might occur when attempting to link initiatives.

6.5.5.1 Tensions and challenges with retrofits

The tensions experienced around retrofits highlighted the socio-technical factors shaping the outcomes of engineering-driven decision-making processes and the business and technical challenges of material interventions. The complexity of retrofit delivery was shaped by the limited energy literacy and the frailty of many older people and householder preferences conflicting with expert advice. Other challenges included the ambiguities around the objectives of residential energy efficiency and industry capacity.

One of the main themes that emerged was the complexity of the decision making around retrofits, which demanded that technical options, trades and cost factors needed to be understood and balanced. Participants with experience in energy initiatives highlighted that making retrofit decisions was intellectually challenging and, hence, could be time consuming. Therefore, delays in retrofit projects should be expected when people of low socio-economic status were targeted. A problem mentioned frequently was the limited energy literacy of some people. Some people had low levels of skills in reading and understanding energy bills or the energy consumption of the various electrical appliances in a home. This presented challenges when trying to convince people of the financial benefits of proposed measures, monitoring changes in consumption and ensuring anticipated outcomes. When actual financial savings did not meet forecasts or expectations due to inappropriate or unexpected energy practices, householders were often disappointed.

Experience had also shown that expert advice and householders' preferences did not always match. For example, a participant with experience in delivering retrofit interventions suggested that a transition to less carbon intensive and healthier living included abandoning the reliance on gas. However, some householders preferred potentially polluting gas heating to the recommended, more efficient reverse cycle air conditioners. Gas heating was valued due to its radiant heat, the visibility of flames and the practice of drying clothes in front of the heater. Householders rejected reverse cycle air conditioners as they were considered dusty. Similarly, householders showed reluctance to switch to induction stove tops due to a successful, historic marketing campaign promoting cooking with gas. This was reducing efficiency outcomes of planned upgrades.

In addition, uncertainties in energy efficiency guidelines and targets emerged, which should or could guide the design and evaluation of interventions. These included the debate about the appropriateness of temperature guidelines and design comfort levels across the various climatic zones in Australia, as research had shown that comfort temperatures were higher in hotter climates than in cooler regions. An Equity stakeholder reported on resistance from rammed earth practitioners to air tightness standards, which represents a cornerstone of retrofit recommendations. Concern was also raised about the possible overheating of homes built to current house energy rating standards.

Another emerging theme was the limited capacity and willingness of the industry to meet the demands of retrofits. Two stakeholders who had been involved in the delivery of retrofit programs spoke about the difficulty of finding enough retrofit businesses with the required qualifications especially in less populated regions. Participants suggested that incentives for training may be needed. One stakeholder suggested that due to the strong construction market for new houses, conducting small retrofits was not an attractive business model.

As I mentioned, we're doing [retrofit projects] Victoria-wide, and we'd like to work with people who are in the local area. It does require a high level of certification and accreditation for suppliers and also, of course, and very importantly, WH&S [Work Health and Safety] standards. So, it is an upskilling of the market. And because there is so much development of new properties going on in the growth phase in Victoria, suppliers or installers are much preferring to work on new builds rather than retrofitting. So, there is a massive challenge in the market around industry capacity, particularly around insulation. (Energy 4 – Operations)



The implementation of energy efficiency measures was considered difficult and labelled the “poor cousin to the new solar and batteries and all the other new things”. An Energy policy advisor admitted that the installation of new products such as solar batteries was easier to finance than efficiency measures. The accessibility of roof spaces for insulation and the risk of overheating on hot days represented technical challenges and occupational health risks. In addition, some assessments required several qualifications. For example, an energy auditor could evaluate the efficiency of an existing gas heater, however testing of the appliance for gas leaks required a licensed gas fitter.

Finally, equity challenges were raised around tenure. Energy and Equity stakeholders were concerned about tenants missing out in roll outs of solar PV systems and explained that retrofits and upgrades of publicly owned housing were bound by state legislations. The recent changes to the Residential Tenancy Act was seen as an opportunity for tenant empowerment and a possible improvement of the quality of privately and subsidised rented accommodation.

6.5.5.2 *Tensions and challenges in the Care at Home system*

Caring for older people presented challenges to service providers and service seekers due to the novelty of the My Aged Care system. Businesses were confronted by the imbalance of demand and supply of Home Care Packages, the changing landscape of service provisions and the tension between householder preferences and eligibility criteria for services. Older Australians reportedly found it difficult to adapt to the commoditisation of high-valued care services, too.

The interviews revealed that the Care at Home system was struggling with administrative and sustainability challenges. A representative of a service provider peak body explained that there was a queue of people who had been assessed as requiring HCP services and were waiting for the allocation of the Package. Only once the Package was allocated, the consumer could contact, select and engage service providers. In expectation of a delay in care allocation, some assessments seemed to be based on predicted future, rather than on actual needs. This seemed to skew the distribution of allocated packages towards higher needs and more expensive packages. Hence, money might have been misallocated and reduced the number of available packages. The gap between demand and supply of public funding was expected to increase with the growing ageing population. Older people would need to rely more and more on their own assets to fund their retirement and care. However, older people seemed to be unaware of this development and to expect the government to remain the primary financial support for their care. Another Health participant reported that there were efforts to merge the CHSP and HCP programs and to introduce palliative care at home, as a more economical alternative to dying in a medical facility. In the opinions of this Health advocacy and consultation stakeholder, any endeavours to integrate energy would add unwelcome complexity.

For service provider organisations the new MAC system caused concern about the feasibility of their operations. With the new market-based system, more service providers were emerging, the competition was becoming stronger and, as the resources had stayed the same, profit margins were decreasing. This affected the type and extent of services providers could offer and their recruitment models. Equity and service peak body stakeholders also spoke about a lack of transparency around prices which hindered informed consumers decision making. For example, some providers had asked for a contract to be signed before the price schedule was disclosed. Other had offered sign-up incentives. There had been cases in which consumers were being overcharged as fees appeared disproportionately high compared to the delivered services. One Health-Advocacy participant also spoke of the difficulty of pricing specialised services, such as those tailored to culturally or linguistically diverse communities and resultant tensions around equity. On the other hand, some councils outside of Victoria were reportedly offering CHSP services free of charge, as updating the prices every year was considered “too hard”. Health stakeholders expected mandated public disclosure of pricing until the end of 2018.

A representative of a service provider peak body also recounted that consumer preferences and independently assessed needs did not always align, and preferences sometimes conflicted with eligibility criteria as reported earlier. Tensions also appeared to be around “consumer-directed spending rather than consumer-directed care”, for example when older people demanded funds as income support, and funds were spent on a funeral plan. At least one provider had responded to consumer wishes and offered to deposit HCP funds into a bank account, which conflicted with the Guidelines. By contrast, some HCP recipients had thousands of dollars of unspent funds in their accounts.

In addition, service providers had to deal with uncertainties in the continuity of funding. Stakeholders explained that MAC funding was determined in federal budgets, and that the current funding only extended to 2020. Many



of the current services were considered “proof of concept”, and the allocation of distinctive funds to the CHSP and HCP had recently merged from two into one budget item, which was interpreted as a signal for diminishing funding. One Health participant also talked about the prospect of the two programs merging into one. These uncertainties made long term planning difficult for service providers. A representative of a provider peak body explained the number of political and legal challenges that services providers were facing:

We've had numerous reviews and we're doing another review through the Royal Commission on a whole range of issues that will probably reinforce what we know and draw out some other things at the same time. (Health 2 – Advocacy, Training & Consultation)

For consumers, however, the new My Aged Care system presented problems, too. Equity stakeholders reported on the challenges that older people were facing when transitioning from the more personal and presumably value-driven HACC services by their local council to an independent assessment process and the market-based MAC system:

So privatisation presents a real problem. Before you may have got a lot, real, coordinated service provision from a public health organisation. For example, home help was provided by Local Government [...] and they provided more than just home help. They were often the people that were regularly checking on people and doing that sort of thing. (Equity 2 – Community & Advocacy)

6.5.5.3 Tensions and challenges in linking energy efficiency and hardship into the Care at Home system

When imagining linking energy efficiency and hardship into the Care at Home systems, stakeholders identified challenges in obtaining necessary political support, collaborations and political processes that hindered systems thinking and implementation.

6.5.5.3.1 Reservations about demand and supply of energy initiatives

The interviews revealed mixed perspectives on the potential demand for energy efficiency and hardship assistance among older people living independently at home. In contrast to the Energy stakeholders, who supported the idea, the representative of a service provider peak body and an Equity participant with experience in the NDIS expressed their doubts about the demand by householders for help with energy-related problems. The representative of a service provider peak body questioned the significance of energy hardship on a national scale. Judging from the interactions with the organisation’s members, concerns with compromises with heating and cooling had been raised in the ‘southern states”, in Western and South Australia as indicated by their capitals, but never in Queensland. In addition, the participant implied that householder demand for energy initiatives may be hindered by a perceived human trait of not wanting or not being able to evaluate long term impacts. The stakeholder had observed a reluctance among older people to plan ahead, a predilection to focus on the moment and immediate needs and only to react to acute emergencies. Hence, the long-term benefits of energy efficiency improvements might not be recognised, and energy efficiency might not be a priority. Equity participants shared this concern. They revealed how some public housing renters did not value energy efficiency investments and preferred technical quick-fixes like air conditioners and fans for more instant comfort.

Drawing on experiences with the NDIS, one Equity policy advisor warned that some people may not demand energy efficiency assistance due to socio-economic disadvantage. The participant reported that the consumer-directed care approach, which was the key principle in the NDIS and MAC, required empowered consumers to achieve equitable and effective outcomes. Yet, vulnerable people were often not confident or able to claim their entitlements. The system required strong self-advocacy. Some vulnerable people could not or would not know how to engage advocates to negotiate on their behalf and, hence, be missing out. In this participant’s opinion, a similar situation might occur in the MAC, where people who were eligible and in need of services did not request and, hence, did not receive these. The participant warned:

So, getting them motivated to look at the bigger picture things like energy efficiency is really not going to happen. (Equity 2 – Community & Advocacy)

The participating care manager concurred that participation in such an endeavour may not be as straight forward as assumed. The participant highlighted that in this cohort of old and frail people interest could be raised, but that



priorities might change suddenly. The participant reflected on the frustrations experienced in recruiting older householders for a recent retrofit program:

You think you've got them, and then they become unwell, and it's not a priority, it's too hard for them. But there was a lot of interest when that went out and the nominations came through fairly quickly. (Health 3 – Operations)

A Health advocacy stakeholder also raised doubts about the supply of such services in the context of a commodification of care, and questioned the uptake of energy initiatives by profit-driven service providers:

And for them a lot of it is about, yes there might be some altruism in providing service but there's also it's about making a buck. As a new business, how can we grow our business to get into this space to capture the market? So, is it a priority? I'm not sure. (Health 1 – Community & Advocacy)

6.5.5.3.2 Tensions around the goals of energy efficiency and affordability within Care at Home

When asked about the possible goals of linking caring for older people, home energy efficiency and energy affordability and their evaluations, participants reflected on the difficulty of balancing environmental, financial and health outcomes.

Although Energy and Equity stakeholders supported the concept of integrating energy efficiency and hardship initiatives into the Care at Home system, they perceived risks in the setting of goals and objectives in terms of energy affordability in a project targeted at older people. Stakeholders warned that in this cohort of cautious energy users, outcomes may not always meet expectations in the extent and direction of impact. For example, due to underheating prior to the retrofits, householders may save less energy than expected, the so-called pre-bound effect, but feel happier and more comfortable and more socially connected. An Energy policy stakeholder acknowledged that “energy efficiency is always more complex than you might think, and there’s potential for adverse effects”.

By contrast the representative of one of the service providers peak bodies found it difficult to imagine energy efficiency and affordability as a goal within Ageing in Place programs at all. The participant saw energy efficiency as just one of the many challenges of an ageing society that commanded attention and was pulling public resources. The participant saw energy problems as outcomes of poor house design and general financial disadvantage which might be better addressed by initiatives such as rebates and income support outside the Care at Home system. For this stakeholder, any goal required economic justification. The participant queried whether it could be demonstrated that health care costs for older people could be avoided through better energy efficiency of their homes.

6.5.5.3.3 Lack of collaboration with the Health domain

Energy and Equity stakeholders were aware of the challenges in achieving collaboration across political domains to support the project’s vision. Limitations in collaborations were evident in the political as well as on the operational level.

Participants across the Energy and Equity domains saw the lack of political collaboration due to the reluctance of the Department of Health to become engaged as one of the biggest practical challenges. Themes included siloed thinking, employee accountability, political ambitions, lack of interest and limited evidence of benefits.

There was a consensus among Energy and Equity participants that it was difficult to make Health policy and program level organisations see energy hardship as an important factor for health. Most participants spoke from experience, describing difficulties in trying to engage people, finding the appropriate contact persons and making and keeping connections. The lack of willingness to engage was evident in the lack of responses by representatives of Health organisations to invitations. Participants talked about the “siloed way” of government departments, “a closed system”, the “box”, that health had “its own language” and that energy was “outside their remit”. One participant managing social and financial inclusion programs regretted the “gaping hole” in the organisation’s collaborative network. An Equity advocate summed up the difficulty of accessing Health organisations as follows:

It is a complicated policy environment to negotiate. Concessions and housing and health are all dealt with separately, and health is its own universe, really, with its own rules, and that's a system that nobody seems to understand all of. (Equity 5 – Community & Advocacy)

The self-segregation of policy makers appeared one-sided: both Energy and Equity stakeholders had made attempts to connect to the Department of Health and had failed. None of the Health advocacy, community, training and consultation stakeholders reported to have reached out to the Energy or Equity domains. Energy and Equity participants were resigned to the fact that they had not been able to build relationships with the health domain, accepting it as “a harder nut to crack”.

Some participants offered possible explanations which pointed towards organisational management styles and objectives in governmental departments rather than to challenges posed by individuals. One Equity stakeholder pointed out that political action was hindered by the distribution of responsibilities for energy, equity and health across diverse portfolios:

There is a level of complexity around decision-making. There is no one minister or one statute, or one part of the constitution that attaches responsibility for those outcomes. At the moment, that's not the way we think about these issues. I think to bring health into it makes it more complicated again. (Equity 5 – Community & Advocacy)

Conditions that may have negatively influenced motivations to engage in energy issues included organisational culture, accountability tools, low awareness of the problem, restricted financial resources, job mobility, competing workloads and the Department of Health's focus on clinical outcomes and physiological determinants of health to the exclusion of environmental factors such as indoor temperatures.

We don't know why, but the reasons could be that they're as equally busy as we are, that they don't – that they see this as potentially interfering with their work. It's maybe not as apparent to them why it's important. So I think there's a – I think there's just the normal kind of siloed way in which larger organisations work. They're focused on the health policy, and unless they see energy efficiency as a health policy, to work on it with their reduced resources like every other government department, they're unlikely to give it their focus. That's just a realist observation – not so much an observation but a speculation as to why it's hard to engage people on issues that they don't see as being priorities for them and they're not in their performance agreement. (Energy 1 – Policy)

The reluctance to collaborate also extended to the operational level, as evidence by a reported lack of interest of community health organisations in energy-related matters. While one Equity stakeholder had suggested community health organisations as missing on the draft stakeholder map and as potentially interested agents in helping people with hardship related problems, another Equity participant recounted that the participant's organisation had contacted various community health organisation to become involved in issues around energy affordability. Despite the offer of a grant, the organisations had not responded. This was interpreted as a strong signal of lack of interest. As a result, this Equity organisation had decided to turn its attention away from health and to focus on improving housing quality, which seemed to be supported across domains.

The lack of interest and willingness of Health to engage with the Energy and Equity domains may also have been rooted in the differences in the epistemology of the varied disciplines. An Equity participant shared knowledge about an initiative in the UK where guidelines for medical practitioners on energy efficiency had had less impact than expected because health professionals and workers were not convinced of the evidence.

The Citizens Advice Bureau in the U.K. [has developed] a set of guidelines for clinicians around energy efficiency, to actually help doctors, nurses, healthcare workers, talk about energy efficiency in a way that had a focus on health. The policy officer said they had become aware recently that it wasn't having the traction they'd expected, and the reason was that compared to other health guidelines, the clinical evidence was seen as less rigorous, and so it was regarded less seriously. (Equity 5- Community & Advocacy)



This quote also implied a lack of credible evidence for health benefits of improved energy efficiency and hardship. One Energy policy advisor said that the conviction of the links between energy efficiency and health were stronger in the lower ranks than higher echelons of the government, where other issues took precedence.

Some individuals absolutely see a link, and then others, particularly as you get up the hierarchy, are less convinced, [...], I'd say not convinced enough to want to invest a lot of time, money or attention into it. (Energy 6 – Policy)

The representative of a provider peak body seemed to explain the disinterest in energy efficiency. This policy advisor saw energy efficiency as a problem sitting outside of Care at Home programs but with the potential to affect the principles of Aging in Place policy:

With the Aged Care Roadmap focused on care and services, that's probably more of a priority than the broader energy efficiency issue. So, the question is, how do you get leverage to create energy efficiency and invest in behaviour change and the preventative end of policy reform? (Health 2 – Advocacy, Training & Consultation)

Several participants were hopeful that the current Victorian retrofit projects would deliver convincing evidence. Energy policy advisors, however, also implied personal competition for acknowledgement and political advantage by politicians that hindered collaborative efforts:

Sometimes it can become complicated if there may be a new working relationship, or there's a bit of a discussion to be had by people far more important than us about who's getting the credit for this initiative and that sort of thing. (Energy 5 - Policy)

Only one Equity stakeholder had connections to a health department, although not on issues around energy or indoor temperatures. This participant would have welcomed collaborative work on energy.

A gap in political collaboration was also noted within the Energy and Equity domains between the leaders of the federal and state governments. Regretting the abolishment of the Ministerial Councils, one stakeholder summed up the difficulties by saying:

It's a very fractured political environment. Very hard to achieve bipartisan agreement on anything. [...] There's a step away from national action into more jurisdictional action. That isn't necessarily a bad outcome, but it means that sharing information on good practice, effective policies or programs, or sharing good data is something that becomes much harder to achieve. Responsibility for resolving these issues can be outside the mandate of one ministerial portfolio, or any one consumer advocacy organisation. (Equity 5 – Community & Advocacy)

Gaining the support of politicians seemed to require a longer and more diverse process including rapport building through interpersonal relationships, development of research evidence and written submissions.

6.5.5.3.4 Limitations in funding

Tension around funding covered two dimensions: the cost of a potential program linking energy services into the Care Home system, and the financial support available to individuals through MAC.

Firstly, stakeholders raised concerns about the cost of a potential program linking energy services into the Care Home system. The cost of a potential program linking energy services into the Care at Home system was associated with the expected reach of the program and current funding limits of the Care at Home programs. There was a tacit assumption that an initiative linking energy services into the Care at Home system required funding. The representative of a service provider peak body explained that resources for current Care at Home services were already stretched and insecure which deterred service providers from offering additional services.

I think the sustainable funding issue is a real challenge for our organisation in terms of being able to advocate for other add-ons beyond care and services. (Health 2 - Advocacy, Training & Consultation)



An Energy policy advisor explained the complexity in identifying appropriate and feasible population target numbers. Programs that try to target too many people may struggle due to insufficient funding to service everyone. Performance indicators based on the number of people reached may not represent the real value. Programs that target smaller groups may not capture those most in need, because these people may not self-refer, may be the most expensive and difficult to reach. However, these may demonstrate the most significant individual and social benefits.

In addition, funding was seen as being precarious. Energy policy advisors revealed that the volatility of political agendas posed a risk to the funding and successful implementation of programs. Similarly, in industry funded energy hardship programs delivered through community service organisations, program managers relied on the good will of the energy companies.

An Energy stakeholder observed that financing energy efficiency initiatives was risky in two ways: Firstly, with regard to evaluation, as they did not always result in the expected savings, and secondly, in their delivery, due to the limited capacity in the industry. The participant stated that “it’s quite hard to finance energy efficiencies. It’s much easier to finance an actual sort or more capital expense like solar”. Environmental Upgrade Agreements, in which upfront costs are covered by a loan that is serviced by the savings in energy expenditure, were proposed as a possible funding mechanism. However, it was acknowledged that this may not be appropriate for the most vulnerable groups.

Tensions also emerged around the allocation of funding within programs with consequences for the quality of the evidence. An Energy policy stakeholder disclosed that when the bulk of funding was allocated to the delivery of the intervention itself, and evaluation added as an afterthought rather than a planned component, it was difficult to develop good and rigorous evidence.

The precariousness of funding for energy initiatives due to the unpredictability of political decisions also posed challenges to the project management of programs. Energy policy advisors shared that uncertainty in program funding meant that departmental staff and consultants did not enjoy secure and reliable employment, that there was disruption and loss of operational knowledge due to staff turnover, and that expertise was lost. An Equity stakeholder added the “key person risk” to sustained and successful projects. The participant explained that often, especially in non-for-profit community organisations, energy expertise was concentrated in one person. If this person left the organisation, knowledge and networks were lost. This was exacerbated by the lack of a central repository on energy information:

There is a level of information, data and activity out there, and it is difficult to keep on top of. There's just a lot happening. (Equity 5 – Community & Advocacy)

Secondly, stakeholders raised concerns about the appropriate use of individual care funding, i.e. the limit of funding available to each individual and how this may be allocated to energy and care needs. For one Health stakeholder, access to medical services and activities of everyday living took precedence over home comfort as the benefits were deemed larger. An Equity stakeholder was concerned that insufficient funding in combination with a unidimensional assessment might have unintended adverse outcomes:

Will there be sufficient funding built into the system to adequately accommodate them, and if there isn't, will it divert funding from other – sometimes I don't want to say more basic needs, because sometimes these can meet quite basic needs for comfort and safety. But maybe more immediate needs. If the package doesn't allow everything to be covered that the person needs [...] you could have an assessor who sees some energy efficiency measures as getting easier runs on the board and neglecting others that are just as important or more important. So could it have a perverse outcome in that respect? (Equity 1 - Community & Advocacy)

6.5.5.3.5 *Ambiguity around the scope of eligible home modifications and possible abuses of funds*

A further tension that may hinder linking energy efficiency and hardship into the Care at Home system was the ambiguity around the scope of eligible home modifications. Both consumers and service providers required clarification on the interpretation of what constituted large home modifications and to which extent these could be supported through the Care at Home programs.



The representative of a service provider peak body explained that both service providers and consumers grappled with the interpretation of the Home Care regulations and were looking for the Department of Health for guidance. Concerns about the definition and related services from providers had already reached the independent Aged Care Complaints Commissioner, yet clarifications from the Department of Health were slow in coming.

There is no definition [of large modifications]. [We have been] presenting lots of questions to the Department over the last 18 months. In the first six months of that 18 months, the government referred providers back to legislation and did not offer an opinion, but as we've gone on, they've started to provide interpretation more and more, because the sector has needed it, and we've seen senior rights advocacy groups and providers interpreting things differently and needing someone to make a decision. We're also seeing a bit of ambiguity between what the Department of Health might be thinking, and interpretation would be, and also the Aged Care Complaints Commissioner. (Health 2 – Advocacy, Training & Consultation)

This representative of one of the service provider peak bodies also expressed concern that householders may misappropriate the funds as income and purchase energy-related items which they could afford themselves. The participant suggested that criteria should be developed which ensured that any financial help was linked to a perceived energy-related health need or risk.

6.5.5.3.6 Possible inequities due to tenure and lack of recognition and geography

Tensions were also apparent around tenure and the difficulty of recognising those most in need. Stakeholders were worried that integrating energy efficiency improvement into the Care at Home system may exacerbate social inequities. The concern was that the problem of the split incentives would persist if energy initiatives were paid for through tenant resources. There was consensus that funding for a tenant's health care should not be used to profit a landlord:

So if you've got a client who owns their own home, getting an air-conditioner in there is fine. But putting an air-conditioner in a rental property when the landlord's going to benefit from it? So I think incentives for landlords to participate in this sort of stuff might be a bit of an area that hasn't been explored. (Health 3 – Operations)

One participant with experience in delivering energy improvement initiatives raised the question of how householders most in need may be recognised. The participant proposed a criterion around comfort, "trying to see who needs the intervention to make their home comfortable first".

Two Health stakeholders also expressed their concerns about regional inequities due to the differences in addressing energy efficiency in the different states. In their opinion, householders in Victoria would be advantaged, as Victoria was perceived as a forerunner in energy initiatives, and because individual councils showed a lot of interest. They felt that nationally such a program would only find resonance if it was made an integral part of the MAC.

6.5.5.3.7 Challenges in the implementation of a possible program

Perceived challenges in the implementation of a program linking energy efficiency and energy hardship into the Care at Home system centred around the capacities and skills of both the retrofit and the health front-line workers.

Firstly, stakeholders raised doubts about the capacity of the retrofit industry capacity skills to meet the expected demand among vulnerable householders. The theme of limited industry capacity addressed the capacity of the retrofit industry to meet a potential increase in retrofit demand and the skills of the assessors and tradesperson in dealing with vulnerable householders.

One Energy participant raised concerns about the already limited capacity of the retrofit industry to meet an increase in demand for energy assistance and retrofits, if this was integrated it into the Care at Home system, and about how a potentially large-scale initiative may be rolled out systematically. In addition, the interviews revealed that assessment training may not be sufficient when working with older people. An Equity stakeholder highlighted the need for holistic qualifications, stating that assessors should be adequately trained and accredited to assess the technical characteristics of dwellings, guide householders in use of appliances, provide advice on energy



saving behavioural tips and to work with vulnerable householders with poor energy literacy and restrictive behaviours.

It has to be done in a sensitive way, too, because often these households will already be using a low level of energy; so just giving them the confidence to use more energy for health and wellbeing in a cost-effective way is important, because they may well have already been taking a rationed approach to everything. (Equity 1- Advocacy and Community)

The interviews also revealed that retrofit workers required additional skills for working with vulnerable people. A participant with experience in delivering energy initiatives noted that retrofit staff were often mentally affected by the conditions they encountered in the homes of vulnerable people.

It's really difficult when you're going into someone's home and you're seeing people who are vulnerable. For our employees, it's really hard. So we need to look after our people really well and understand that they need breaks from this type of work. So that's a workforce sort of capacity challenge for us as well. (Energy 4 – Operations)

The participating care manager echoed the difficulty of dealing with socio-economic differences in the clients' living conditions even for trained care workers, contrasting “those parallel universes” of a “beautiful home” and “a rental home or an office of housing home”.

Secondly, stakeholders thought that there was a lack of internal capacity in service provider organisations. The perspectives of the various stakeholders revealed that linking energy efficiency and energy hardship into the Care at Home system was associated with challenges in skills and workload. One Equity stakeholder pointed out that people employed in the care workforce, be it in a call centre or working face to face with older people, were not trained in energy efficiency and, hence, would require education on this topic. On the service providers' operational side, concerns were also raised about the limited capacity and possible overburdening of the front-line staff, who were high in demand to deliver various messages, yet short in time and resources.

Thirdly, one stakeholder noted the limited reach of Care at Home system. One Equity stakeholder raised the point that not all older people were receiving care through the Care at Home system and that targeting older people through additional avenues would be able to reach more people. In addition, people with a disability who turned 65 and stayed with the NDIS scheme instead of changing over to MAC would also be missing out, unless energy efficiency and energy hardship was also linked to the NDIS. The stakeholder felt that this might disproportionately affect people of Aboriginal and Torres Strait Islander descent.

6.5.6 Opportunities

When reflecting on a goal in linking the caring for older people with energy efficiency and equity and its evaluation, opportunities that were identified included consensus on health and wellbeing as the primary goal, a shift in public opinion and possibilities of funding from sources outside the MAC.

6.5.6.1 Common goal setting around health, wellbeing and safety

When asked to propose a goal for linking caring for older people, home energy efficiency and energy affordability initiatives, Energy and Equity stakeholders as well as the HCP manager shared a human value-driven perspective. These participants agreed that the goal when linking caring for older people, home energy efficiency and energy affordability should be better health through better homes. Health included mental health, stress and social connections:

One, having a proper, servable house that people are healthy and happy to live in. And by not even having an energy efficient home, it's not just their physical health condition, but it's also a mental health impact. So if you don't have a home where it's comfortable, people are reluctant to invite people over, and that creates social exclusion. So it is very multipronged around making sure, one, that there is a healthy, comfortable home, which then also is efficient in terms of energy costs. They're both linked. (Energy 4 - Operations)



The use of the terms “proper, servable” highlighted the psycho-social benefit of status associated with a comfortable home. Proper implied public judgment of the quality of the home. Servable meant presentable to others, to visitors, to the community. A comfortable home was valued for physiological and social benefits. As in this quote, participants made little reference to distinct physiological benefits of initiatives or potential impacts on specific diseases or chronic conditions. This may indicate a dearth of knowledge on the clinical research of energy hardship. As in the preceding and the following quote, examples highlighted aspects of wellbeing, such as comfort and the prevention of symptoms of energy hardship, such as compromises in nutrition or medical care.

But the health impact is the thing that's actually the primary one. And when I talk about health, I'm also talking about people not being too frightened to open their bills. So, it's actually around having some comfort that they can afford to live in a house that is properly heated, or properly cooled, and that it isn't going to cause them to go without food or go without medicine, or to forego something else vital. So, I think that health and wellbeing would be the goal that we're looking for. (Equity 5 – Community & Advocacy)

Wellbeing also included empowering householders and to address problems around energy proactively:

So I think in terms of a major initiative from my perspective is about providing ways of informing consumers about what they can do and also making sure that they understand that they don't need to be afraid to call their energy provider and let them know that they're struggling. (Equity 3 – Operations)

Several participants also mentioned safety when talking about goals, although safety was seldom defined. The term was associated with indoor temperatures, with the reliability of energy supply, with fall risks, paired with comfort and implied in resilience to extreme weather events and future climate scenarios.

I think being able to adapt to and withstand climate change. Yes, protection from extreme heat or extreme weather events generally, but particularly extreme heat. Because we know some of the energy regulations are inadequate in that respect. They're not necessarily about climate safety. And you can cut a lot of – well yes, you can cut a lot of corners, you would say, under some regs you can put solar panels on a home and that ticks most of the boxes to get you to a certain number of stars or whatever it is, or a certain level of energy efficiency rating. But you can still have a house that performs quite poorly in terms of thermal comfort. I think that thermal comfort is really important. (Equity 1 – Community & Advocacy)

When talking about goals, Energy and Equity participants placed the focus on individual households and qualitative outcomes and meanings rather than on quantitative assessments of program achievements. A second objective was the evaluation of what worked to inform future programs. Participants emphasised the variety of goals and meanings of possible outcomes for householders, and the significance of the context of each individual household:

There will be a range of goals depending on the household you're dealing with as well [...]. That's part of the program design, to not be too rigid. (Energy 1 – Policy)

Reference was made to the work on co-benefits of energy initiatives in the Power Shift project and the multitude of gaps in knowledge identified in the report. Terms such as “multipronged”, “multiple benefits” and the recommendation to avoid being “too rigid” highlighted that stakeholders were aware of the dynamic nature of the socio-technical system linking energy and health and the difficulty of predicting accurate quantitative outcomes.

What we'd like to get is better outcomes for those people, which are not necessarily lower energy bills. [...]. So, in that sense, energy affordability I would say is less relevant to this group. It's more about health outcomes. Energy efficiency is one way to target those health outcomes, but this isn't about necessarily getting their bill down. (Energy 1 – Policy)

Wellbeing was also put first by the Health Advocacy stakeholders, although wellbeing was more strongly linked to financial outcomes.

There should be an affordability goal around financial sustainability for people, for older people. [...]. But personally, I also think, the main thing is around, it's a

wellbeing outcome [...] Yeah the well-being outcome is probably the most important. And the financial outcome contributes to the well-being outcome. (Health 1- Community & Advocacy)

6.5.6.2 *Public sentiment was shifting the political agenda*

One Equity stakeholder suggested that a change in public sentiment was shifting political agendas, making policy makers more receptive to ideas around addressing energy hardship and perhaps more willing to fund projects:

One of the consequences of public anger and price rises is a willingness for governments to actually do stuff and spend some money. As I said, at the beginning of my project, we thought that it would all be retailers; now the focus is very much on more what can we as a government do? [...] governments are keen to try and do things that help make energy more affordable. This is an opportunity because I think there is a number of new stakeholders in this space that weren't here three or four years ago (Equity 5 – Community & Advocacy)

“New stakeholders” included researchers and advocacy groups such as the Tenants Unions and the Council of the Ageing (COTA). They were supported by “that little explosion of research and knowledge, and data has its own momentum and starts generating action”. This quote illustrated the increase in academic interest and research on energy hardship and the power of evidence to drive change. The availability of unprecedented amount of national data through the LIEEP projects and the Power Shift consumer segmentation work was regarded as an opportunity to provide evidence for setting political agendas.

6.5.6.3 *Shared perception of equity and efficiency benefits by leveraging trust-based relationships*

Perceived benefits of linking energy initiatives with services aimed at caring for older people included access to the most vulnerable householders through designing programs around trust-relations and improved equity through uniform service design.

A care operations manager emphasised that accessing older people through the Care at Home system was a unique opportunity of engaging those householders through the “trusted intermediaries” or “conduits” of care workers. Foregrounding the trust that householders placed in care service workers, the perception was that such a program could reach those who had few social connections, low levels of information and who might be susceptible to intentionally misleading business practices.

I think it's really hard to get those people because they're – I don't know that there's a way that you can get access to promote it in another way perhaps. Because they're struggling so much just to stay in their own home, they're not sort of getting the information that you and I get, you know, challenging to – they're going to doctor's appointments, and they're worrying about their shopping, their health. So it's the staff who visit them who are their reliable source of information, or that they trust. Because there's also a lot of, you know, that with all the conman stuff, there's a lot of stuff around, do not knock and do not ring, there's all the mistrust as well. (Health 3 -Operations)

One stakeholder emphasised that the relationships were often formed with individual persons and not necessarily whole organisations. Experience in a LIEEP project had shown that householders' willingness to engage with energy interventions went beyond their expected personal gain, but that participation was regarded as a reward to the trusted person. Hence for householders to trust the energy experts, these would need to be introduced by the trusted care worker.

6.5.6.4 *Perceived cost-effectiveness through the convergence of services and co-benefits*

On the premise that support on a political level would need a business case, some participants perceived the potential cost-savings in the synergies and co-benefits of linking the care of older people with energy initiatives.

For Equity stakeholders leveraging energy initiatives through existing channels was a cost-saving strategy. Assessment and management of care, energy audits and services were regarded as complementary. The tacit



argument in the statement below was that acceptance of a diversity of needs should acknowledge an adequate thermal environment as an integral part of accessibility.

[If] you're already in the home doing an assessment for other things, you should already be getting a good understanding of their health and wellbeing and affordability issues and things like that. So, adding in energy efficiency seems like a common sense thing to do as part of that. And if you're already potentially suggesting modifications to the home that are about accessibility, ramps, rails, communication devices, things like that, energy efficiency would seem to be an obvious thing to add into the mix to improve comfort and health and all of those things. I guess it avoids that, for at least this population segment, it avoids that duplication of service provision. So it's economically efficient which is what the Federal Government should love to hear. (Equity 1 – Community & Advocacy)

An Energy stakeholder reflected on the indicators of energy hardship and capabilities of sub-groups of older people to deduce potential benefits in equity:

I would expect co-benefits; there will be the benefits not just of reduced energy bills, or increased use of energy services, but what those increased use of energy services enable. Whether that's the social outcomes of feeling comfortable of having people visit, or cooking more warm food and therefore having better nutrition. Not walking from a warm bedroom to a cold bathroom and exposing yourself to health risks. Because this is a cohort that is more vulnerable to a lack of energy services than other cohorts, you'd expect benefits to be more present as well. I think there are huge equity benefits in targeting a group of households who are probably less likely to undertake these activities by themselves, whether that's due to barriers of money; barriers of information; barriers of capability to interpret information; barriers of trusts in the services and trades necessary to perform those; the time to do the things, potentially the physical capability to organise things. That equity component is often forgotten, because it's implicitly there when you're talking about vulnerable and disadvantaged households, but it's absolutely something that, because of the cohort, will probably need more resources to help, needs to be explicitly recognised to off-set the fact that it is more intensive, but you are getting a greater benefit in that degree. (Energy 6 – Policy)

6.5.6.5 *Facilitation of co-operations through the COAG Energy Council and stakeholder networks*

Energy and Equity stakeholders suggested that the COAG Energy Council was a possible brokering agency, which could facilitate co-operations and linkages between care and energy initiatives and institutionalising cross-sectoral integration or programs on a national level. Some stakeholders offered access of their own networks to upscale the dissemination of information.

The COAG Energy Council was regarded as an opportunity to connect the various political domains and levels of government. Energy policy stakeholders advised that the COAG Energy Council comprised members of all states, territories and the Commonwealth government. The Council was charged with “existing schemes that help vulnerable, low-income consumers typically, and looking at opportunities going forward” and would be welcoming useful information. COAG had also established Energy Consumer Australia to aid in the process of empowering consumers. The COAG Energy Council was making recommendations to the COAG Building Ministers Forum advocating for higher thermal performance standards for new homes from 2020. The ECA was trying to influence the COAG Energy Council to mandate the improvement of existing dwellings. ACOSS was reportedly also using the COAG Energy Council to promote minimum energy efficiency standards of rental homes across all states and territories. Influence within the COAG Energy Council was regarded as a bottom-up approach. Success relied on the willingness of individual COAG Energy Council members and networks to take actions. Lobbyists might act as intermediaries and link disciplines:

The COAG Energy Council is an imperfect, but the best way we have at the moment, of elevating those concerns to other portfolios. So, you rely on the officials in that department to communicate with their colleagues. Or, alternatively, we rely on advocates who have those connections. So, they can bring those strands

*together - whether they're able to do that, because that's just not in our territory.
(Equity 5 – Community & Advocacy)*

Energy and Equity stakeholders also offered introductions to the organisations in their own networks to promote the researchers' cooperation with a multitude of stakeholders at varying levels of influence, across jurisdictions and domains. Stakeholders with expertise in delivering programs offered their network of competent tradespersons with proven expertise in retrofits. A question on the relationships of the participating organisations to others on the stakeholder map provided visual evidence of the strong links between the Energy and Equity domains. Relationships between Energy or Equity and Health were less frequent. The most frequent relationships of the Health stakeholders were to other organisations in the Health domain (Figure 6). A representative of an older consumer advocacy body was a bit more cautious in offering the organisation's support. The participant suggested that the organisation could use its political influence and strengths in lobbying to advance such an endeavour if the organisation adopted it as one of its priorities.

If something was a priority it would – I think the organisation is very well known and it has political clout to be able to lobby effectively. (Health 1 – Community & Advocacy)

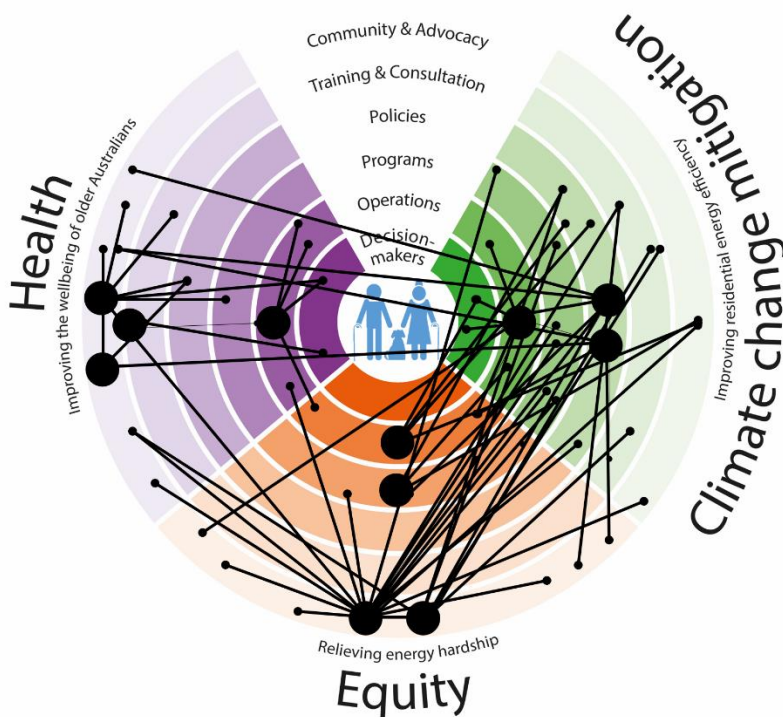


Figure 6 Stakeholder map showing links between organisations as lines

6.5.6.6 Potential reframing of the MAC into preventative planning could include energy efficiency

The ongoing development of the MAC system and its potential reframing into preventative planning for old age may also offer opportunities for cooperation on a program level. The representative of a provider peak body explained that a new pilot project would trial “preventative planning” for ageing people from the age of 45, in which education around energy efficiency might be included:

So, it's more like a preventative public health issue, and I know one of the things the government's currently piloting that was announced at the 2018, '19 Federal Budget in May was the government is piloting online planning support for 45-year-olds and 65-year-olds which is starting to look at lifestyle, social, financial planning at key points. And if I think about a population-based approach to the whole issue of energy efficiency and cost benefit analysis and environmental impacts and

things like that, I would think it's probably more about education of people around the cost benefits. So that's at an individual level and a 45, 65-year age touchpoint to introduce those concepts is important. (Health 2 – Advocacy, Training & Consultation)

Governments might find energy issues complementary to the MAC's aims of promoting wellbeing and reablement, if energy efficiency was framed as a long-term costs-saving and preventative health strategy.

6.5.6.7 *Potential uptake of energy initiatives by care service providers if supported by incentives*

The interviews also suggested a potential uptake of energy initiatives by care service providers if supported by incentives. A participant representing community and advocacy organisations of older Australians suggested that for profit service providers could see services around energy as a unique selling point, as their “point of difference”. However, service providers would need to be convinced of the business case of such additional service offers, considering the additional work loads and efforts to navigate the bureaucracy of the MAC. The participant suggested that a financial incentive may be a motivating driver.

The argument from providers will be: “We're already doing too much, we are overregulated, now you want us to do something else.” So there has to be something in it for them as well, and it's some sort of incentive to help them. (Health 1 – Community & Advocacy)

A care manager supported the assumption that service providers were value driven and would be interested in introducing clients to energy efficiency and hardship assistance.

Case managers are always interested in how they can enhance someone's quality of life. (Health 3 – Operations)

6.5.6.8 *Learning from other cross-disciplinary collaborations*

Another opportunity was the success of other cross-disciplinary collaborations and the lessons they could offer. An Energy advisor thought that successful initiatives around family violence presented an opportunity to engage in more collaborations with the health domain. A pertinent example was the presence of lawyers in the offices of general practitioners. This assisted women to access help and legal services in secret. This participant saw the potential benefits of similar multi-disciplinary engagement in the potential education of service providers on energy and better service outcomes.

Something that comes to mind is greater integration of services, and recognition of the links between them all. And I think a good example to look to is the stuff that's been done in Victoria around family violence, and that it's come up with very broad recommendations that are really tackling cultural change, or ways to help, and there's really interesting stuff where GPs are having lawyers on their premises so that an older person who might be getting exploited by members of their own family, can see a lawyer without people knowing. And so there's probably equivalent ideas that can be brought in where you've got people coming in to provide services in people's homes, and that sort of thing. Another interesting example, an early indicator of, talking about family violence again, is animal control officers from council going to houses, because where there's animal neglect there's often family neglect as well. (Energy 5 – Policy)

6.5.6.9 *Potential funding through energy providers, council rates or a MAC energy supplement*

The interviews revealed opportunities for funding an integration of energy efficiency and hardship initiatives into the Care at Home system through energy providers, council rates or a MAC energy supplement.

Funding through energy provider was suggested by one Equity stakeholder with experience in hardship programs. The participant suggested that energy providers might be motivated to support such an endeavour to demonstrate that they were “a socially responsible company”. A prerequisite would be that the companies did not



use such a program to promote their own services or products. Direct engagement of energy providers might also have equity benefits, as it would avoid a distortion of information of contracts through third parties such as contract brokers. The Victorian Payment Affordability Framework, which was expected to be come into force in January 2019, was thought to possibly trigger some companies to address the vulnerability of their customers with more empathy. The participant added that a co-operation between governmental agencies, communities and energy providers might secure longer term programs and more sustained funding.

I think the Government working with the energy sector and working with community organisations to deliver those services, which is currently what's happening but it's happening I think on a fairly ad hoc basis rather than looking at it as a key initiative that is sustainable over the long term, across all regions in Victoria. (Equity 3 – Operations)

Funding through new business models was suggested by a participant with experience in retrofit deliveries. The participant mentioned the Solar Savers Program used by 22 council programs which could upscale the uptake of initiatives. In this program, householders avoided upfront costs through council loans that were tied to their property and serviced as part of their council rates.

Funding through a MAC energy supplement was suggested by the representative of one of the service provider peak bodies. The participant referred to the MAC needs-related and assessment score-based supplements for cognitive impairments and the viability supplement to support services in regional and rural areas (Department of Health 2018d). A similar supplement for energy might be introduced to improve residential energy efficiency or hardship. However, the participant was hesitant about its justification in the context of Care at Home, suggesting that energy affordability was a population-wide and a dwelling-specific issue:

If we're going to see in some areas energy issues and financial disadvantage, will [it] create additional problems above the broader population, is that a structure that might be able to be attached onto Care at Home in terms of a supplement? And the question is, is it a supplement that's attached to Care at Home, or is it a separate rebate program regardless of age? And then, the question for me would be around, if we look at cost modelling, is there a difference in cost based on age? If there was, is it because of the types of homes that older people live in relative to younger families because of the way design has changed over time? If that's the case, then the question is, is it certain types of homes that would be eligible for a rebate or certain types of design that would be eligible for a rebate over others? (Health 2 – Advocacy, Training and Consultation)

The quote above raised the concern about the feasibility of funding. Federal Energy policy stakeholders proposed that the amount of resources needed might be determined by the ABS, using restricted data. The aim of such work could be the prioritisation and characterisation of population groups in fuel hardship and the testing of a framework of potential causes and indicators. A statistical approach to cost benefits analysis was also recommended by a Victorian Energy policy advisor. Modelling outcomes for representative samples could demonstrate impacts and present convincing arguments for benefits despite acknowledged uncertainties in the assumptions. There was reportedly good expertise in Victoria in evaluating changes in actual energy bills. In addition, Energy stakeholders offered to share their knowledge from the various Victorian energy retrofit and upgrade projects for a future project proposal. These included empirical retrofits costs and barriers encountered during the delivery of the projects.

6.5.6.10 *Community and political willingness to address energy hardship of tenants and the thermal performance of rented homes*

The interviews also revealed that a growing community and political willingness to address energy hardship of tenants and the thermal performance of rented homes could facilitate the linking of energy initiatives into the Care at Home system and tenant empowerment.

Political willingness to address energy hardship of tenants and the thermal performance of rented home was manifest in the reforms to the Victorian Residential Tenancies Act (RTA). Equity stakeholders highlighted that these reforms provided the basis for future regulations that would empower tenants to improve the energy efficiency of their rented home:

So as part of the reforms to the RTA there will be one set of regulated modifications that tenants don't have to get landlord consent for, and we'll be pushing for minor energy efficiency upgrades to be included as part of that where it's non-structural, if it's a minor draught sealing measure or perhaps a fan, or certain window coverings, something like that. And then there'll be another set of modifications that landlords can't unreasonably refuse consent to. So they're yet to be prescribed, the exact modifications but it includes modifications that improve the thermal comfort of the home or reduce energy and water costs. (Equity 1 – Community & Advocacy)

Accessing landlords through the Care at Home system might facilitate retrofits for disadvantaged people if the justification was needs-based and improve social equity. The Equity participant acknowledged that these new RTA regulations were likely to disadvantage older renters with troubled relationships with their landlords who “must just fear going to them for consent. And if it is refused, they may feel completely unable to challenge that at VCAT.” Care managers might help these householders by acting as advocates. A care manager recounted that case managers liaise with landlords regularly with regards to needs-based proposed alteration with mostly positive responses to modification requests:

So rental properties at the moment we have to seek permission from the landlord, that goes for anything. So if we need to get a rail in so they shower safely. So most landlords are pretty good with those sorts of things, though sometimes they're not because they think it disfigures the property or all those sorts of things. But we try and say that it actually enhances it, rails improve safety for everybody. [...] I think [...] for those people who are really disadvantaged and vulnerable, I think it evens the playing field a bit for them. (Health 3 – Operations)

Another Equity participant suggested that energy efficiency improvement in rental homes may be promoted by attaching conditions to negative gearing opportunities. Participants also mentioned that the Victorian agencies of the Department of the Environment, Land, Water and Planning and Sustainability Victoria actively supported energy efficiency and hardship initiatives in public housing.

6.5.7 Sustainability

With regards to sustaining efforts of linking initiatives around caring for older people and home energy efficiency and affordability beyond the duration of a project, the most frequent suggestions were to prove the benefits and to ensure continued funding.

6.5.7.1 Evidence of benefits

Evidence of the effectiveness and cost-efficiency of linking energy initiatives into the Care at Home system was deemed necessary. However, there was a shared perception that a program evaluation needed to address social outcomes, economic indicators and a certain degree of environmental benefits. Emphasis was placed on the business case to show “the cost of the program versus the economic benefits” and on “meaningful evaluation”. An Energy advisor highlighted the tension between the economic and value-driven benefits of a program:

And once again, being able to quantify economic outcomes, because often the real decision makers are central agencies, and cabinet, and that sort of thing, so that's where a lot of that decision making comes back to. Which doesn't always work for programs that have so many qualitative aspects to it, but you can't take your eye off that ball. (Energy 5 – Policy)

Economic indicators mentioned by participants included financial benefits on an individual household levels, such as reduction of energy consumption, bill savings, affordability, discretionary budget and affordability of other essential household items. On a broader economic level, impacts included taxation returns and the improved value of homes. Benefits in productivity were bracketed on the assumption that most care recipients would be retired.

Indicators of environmental benefits included lower greenhouse gas emissions, reduction of peak demand, deferred network generation and investment. One Equity participant expressed the precariousness of expecting emission reductions from this cohort and raised issues of distributional fairness of carbon emissions reductions:

It's a tricky one with low income and vulnerable households because overall we would have liked to see that reduction in the emissions but we do have to be careful to note that in some cases putting in energy efficiency measures may see a household consume more energy where they've been severely rationing or avoiding. So it's just about managing that. And hopefully the measures taken will allow them to consume more energy in a way that – it's just, it's a tricky one I think, when you're asking which – how shall I phrase this – I guess which households should be doing the heavy lifting in terms of emissions reduction. (Equity 1 – Community & Advocacy)

Meanings of impact were evident in the participants' identification of social outcomes, which included better social connectedness through visitors to the home and social outings. One participant highlighted that social contact could also be facilitated through electronic devices, which in turn required energy. Energy policy advisors attributed higher value to social outcomes among this vulnerable cohort than to the discipline-specific cost benefits:

I wouldn't put things like reducing energy consumption or bill savings as a top priority, because for some people that will just make matters worse. But it would be a good thing to observe, collect that data, and it could well be that you do both. It's great to have bill savings, but if you don't have the associated health outcomes with those, then it's like well, did that person just get sick? (Energy 1 – Policy)

Social outcomes were often expressed qualitatively in descriptions of practices, such as inviting friends for tea, buying presents for grandchildren, “cooking more warm food and therefore having better nutrition” and other preventative health outcomes such as “not walking from a warm bedroom to a cold bathroom and exposing yourself to health risks” A care manager also highlighted the benefits for public health by reducing the health risks of common coping practices through more affordable indoor temperatures. In contrast to the representative of the service provider peak body, who perceived energy efficiency as a small factor in a broader ageing well strategy, this participant with first-hand experience in energy efficiency retrofits, saw housing quality as the first step towards better lifestyle:

Affordability means that they have the environment set at the optimal temperature or comfort for them to be safe and operate, you know, they're not sitting there twisted up in a blanket and then falling over when they jump up or they're not sitting there with their feet in a bucket of cold water on a really hot day and then go flying when they get up and forget to dry their feet. Or injure themselves by emptying those buckets of water, that's the other thing. [...] It also means that if they're saving money and they're living safely, they're going to stay at home longer, and they're not going to end up in residential care inappropriately, and they're going to have more resources to look after their wellbeing in other ways, you know, buy better food and go to an exercise class and feel good about themselves and stuff. (Health 3 - Operations)

Health outcome indicators were predominantly those used in the Healthy Homes program, such as hospital presentations, GP presentations, pharmaceutical expenses and reliance on medication, due to better comfort, reduced stress, mould and dampness. Evidence could also be built around the technological solutions and how technologies support intended outcomes rather than on direct benefits for individual householders.

6.5.7.2 *Continued funding*

Stakeholders drew from experience when they highlighted that continued funding was important to ensure continuation of the delivery of the measures as well as to retain staff with the necessary expert knowledge and skills. One proposed mechanism was linking the project to existing initiatives with long term funding commitments like the MAC. The rationale was that long-term projects enjoyed support from the highest ranked politicians and would be less susceptible to election cycles. Political support for energy efficiency initiatives was regarded as more volatile than for the MAC. An Energy policy advisor described energy efficiency initiatives as “very boom and bust [...] and so getting your hooks into something that's got a longer-term vision for funding is pretty strategic” (Energy 5 – Policy). Long-term funding was also regarded as important for ensuring effective and efficient delivery of projects. An Energy stakeholder implied that the attention of delivery partners waned when they felt a termination of their contract:

There are often a limited number of service providers for a particular policy area for the service delivery kind of aspect. And toward the end of their funding period, they'll be looking for new grants or new funding to deliver other services. And to a certain extent they have – I was going to say they won't deliver until the end of the other one. It's just understanding they're coming to the end. If you think that may be five years of funding and you've got six months left until it runs out, your focus is going to be on where the next five years of funding is coming from, not on finishing off the months of the project. (Energy 2 – Policy)

6.5.7.3 Collaboration and shared vision

There was a consensus among all stakeholders that the sustainability of a program linking energy efficiency and Care at Home needed to be supported by collaborations and a shared vision across policy domains and jurisdictions with an inter-disciplinary systems-approach to the metrics of evaluation:

I do think it's going to be quite a very dedicated focus by federal, state and local levels of government. It does actually need to be a particular area of segment that's called it out and really understand the complexity in all of these things, and it will probably require government departments to be working together - so the energy, environment sort of department working with health around this. So it does require a collaboration to ensure that we don't lose sight of what actually all the impacts are that can come from really good work in this area. So I guess interconnected sort of KPIs or metrics is quite important. (Energy 4 – Operations)

Collaborations could also take the form of energy education to raise awareness and energy literacy across the community through partnerships with energy providers and governmental bodies. A Health stakeholder suggested to raise awareness among case managers, too, on how to refer clients to energy services even if these were not covered by the care package. As an Equity stakeholder pointed out, embedding energy initiatives into the practices of service providers would achieve long-term survival of a program.

Shared vision also extended to the community. Two Equity stakeholders referred to the maternal health and the Kindergarten programs and their continuation after funding had ended when they suggested that the establishment of strong community support would sustain the project. A participatory design was regarded as a useful mechanism to build this community support:

Something like this needs to be as user led as possible from the outset and not something just imposed on people. So, you build that backing for it. So if there is a threat that funding will be withdrawn or reduced that there's push back from older people, because older people are politically powerful, to a point. And that's where I think things like maybe some degree of co-design but definitely tailoring of it and actually getting to what older people need and having their back, that will be important for sustainability. (Equity 1 – Community & Advocacy)

A communication strategy would need to form part of fostering that community support. Another Equity stakeholder recommended to involve a "communication expert or advertising marketing expert [to] actually transfer that information and interest level in the long term for that person, for those vulnerable groups".

The representative of a service peak body proposed a shared vision through a holistic National Ageing Strategy. Although this participant framed energy as an outcome of building quality, rather than a person's capability, and saw need as a function geography, this perspective acknowledged that a sustainable response to energy hardship among older people needed to address political, social, economic and physical environments.

Within that context, it's really a matter about where in that would you find leverage points to bring in energy efficiency and energy affordability within the context of an ageing population and developing the evidence and articulating the evidence around current design of residential dwellings, probably focusing on design in residential dwellings in the southern states of Australia. (Health 2 – Advocacy, Training & Consultation)



The idea of a shared vision also included energy retailers monitoring and advising on energy usage, in a manner similar to the business practices of telephone companies.

And it becomes more normal for a retailer to check in with customers more regularly, it just becomes part of the normal relationship. That happens with other services. I don't get offended if Telstra rings me up and says, "Are you on the right deal?" The timing can be annoying (laughter), but I don't think it's intrusive. (Equity 5 - Community & Advocacy)

6.5.8 Alternatives

Stakeholders were also asked about possible alternatives for helping older people cope with energy affordability. Responses included the use of existing, trusted social service providers, state-wide programs and initiatives by energy retailers.

Foregrounding trust as the key for accessing households and encouraging uptake of proposed initiatives, Energy and Equity stakeholders as well as the care manager suggested to provide long term funding for energy initiatives to organisations with established relationships to vulnerable and/or older people. These included the Brotherhood of St Laurence, Kildonan, MEFL, the Older Person's High Rise Program and the care provider Bolton Clark.

Care at Home is not going to capture quite a proportion of people that are older. Looking outside Care at Home is actually good for your campaign. Because you get a lot of people who are older that actually don't have, who are living in supported residential services, aged care homes, hostels, on the street that won't be reached by Care at Home. So, things like public campaigns would probably be good with the organisations that are engaged with them. (Equity 2 – Community & Advocacy)

Other social services agencies such as ACOSS and Centrelink could also facilitate a Commonwealth program targeting older people in energy hardship.

Alternatively, there could be state-based initiatives. In the opinion of federal Energy policy advisors, these would be most likely in the states of Victoria, New South Wales and the ACT. Labelling these three states as “progressive” and “the usual suspects” implied that these alternatives were likely to exacerbate existing inequities in energy-related assistance. An Equity stakeholder added Queensland to this list, pointing to the successful QCOSS Switched on Communities program.

A third suggested alternative was to engage householders through energy retailers. An Equity stakeholder suggested that energy retailer might be able to identify hardship households and offer home energy assessments and material improvements.

Retailers, because they're the people who are seeing bills, and they're not necessarily perfect avenues for approach, but that would be the alternative. We could require or provide some sort of an incentive for a retailer to focus its attention on those customers, to offer energy audits or minor retrofits. They do that already through their hardship programs. There might be ways of turning white certificate funding into initiatives to fund programs to support older households - I don't know if that would be either effective or easy, but it might be a source of funding. (Equity 5 – Community & Advocacy)

Another suggestion was an education program. This assumed older householders as rational actors:

An awareness program of the linkages between energy efficiency, energy use, energy contracts and the cost of the bill, and their discretionary income, that they could use for other activities that may have a positive impact on their health and wellbeing. (Equity 4 – Programs)

Finally, smart technological approaches might offer alternatives. A stakeholder with experience in delivering innovative low carbon programs suggested micro-grid-based and social impact investment models with potential social and environmental benefits for a range of vulnerable householders:

So, some could be that you could share some of the solar across with your neighbours. So, we could sort of look at some community energy projects where people who may not be able to afford solar on their roofs, but their neighbour can, you could share it across and gift it to your neighbour. That would be an amazing sort of opportunity to look at. So, I think some of those new models around that space might be really helpful to sort of accelerate that and look at different ways of doing things. I'd love to see something like a microfinancing sort of platform where people could gift a home upgrade to somebody. You could microfinance that. I think there's a whole range of different things we could also look at about how we share and take responsibility as individuals to look after somebody else. (Energy 4 – Operations)

6.5.9 Pathways

Stakeholders were also asked what actions they would prioritise to achieve the linking of initiatives around caring for older people and improving home energy efficiency and energy affordability, and what the timing of these action should be. The synthesis of the proposed activities yielded a pathway for a potential program. The interviews revealed that raising awareness and educating the community about the links between energy and health and establishing a political agenda around caring for older people and energy was key for a social compact, cross-departmental collaborations and the setting of shared goals. Essential design features for a program were a holistic design, sustained funding, affordable services, initiatives based on referral and tailored services, and meaningful evaluations to provide evidence for ongoing support. Most stakeholders stated that immediate action was needed.

6.5.9.1 Raising awareness and educating the community

Raising awareness and educating the community about energy initiatives and the links between energy and health was regarded as one of the first steps toward a potential program. Several stakeholders suggested that consumers needed to be made aware of the types of energy services and the mechanisms of accessing them. The theme of raising awareness also included educating stakeholders across the domains and various levels of influence of the merits of energy efficiency and affordability for health. Particular attention should be given to front line workers, who were singled out as being very influential in shaping the decision of older people. Equity stakeholders also identified a need to educate care assessors and service providers on the links between energy and health to foster the willingness to participate in new services, which were likely to increase the workers' workloads.

Getting people to understand, assessors and other organisations to understand why the hell am I looking at energy efficiency measures? It's just, because it's not just about affordability, it's about health and wellbeing [...] But getting the buy-in and understanding early on about why this is being done will be really important because I think there's a very limited understanding at the moment about the link between health and energy efficiency. So that will be really important to communicate from the outset. (Equity 1 – Community & Advocacy)

Perceived opportunities to raise awareness were the social capital of individuals and of consumer advocacy groups. The COAG Energy Council was seen as a possible pathway of bringing this issue to the attention of other governmental departments, predominantly through interpersonal connections, or through prominent advocates who would be able to access officials across the housing, equity and health domains.

The theme of raising awareness and educating the community also emerged in the deliberation on a “national conversation” around ageing and planning for old age, as proposed by a representative of one of the service providers peak bodies. In this participant's perception, informed discussions on ageing well could include residential energy efficiency initiatives and, hence, counteract people's reluctance to plan ahead:

What we need to do within a national conversation on ageing is to create incentives for people to engage early. So, I think that's where energy efficiency would potentially be of benefit, but it needs to be couched within the context of the overall cost of aged care and needs in later life. (Health 2 – Advocacy, Training & Consultation)



6.5.9.2 Establishing the political agenda

The interviews yielded that another important first step would be the establishment of a political agenda around linking energy services into Care programs and to gain the support from senior political decisions makers. Establishing the political agenda entailed gaining consensus across the domains and getting an early agreement among leaders on who would be accredited with the success of the program. A potential sharing of successes by more than one portfolio or Minister was not mentioned.

Where you've got collaboration between different ministerial portfolios, having that apportionment of credit sorted out, or they should hopefully have sorted it out, we can't sort it out for them. So that you don't get held up by politicking, basically, or territoriality. (Energy 5 - Policies)

Political willingness might be strengthened by a strategy which linked to existing programs and leveraged existing tools. One Health – Advocacy participant also put a focus on technological solutions on the premise that good returns on investment would appeal to both householders and the government:

In the future consumers will have to pay more, and this is politically sensitive. If there is incentive politically for government to provide solutions that will reduce how much consumers have to pay, I think that's the angle that will appeal to government. We're seeing that with technology. Government are investing a lot in technology solutions because they're the things that, in terms of home modifications, can probably be introduced relatively cheap and give a benefit over the long term with consumers paying less. (Health 2 - Advocacy, Training & Consultation)

Stakeholders identified organisations who may support linking care of older people with energy efficiency and hardship initiatives by nominating the perceived five most influential and five most interested stakeholders. The nominated organisations were mapped in a Venn diagram. Following Robert's stakeholder matrix (Roberts 2011), those organisations with interest but without influence signified supporters. Those stakeholders with influence but no or little interest represented onlookers. Those situated in the intersection of interest and influence represented likely promoters (Figure 7). Both circles contained organisations from all three domains. Most named stakeholders were organisations or groups of people. However, the five most influential stakeholders contained individual persons in political leadership positions. The intersection with likely promoters contained a high proportion of stakeholders from the Equity domain: ACOSS, VCOSS, DHHS, energy retailers or providers with hardship programs, the Brotherhood of St Laurence (BSL) and Kildonan. The Health domain was represented by COTA, care service providers and case managers. The only organisation from the Energy domain that was perceived as being interested and influential was DELWP. COTA was regarded as a likely promoter by several participants from the Equity and Health domains. ACOSS and VCOSS were regarded as likely promoters by several participants from the Energy and Equity domains. The Department of Health was not included in the overlap of circles. It was named as an influential stakeholder by Equity and Health participants. It was also named as an interested organisation. However, the nomination was triggered by desire rather than the perception of reality:

I would hope the Department of Health is interested. [...] number five then? [...] The Department of Health? (Equity 5 - Community & Advocacy)

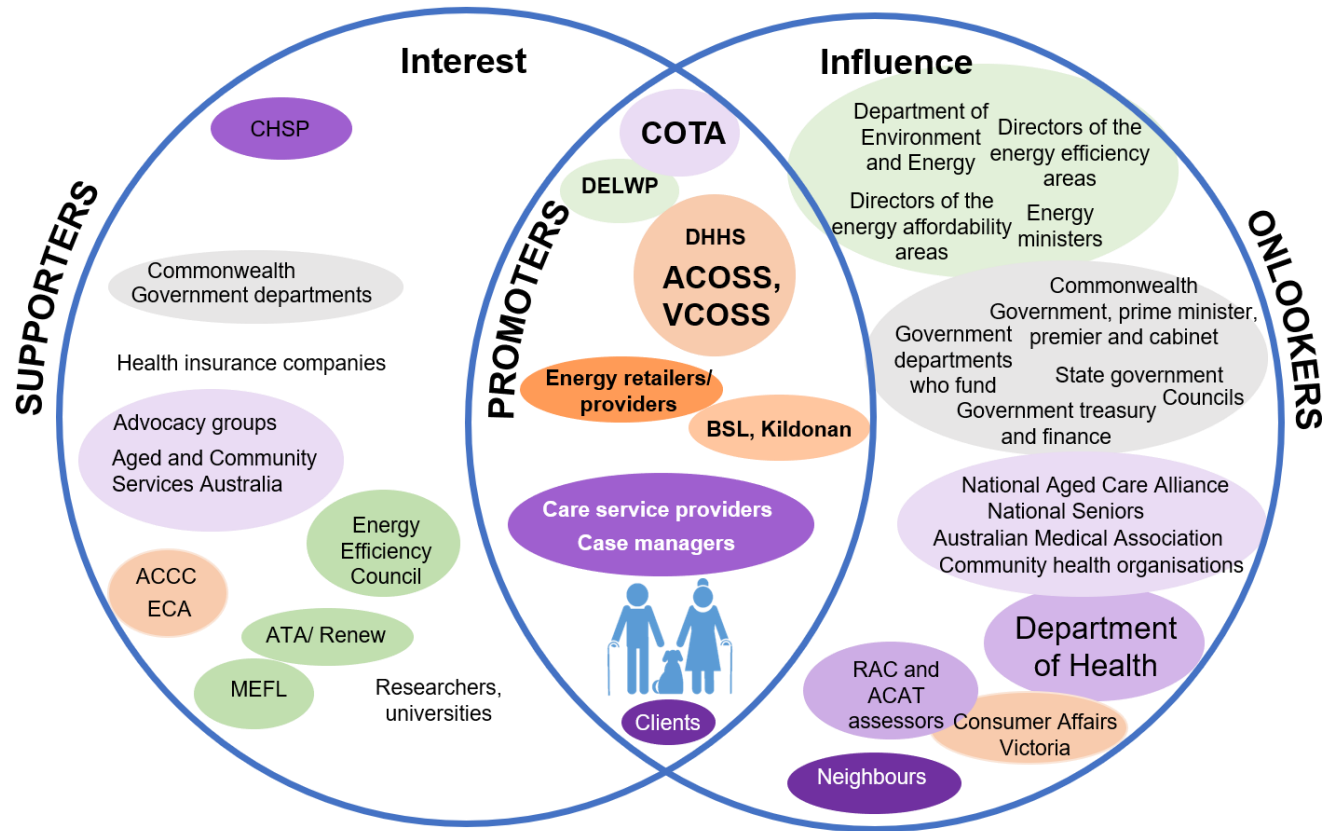


Figure 7 Venn diagram showing the organisations that were nominated as the five most interested and five most influential stakeholders. Organisations in the intersection represented likely promoters. Larger font signifies multiple nominations.

6.5.9.3 Developing a social compact

Linked to the themes of community awareness and political agenda was the notion of a social compact, as proposed by an Equity participant. Social compact was understood as a mutual understanding between policy and community to pursue a common goal around essential capabilities and how these may be achieved:

A consensus that the status quo isn't acceptable, and from that flows a commitment to action to address that. I think understanding the trade-offs and the benefits from improving the health of a household to the public budget (Equity 5 - Community & Advocacy)

The participant argued that a consensus would enable the development of minimum standards and benchmarks that would guide the actions of governments, landlords, programs and funding for better social welfare. Another participant implied such a cross-sectoral agreement when suggesting building a common understanding with energy companies around the balance between social responsibilities and economic growth:

Start in getting companies to think about the vulnerabilities of their customers and how they can support them rather than punish them. (Equity 3 – Operations)

The alignment of political, community and business activities for the common good would also imply co-operations across ministerial portfolios and sectors of the community. Participants completed the preliminary stakeholder map by listing organisations that were perceived as missing. The final stakeholder map presented 49 stakeholders in the Health, 34 stakeholders in the Climate Change Mitigation or Energy domain and 25 stakeholders in the Equity domain (Figure 8).

Non-CW service providers – Non-Commonwealth supported service providers
 CHSP – Commonwealth Home Support Programme
 COTA Council on the Ageing
 RAS Regional Assessment Service
 ACAT Aged Care Assessment Teams

Public Health Association of Australia
 Municipal Association of Victoria
 Victorian Local Governance Association.
 Hospital Admission Risk Program (HARP)
 Australian Medical Association
 Victorian Health Care Association

Consumer Health Forum
 Private Health Insurances
 Health Justice Partnership
 Primary Care Partnerships
 Primary Health Networks
 Consumer Health Forum

Bolton Clark
 Wintringham
 Sacred Heart
 Men's Sheds
 Ozanam House

Tenants Union
 Senior's Rights
 Salvation Army
 One Million Homes Alliance
 Migrant resource centres
 Older Person's High Rise programs
 Department of Social Services
 St Vincent's de Paul Society Anglicare
 Consumer Policy Research Centre (CPRC)
 Ethnic Communities Council of Victoria

CUAC Consumer Action Law Centre
 BSL - Brotherhood of St Laurence
 LMCF – Lord Mayor's Charitable Foundation
 DHHS – Department of Health and Human Services

Department of Treasury and Finance
 Department of Premier and Cabinet
 Real Estate Institute of Victoria

DELWP - Department of the Environment, Land, Water and Planning
 RES assessors – Residential Efficiency Scorecard assessors
 ASBEC – Australian Sustainable Built Environment Council
 VEU program – Victorian Energy Upgrade program
 NatHERS - National Home Energy Rating System
 VPTA - Victorian Public Tenants Association
 ABCB – Australian Buildings Code Board

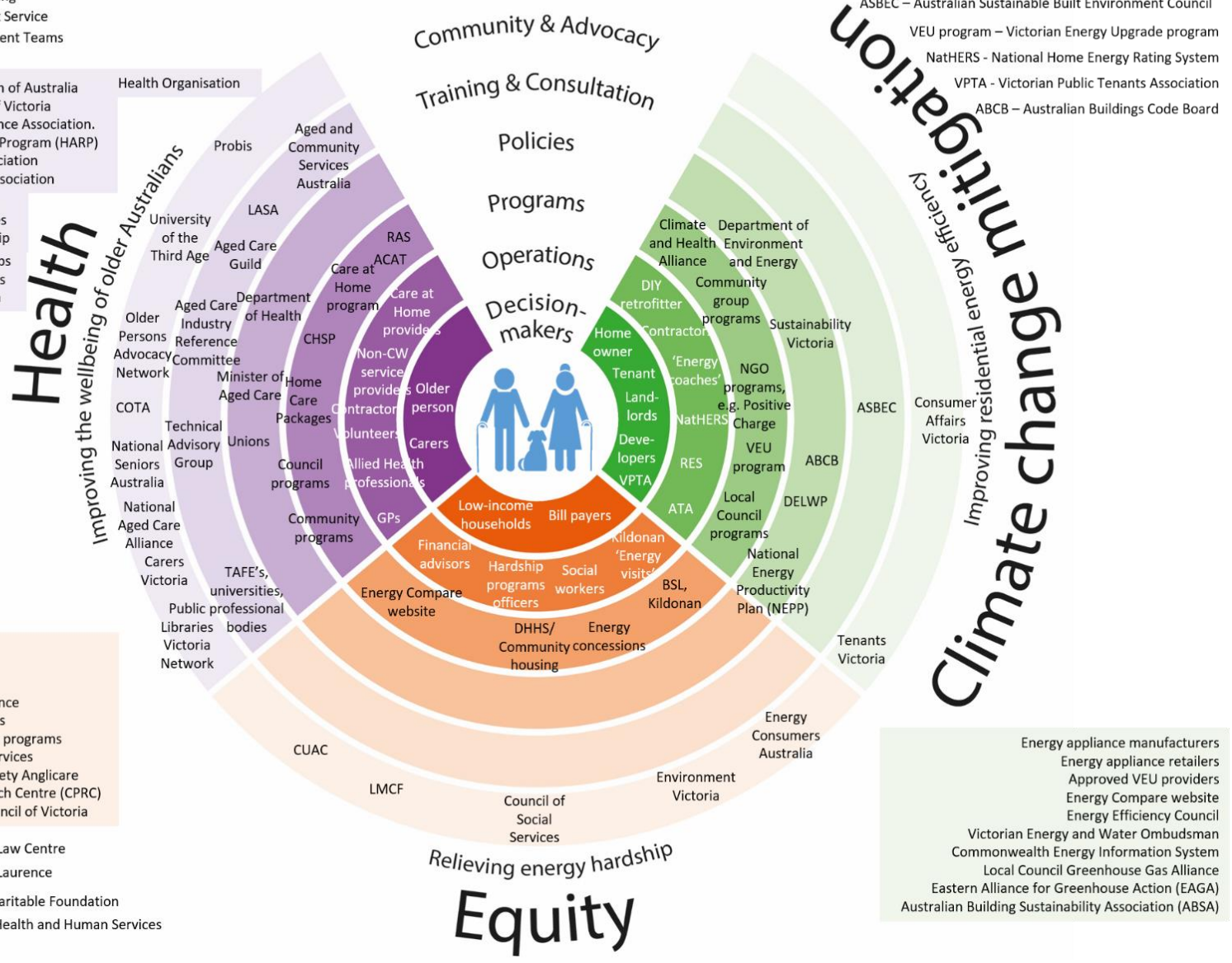


Figure 8 Final stakeholder map with organisations suggested by participants



6.5.9.4 Cross-departmental co-operations

The theme of co-operations addressed collaborations and funding across departments and programs to ensure a coordinated suite of policies, energy and health services and funding. This required a participatory approach, stakeholder engagement, a sharing of knowledge and skills and good project management skills. An Energy policy advisor suggested to work towards “the right support from the top” and the “right level of attention from senior decision makers”. “Right” as opposed to “wrong” seemed to imply that the requirements or aims of the planned endeavour may be misunderstood, misinterpreted or misused, and that preparatory work was needed on the selection of likely supporters and the tailoring of information. In addition, timing appeared as an important determinant of success and effectiveness. A timely process of prioritisation at a high political level, speedy project negotiations with the various parties and a quick project initialisation were deemed important. One Equity stakeholder summed it up as follows:

I think the major, one of the major issues is being able to get organisations to work collaboratively. First of all, to know that they're there, that those services are there and then to make efficient, easy pathways to link those services together. That's the big ticket. Because if we can do that, then I think a lot of other things, other aspects of it – we're already doing those things. (Equity 3 – Operations)

Several participants saw this project as a new opportunity to connect with the health domain. One stakeholder welcomed the idea of a big forum to bring together stakeholders from the various domains and all levels of influence to establish a common understanding and build co-operations. Such a forum could include businesses, service providers and medical professionals:

But actually, organisations like health insurance and the medical sector and also the government divisions and also the people who are delivering this. So, I think it does require quite a big range of organisations to actually come together and really understand the value. And I think that can have savings in the health sector. So how do we actually use that to accelerate across more people, so everyone gets a better sort of living in a thermally comfortable home. So, one would be to bring every single person together and then understand the interconnections of the impacts in each of those areas and how they work across each other and make sure that that doesn't go to a siloed approach. It really does require a whole strategic sort of plan around it. (Energy 4 – Operations)

6.5.9.5 Holistic and participatory program design

In keeping with a multidimensional goal, Energy, Equity and the Health - Operations stakeholders recommended a holistic design of energy assistance, which would address thermal retrofits, upgrades of appliances, energy practices, contract negotiations and concessions. Victorian stakeholders suggested to take advantage of the range of Victorian initiatives, such as the Victorian Energy Compare program and retrofit programs.

I think it would be terrific, if there could be not only energy efficiency assessments and then advice about behaviour to maximise those measures, but advice about switching, getting a more affordable energy bill. (Equity 1 – Community & Advocacy)

One Energy participant suggested that the first initiative offered to householders could be tariff switching, preferably free of charge, because the benefits would manifest immediately, may lead to other investments, build trust and raise awareness:

I'd say the first activities [...], which would either cost money or not, but ideally not, would be that if those people are receiving face-to-face assistance in the home. Then someone can help them get their energy bill, go on Energy Made Easy on an iPad or a computer in the home and help them choose a better tariff. And then that would be a great service for those people who could most greatly benefit from that. There are some very large gains to be made which would obviously then free up money for other stuff. And get people very grateful for what they're receiving and possibly put a conscious thought in their mind. (Energy 1 – Policy)



In addition, a participatory approach to project design was suggested. The statement below illustrates that knowledge sharing and the involvement of front-line workers in the development was regarded as important processes to achieve desired outcomes:

It has to be done with the range of people who have the knowledge, the relevant knowledge, and often they're the people you're going to be providing services to. But they won't always know what's best for them. They won't always know what the program is trying to achieve, but those things are – it's fundamental to an effective design of anything, in my opinion. (Energy 1 – Policy)

A co-design approach was also implicit in the suggestion that any program design needed to fit a service providers organisational management and the client-journey.

The pathways. The actions I would prioritise would be talking with the HACC, or what's it called now, the Care at Home workers and the organisation, and really understanding, their program, how does it work; how much time do the workers have; how much capacity and interest do they have in changing what they do? What do they need to be able to change? Does it need to be the workers themselves, could it be that the Care at Home workers introduce a separate person, the energy person, and vouch for them, effectively, and have this person come in, I don't know, at the end of the session, the start of the session, whatever. In a couple of weeks they show up and they just introduce, they have a chat and then after that they can come in separately and do these things, using the Care at Home as a conduit. But really understanding the way in which that organisation works, and what they see through their experiences as the barriers to interacting. (Energy 6 – Policy)

Co-operations and mutual understanding would then need to be translated into the setting of strategic goals that served both households and political aims.

6.5.9.6 *Initiatives based on referrals and tailored services*

Stakeholders seemed to share a common vision of integrating energy services into Care at Home through referrals and a team approach. A policy advisor with experience in designing energy intervention programs divided the tasks into recruitment of the householder, management of the householder through the process, home assessment, implementation of the material measures, provision of energy contract and practices advice and evaluation of the outcomes. A competent project manager was seen as the key to success.

Kildonan and the Brotherhood of St Laurence were both recommended as a good fit to deliver services due to their long involvement and experience in all aspects of required services i.e. energy audits, retrofits and hardship programs. It was pointed out that the in-house collaboration between energy assessors and financial counsellors could be extended to include Care at Home service branches to facilitate referrals from care workers to the energy team. One Equity stakeholder suggested that a direct involvement of energy businesses in the education of consumers, community health service organisations, hospitals and medical practitioners may be very effective in reaching households. The participant's organisation was training employees of energy providers in how to address clients experiencing hardship in a respectful and sensitive manner.

Equity stakeholders raised the importance of customising energy measures to individual needs rather than to the material shortcomings of the dwelling or focus of a program or policy.

I think tailoring is really important, not just to have a broad brush approach to energy efficiency upgrades. And that is one of the virtues of integrating that into the Care at Home system is that I understand it is all really, a fairly tailored system that actually addresses the household's individual needs. I think that's really important around energy efficiency, that we do that – ensuring that the most immediate and pressing needs of the household are met first and then moving on to other things that may assist them in terms of long-term health and wellbeing and household affordability and things like that. [...] that service level of understanding is really important because we can make policy prescriptions that just are impractical. (Equity 1 – Community & Advocacy)



Tailoring also meant taking consideration of the financial constraints of householders. A stakeholder with experience in delivering energy initiatives pointed out that the uptake depended on the affordability of energy assessments. In addition, behavioural advice should take into consideration changes in the capabilities and energy practices the target group over time. Many older householders currently enrolled in the care programs exhibited frugal behaviours. However, the next generation was likely to be a bit more “slapdash” or careless about their consumption.

6.5.9.7 Meaningful evaluation

Stakeholders of all three domains agreed that evidence would be needed to convince policy makers and funders of the benefits of the initiative. Although much of the evaluation was centred around financial benefits, there was consensus among Energy, Equity and the care service provider that both qualitative and quantitative evaluations would be important to reveal the varied meanings of outcomes. Energy and Equity stakeholders stressed the importance of a multidimensional framework for any efforts linking energy efficiency and hardship with caring for older people. Such a framework should focus on affordability of energy services that are considered essential to the individual and society, such as health and social contact.

Energy affordability is, I think misinterpreted by a lot of people, because it's about reducing bills, or getting in control of bills. Whereas affordability is, are you able to afford the energy services that are important to you? Energy use is about the services you're getting not just about bills, and if you're spending the same amount of money but you're feeling warm, and comfortable, and safe and happy, that's an improvement. (Energy 6 – Policy)

Both objective and subjective outcomes should be valued. Value may be conveyed in statistical results or narratives. Several equity and energy stakeholders referred to the Victorian Healthy Homes project and its “rigorous epidemiological study” design with the implication that it would provide good evidence. Health in all its dimensions should be captured, for example through the SF36 survey currently used in two Victorian projects, but also through “stories about people now having friends over”. Evidence was considered part of a successful communication strategy and key to convincing politicians, health professionals and care workers of the merits of promoting energy efficiency.

Interestingly there was anecdotal evidence that the MAC does not contain evaluation procedures or outcome assessments for the individual support plans. This signified that any care was considered beneficial or that evaluation processes had not been put into place yet.

I believe that there is a goal when you do the assessment, that is what we've just learned from our service providers we've done the first field visit last week. And it seems at the end of the year no one checks to see if they have achieved the goal. So, there is a support plan but there's no feedback link to see how we achieved the goal at the moment. But monitoring is part of the framework and it may be that they're still trying to work it out but it's part of the framework. So, there should be a goal and it should be monitored. (Equity 1 – Community & Advocacy)

6.5.10 Categories of perception

The perceptions of various stakeholders of the idea to link energy efficiency and energy hardship initiatives into the Care at Home system fell into a spectrum with three main categories of description: opportunity, ideal and distraction. Perceptions seemed to be less shaped by the domain in which participants worked, but by their experiences with retrofit and care projects or programs and efforts to engage with Health policy makers. Most stakeholders fitted into one of these inductively derived categories of perception, however some overlap in a few stakeholders was observed. Participants' final statements seemed to epitomise their perceptions.

The stakeholder interviews revealed that Energy stakeholders and the Health-Operations care manager were mostly aligned with the aims and objectives of the idea and saw linking energy efficiency and hardship initiatives into the Care at Home system as an opportunity and a mechanism to achieve better social equity. They all had current or past managerial experience or in-depth knowledge of retrofit intervention projects for vulnerable or older people. They took a capabilities approach to energy hardship and focused in their descriptions on the most vulnerable cohorts. Considering the policy goal of reducing carbon emissions or improving energy affordability, it



was surprising to learn that the Energy stakeholders valued wellbeing outcomes more than environmental or financial benefits. Although these participants acknowledged the challenges of retrofits, they were optimistic and regarded these as valuable lessons rather than as obstacles. They were keen to share their learnings to improve future endeavours. The Energy stakeholders and the Health-Operations care manager were optimistic, supportive and offered to help with a future pilot project.

I think that there are great complementarities here, and it's tremendous that you're doing this project. (Energy 6 – Policy)

Most Equity stakeholders tended to see the potential integration of energy efficiency and energy hardship initiatives into the Care at Home system as an ideal which revealed limited understanding of the reality of the lives of vulnerable older people or the challenges of trying to engage Health policy makers. These stakeholders had extensive experience of working with vulnerable households and some in retrofit intervention projects. They desired inter-sectoral collaboration but were disillusioned by their own failed attempts to involve Health policy makers into their endeavours. Their descriptions also revealed a capabilities approach to energy hardship, by recognising that energy-related practices were shaped by physiological, cultural and social conditions. These stakeholders were supportive of the project and willing to promote it, yet they were sceptical about its success.

And my experiences working with older people [...] you shouldn't generalise but a high proportion of them wouldn't see this as a priority because there's some very fixed behaviours and beliefs, and this is big picture stuff which may not fit with what they think is important. (Equity 2 – Community & Advocacy)

I think that there needs to be a real strengthening of the relationship between those services that are health based and health focussed services in the lives of people in their elderly years with the practical aspects of their energy consumption and use and knowledge. (Equity 3 – Operations)

The Health Advocacy participants tended to perceive any efforts of linking energy efficiency and hardship initiatives into the Care at Home system as a distraction from the broader challenges of an ageing population and their organisations' main priorities. Energy hardship was regarded as a predominantly financial and lifestyle problem. Descriptions implied older people as a more homogenous, digitally literate and empowered cohort. Energy-related vulnerability was a new concept and largely absent in their discourses. The phenomenon was experienced through secondary sources, such as public statements and an academic publication by the interviewer. The participants' organisational advocacy was dominated by tensions within the MAC. Despite their reservations about the proposed project's aim and mechanisms, these participants also offered valuable insights into how political change could be affected. They proposed a suitable funding mechanism and wished the research team 'good luck'.

It's not an easy topic, and I think it's the tensions that create a challenging conversation around this, and I think that's probably not just energy efficiency. There are other areas of everyday living expenses. It's a challenge of society how we care for our most vulnerable. (Health 2 - Advocacy, Training & Consultation)

6.6 Discussion

Within the larger Seed Fund study, the stakeholder interviews aimed to provide a better understanding of the perceptions of organisations of the idea of linking caring for older people with energy efficiency and energy affordability initiatives. Stakeholders spanned a variety of disciplines and realms of practice and policy. Invited stakeholder organisations were multi-disciplinary and multi-sectoral and allocated to the Energy, Equity and Health domains. The study has identified challenges and opportunities for the proposed integration of initiatives and identified both potential promoters and supporters who could be approached as research partners and for funding.

One of the main challenges that were identified were the states of transition of both the MAC system and the energy landscape. Both domains were grappling with intrinsic issues whose resolution may dominate political focus and funding before additional components or complexities may be added. In the Care at Home system these were tensions around the backlog of funded packages, consumer empowerment, and the interpretation of the scope of service offers. In the energy sector, tensions included limited industry capacity, pre- and rebound effects and consumers' reluctance to adopt the most efficient technological solutions. Reservations about linking



Care at Home with energy initiatives concerned uncertainty about the demand from older people and the financial outcomes, the resistance to collaborations by Health policy and program organisations and limitations in funding. All stakeholders expressed doubts about sustained high level political support, sustained funding for initiatives and the consequent churn of qualified and experienced staff.

One of the key challenges was the apparent lack of co-operation with Health policy and programs. The unsuccessful attempts to collaborate mentioned by Energy and Equity stakeholders echoed the limited response by Health stakeholders to participate in these Seed Fund interviews. It is difficult to speculate on the possible reasons, but one may have been the unwillingness of policy makers to engage in additional tasks, when the system was already facing financial and legal challenges. During the time of writing this report, the federal government announced additional Home Care Packages in the top two categories to relieve the pressure of the backlog of allocated packages (Probyn 2018).

Limitations in funding included concern about ‘free-riders’, i.e. householders taking advantage of subsidised energy services although they would be able to afford it themselves. Such market failures have been observed in subsidised programs elsewhere (Grösche & Vance 2009; Nauleau 2014). However, a LIEEP project aimed at helping older householders showed that a financial incentive triggered bigger investments (SECCCA 2016). Hence, initiatives offered through the Care at Home system may upscale the uptake of energy retrofits.

Concerns were also raised about the lack of energy knowledge of the care workforce and the social skills of energy audit or retrofit workers, possible inequities due to tenure and the limited reach of the Care at Home system. Reach may be improved by extending the idea of linking energy efficiency and hardship initiatives into other social services. Lessons may be also learnt from European projects, which are linking energy poverty initiatives with the health and social services (Bajomi & Gosztanyi 2016; Scarpellini et al. 2017; Social Innovation to Tackle Fuel Poverty 2018).

The reported tensions around care service fees also seem problematic with regards to the already apparently unattractive business cases around retrofits and the uncertainty of financial benefits for householders. With care administration fees as high as 45 per cent of the value of Home Care Packages (Brown, B 2018), retrofit delivery through the Care at Home system would not make economic sense unless they were exempt from administration fees or highly subsidised. The publication of service fees since November 2018 promises better transparency and comparability (*User Rights Principles 2014. Compilation No. 6* 2018), however even the lowest rate of 20 percent may be too high for a meaningful financial benefit. The best approach may be to offer energy services through direct referrals rather than as integrated services to keep down the costs for the households and to minimise the additional effort of care workers.

The interviews also identified many opportunities that may support the integration of energy efficiency and hardship initiatives into the Care at Home system. A key opportunity was the eagerness of the Energy organisations to address equity in the Australian low carbon energy transition as a moral imperative. Hence, Energy stakeholders were willing and prepared to compromise on environmental and affordability outcomes in favour of benefits in health and wellbeing among this population group. Encouraging was also the first formal collaboration between the Health and Equity advocacy groups, with Energy Consumer Australia supporting energy specialists in the state branches of COTA. As a member of the National Aged Care Alliance, who regularly advises the Department of Health, COTA could also mobilise other NACA organisations and lobby the issue with the governing bodies of the MAC. As COTA was identified as an organisation with interest in the energy issues of older people, this advocacy group could become a key player in social mobilisation to build a political agenda.

In addition, most stakeholders agreed that the integration would be a worthwhile effort, even though the priorities of the Health and Energy domains were not aligned on a political level. Encouraging was also the eligibility of new, and presumably more efficient heaters and air conditioners for funding through the Home Care Packages and the news that the Department of Health may be issuing guidelines on what may constitute “major modifications”. Funding through an energy supplement and through energy providers seemed the most practical solutions. If these funds were provided by the federal Commonwealth or energy retailers, then the funds available for traditional home modifications under the MAC or immediate health needs would not be diminished. The interviews also suggested a potential uptake of energy initiatives by individual care service providers if supported by incentives. Such a development would represent a market-based solution in line with the principles of the MAC.

The ideas of a social compact, a shared vision or even a more comprehensive National Ageing Strategy were significant in the context of this project, as these suggestions highlighted energy hardship and energy related



health outcomes as social problems. This shift from energy hardship as an individual to a structural, community problem, confirmed the premise of this project for a systems-based, cross-sectoral response to energy hardship among older people. It is hoped that a social compact would extend to a shared responsibility across political agencies and surpass individual ambitions of politicians. A unified vision of energy efficiency and health would also entail a shared epistemology or at least respect and acknowledgement of the validity of the research methods and outcomes of other disciplines. The broad interest across the domains in future research presented an opportunity for such knowledge exchange and collaboration.

The theme of gender, which appeared as a possible challenge in the literature review, did not emerge from the stakeholder interviews. This may have been due the interview topics omitting gender equity as a key principle for evaluation (Pasanen 2018).

Moving forward, one of the key activities towards creating synergies between caring for older people and energy initiatives would need to be the building and actioning of a political agenda. The pathway sketched by the stakeholders suggested a Multiple Streams Approach (MSA) (Kingdon 2003). According to MSA, changes in policies require the problem to reach the attention of policy makers, the availability of a problem solution and the willingness of policymakers to act due to public concern and advocacy for the solution. Changes in government may represent windows of opportunity (Cairney & Jones 2016). Achieving this alignment of problems, policy and politics (Clarke, Swinburn & Sacks 2018) requires evidence of the extent and severity of the problem, a pilot project to test possible approaches towards a solution, communities to participate in the research design, implementation and evaluation and to advocate for a practice-based application of the findings, and policy and program decision-makers to fund the research and facilitate innovative program approaches. The next federal elections at the beginning of 2019 may determine the timing of these activities.

The study involved limitations due to selection bias. The sample included six participants who had met the researcher before. Another two participants had expressed their interest in the lead up to the project. Two participants were referred to the researcher by invited participants. Only three participants and their organisations did not have any communications with the research team before. However, the risk of acquiescence bias was mitigated by posing open questions that demanded the participants' opinion on a topic. In addition, the researcher pretended ignorance on the topics and projects mentioned by the stakeholders and encouraged them to explain these to fully capture the participants' perspectives and the meanings implicit in their words. Social desirability bias was deemed unlikely due to the seniority of the participants' positions and the familiarity of some participants with the researcher which allowed honest responses. Traces of social desirability bias was only suspected in one Health-Advocacy interview. To minimise confirmation bias, the draft report was sent to all participants for member checking. In response, the interpretation of 'a cabal of people' was revised.

Finally, the study was limited by the absence of any representative of the Department of Health or the medical profession. The lack of interest and response to the invitations confirmed the alleged lack of interest of health politicians and professionals in residential energy efficiency.

6.7 Conclusion

This component of the Seed Fund Project collated the perceptions of stakeholder in the three domains of Energy, Health and Equity to obtain a realistic impression of the viability and practicality of the idea of tackling energy hardship among older people through synergies with the Care at Home system.

The study revealed a closely-knit community of Energy and Equity stakeholders and a disciplinary, policy and communication gap between Energy and Equity and the Health domain. Many Energy and Equity stakeholders pursued the same goals, were already working together on programs and trialling various approaches to inform policies. Hence, they used similar language and revealed the same way of thinking about the meanings of energy efficiency improvements, even though the Equity stakeholders seemed more sceptical. The Health-Operations HCP manager shared the same values and priorities due to a previous managerial position in a retrofit project. By contrast, advocacy-level Health stakeholders did not share this paradigm of 'energy efficiency for better health and wellbeing'. For them, Energy was only an emerging issue that was tackled with hesitation or more reluctantly and preferably as part of a wider strategy. Assistance was framed in terms of financial measures rather than in terms of capabilities, and evaluations were approached predominantly in a quantitative way.

However, this project argues that framing energy hardship as a technological, building quality-related problem ignores the importance of capabilities in finding solutions. Framing energy hardship as a financial problem ignores



the social context of many older people. And framing solutions in terms of cost-benefit analyses risks missing the real meanings of energy services in a home. The stakeholder interviews hoped to find inter-disciplinary and cross-sectoral support for integrating energy efficiency and hardship initiatives into the Care at Home system. The results indicate that there are opportunities for building synergies across the Care at Home service providers, Equity and Energy domains, but that the process to engage Health policy and program decision-makers is bound to be slower than expected. It will require more research, more evidence, more funding and a certain degree of political activism.

7. Care provider report

7.1 Summary

The study of the organisational processes of two care provider organisations produced a visual map of the client journey through the system, starting at the referral to My Aged Care to the assessments and support services. The interviews with a broad spectrum of care workers revealed that symptoms of energy poverty were noticed. However, the responses by the care providers were limited by a lack of knowledge of energy-related financial or behavioural assistance. Care workers desired hard-copy and digital comprehensive information material and links to services in hard-copy and digital form.

7.2 Purpose

The purpose of the organisational ethnography in two care providers' offices was the documentation of current practices of dealing with energy-related problems of clients and the identification of the care providers' needs of resources. The two participating organisations that provided in-home care were MHA Care and Nexus Primary Health. Both were located in regional Victoria, and both were not-for-profit organisations. MHA Care was located in North-Eastern Victoria, bordering New South Wales. Nexus Primary Health was a larger organisation comprising a broad range of Primary Health services. It was located in Central Victoria with their Head Office located approximately one hour north of the Melbourne city centre.

7.3 Methodology

Organisational ethnography is a qualitative methodology that aims to understand the cultures of organisations, frequently with the aim of quality improvement (Ybema et al. 2009). Combining traditional ethnographic observation (Spradley 2016) with more focused organisational methodologies such as process mapping (Trebble et al. 2010) and semi-structured interviewing, organisational ethnography aims to elicit thick description (Geertz 2008) and nuanced understandings of the lived experiences of individuals operating within organisational cultures (Ybema et al. 2009). In this project, the field work for the organisational ethnography focused on a broad spectrum of employees that were involved in the coordination of individualised home care services.

7.3.1 Data collection

Primary data was primarily collected through two qualitative research techniques: interviews and focus groups. Staff members from each Care at Home service provider were invited to participate in the organisational analysis of their daily processes. Participation in the organisational analysis primarily involved three research components, either in combination or isolation: firstly, provision of input into the development of a 'client process map'; secondly, participation in individual or small group semi-structured interviews; and thirdly, participation in a focus group to validate the 'client process map' and gain feedback on the preliminary data analysis. Participants were free to decide on whether to participate in selected or in all research components. All field work for this study was conducted within the offices of the organisations. The research did not include client home visits.

The CEOs of the two partnering organisations had consented for the project in general to be conducted within their organisation when they provided Expression of Interest support during the RMIT Seed Fund grant application process. After the successful award of the grant, both organisations had agreed to allow the researchers entry onto their premises and access to their staff based on the draft Participation Information Sheet/Consent Form (PICF) for their staff. The final PICF was approved following ethics approval. The PICF outlined in detail the voluntary nature of the participation, the risks and benefits of taking part in the research, the participants' rights and what was required of them. Participants were not reimbursed for their efforts.

The intention was that both organisations were going to distribute the Participation and Information Sheet/Consent Form (PICF) in an Expression of Interest email to their eligible staff. Due to an outage of the email system in one organisation, this was only achieved in one organisation. This email sent by the senior manager confirmed the approval of the research by the CEO and pointed out the inclusion criterion for participation, which was having some experience in the Care at Home system. The email also stressed the voluntary nature of the participation, the right to withdraw from the research at any stage and that staff members declining to participate or withdrawing from the research did not need to give any reason for their decision. The email by the senior manager also pointed out that a person's participation in the research would not lead to any benefits in remuneration or employment, nor would the declination to participate result in any negative consequences, such



as prejudice, discrimination and disadvantages in employment. The email asked staff members to respond directly to the Chief Investigator (prior to the field work) or to the researcher on site (during the conduct of the field work) to indicate their interest in participating in the research. This provided the researchers with the contact details of the interested persons. A reminder email was sent by the senior manager one week after the initial email. Although the CEOs had the option to participate in the research themselves, the CEOs were asked not to coerce the participants into taking part in the research project. In the one organisation with the email outage, all information was communicated by the researchers to participants who approached her. In both organisations, the researcher reiterated the approval of the research and its voluntary nature again before obtaining signed PICFs from participants and conducting each interview.

Those participants who expressed interest to participate in the research were contacted directly by the Chief Investigator or researcher on site. The signing of the PICF's was arranged and the interactions, such as interviews and focus groups were organised.

In addition, to safeguard the consent of staff members who might be interacting with the interviewees during the data collection period, the CEOs provided written notification to all employees of the dates of the observation period and the aims and nature of the study prior to the start of the field work. A poster with the research team's photos and a brief description of the research was placed on staff noticeboards. The draft poster was provided by the research team. When interviews were interrupted by phone calls or interactions with other members of staff, the recording was paused. A contingency plan was prepared for possible ethical challenges that might have been encountered during the field work. The underlying principles were that

- as much as possible, informed verbal consent of third-party participants involved in secondary observations should be obtained and recorded in the field notes,
- participant discomfort and the impact of the study on organisational activities should be minimised, and that
- the researcher should always be attentive to possible ethical issues and record his/her reflections in the field notes.

Key interview data was transcribed. The researcher administering the field work extracted key quotations to support the findings.

The focus groups were designed to gather information from several persons simultaneously. By capturing the interactions between participants, focus groups provide a better understanding of the relations between participants and their varied experiences, perspectives and priorities (Kitzinger 1995). In this project, focus groups were held in each of the two home care service providers at the end of the data collection periods to facilitate an organisational analysis. Participants were the managerial staff, leaders of the assessor and financial counselling teams and other executive managers as well as some interviewees who were able to attend. The focus groups validated the client process maps and facilitated discussions around current and future embedding of energy efficiency and hardship initiatives into their organisational processes. The focus groups were audio-recorded. Consent was recorded in writing on the Consent Forms and verbally at the beginning of the recordings. All participants had the right to remain silent and to withdraw from the focus groups at any time. All participants had the opportunity to provide 'off the record' information, which was not audio-recorded and not ascribed to them. The focus group recordings had not been transcribed to the date of writing.

7.3.2 Data analysis

The data was analysed to provide a client process map and an account of how case staff was making sense of and responding to residential energy efficiency and hardship. The main outputs were a draft client process map which was validated at the focus group meeting, windows of opportunities and recommendations.

7.4 Results

7.4.1 Participant information

In total, 25 staff members participated across the two care provider organisations. At MHA Care, 10 staff members volunteered for inclusion in the research including the Service Manager, members of the Home Support



Assessment Team, Intake and Care Co-ordinators, a Service Co-ordination Officer, and members of the Administration, HR, and Volunteer co-ordination teams. The CEO was present for the focus group. At Nexus Primary Health, interviews with 16 participants were carried out. Participants included their Community and Quality Executive Manager, the District Nursing Manager, the Community Support Manager and members of their Social Support, District Nursing, Regional Assessment and Community Interlink teams; financial counsellors, an Access and Support worker, a community counsellor, and allied health practitioners. One allied health professional was hesitant at the beginning of the interview as she had been confused about the title of the research. She had thought that because it referred to the elderly and 'energy', she had thought that the study related to the amount of personal energy of clients had rather than their electricity or gas use. The confusion was explained by the fact that the information about the research had not been circulated because the organisations' email system had been out of order for one week.

7.4.2 Client process charts

The information gained through the interviews was translated into client process charts. The two charts (Figure 9 to Figure 11) reflect the detail, content and presentation style of data provided by interviewees in the research. While the two diagrams appear differently, the internal processes for CHSP funded and HCP recipients are very similar. The main difference between the two organisations was that many of the services that were referred to externally by MHA were available internally under the Nexus umbrella.



CLIENT REFERRAL PATHWAY (NEXUS)

As at 16th October, 2018

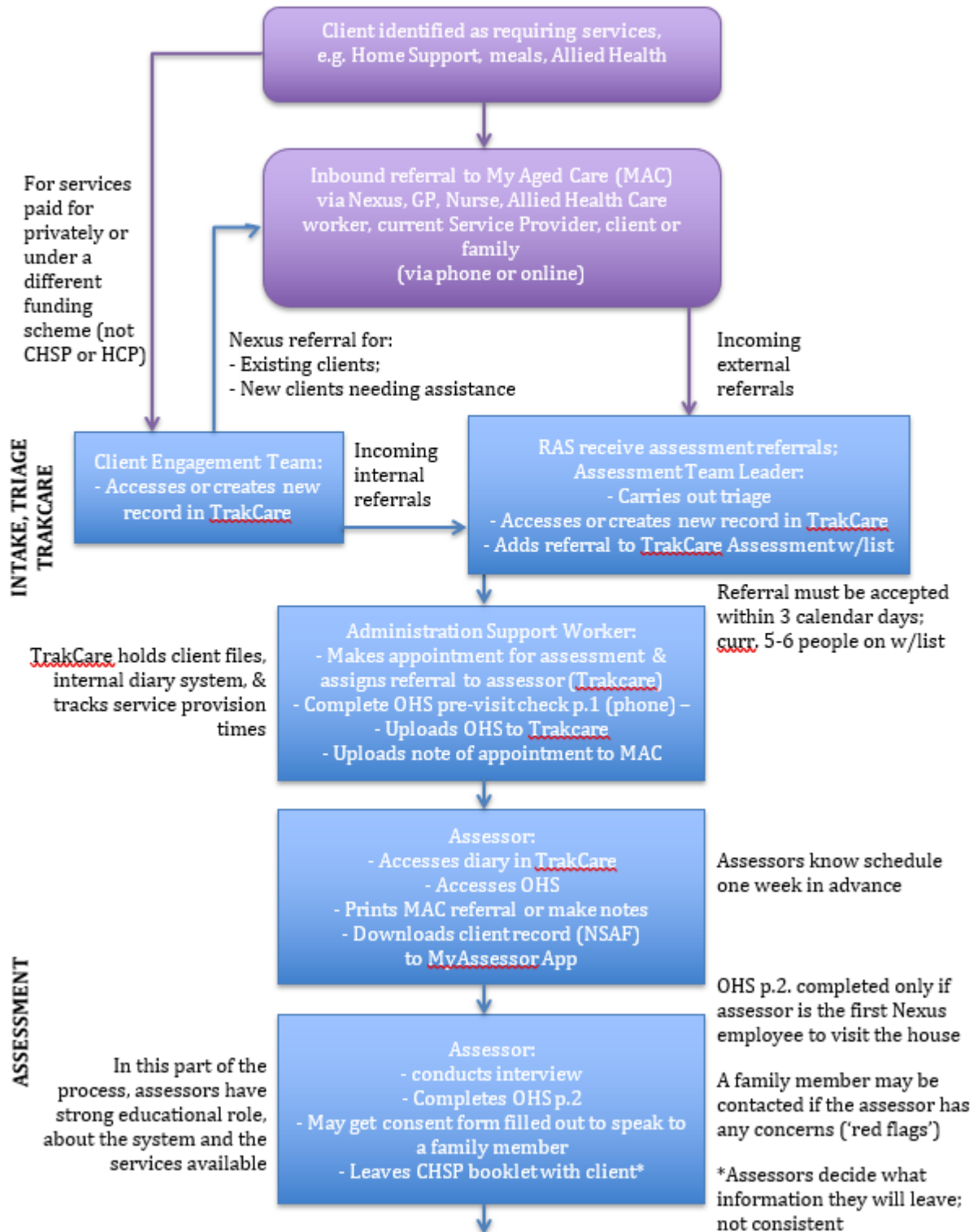


Figure 9 Client process chart Nexus Primary Care – Part 1

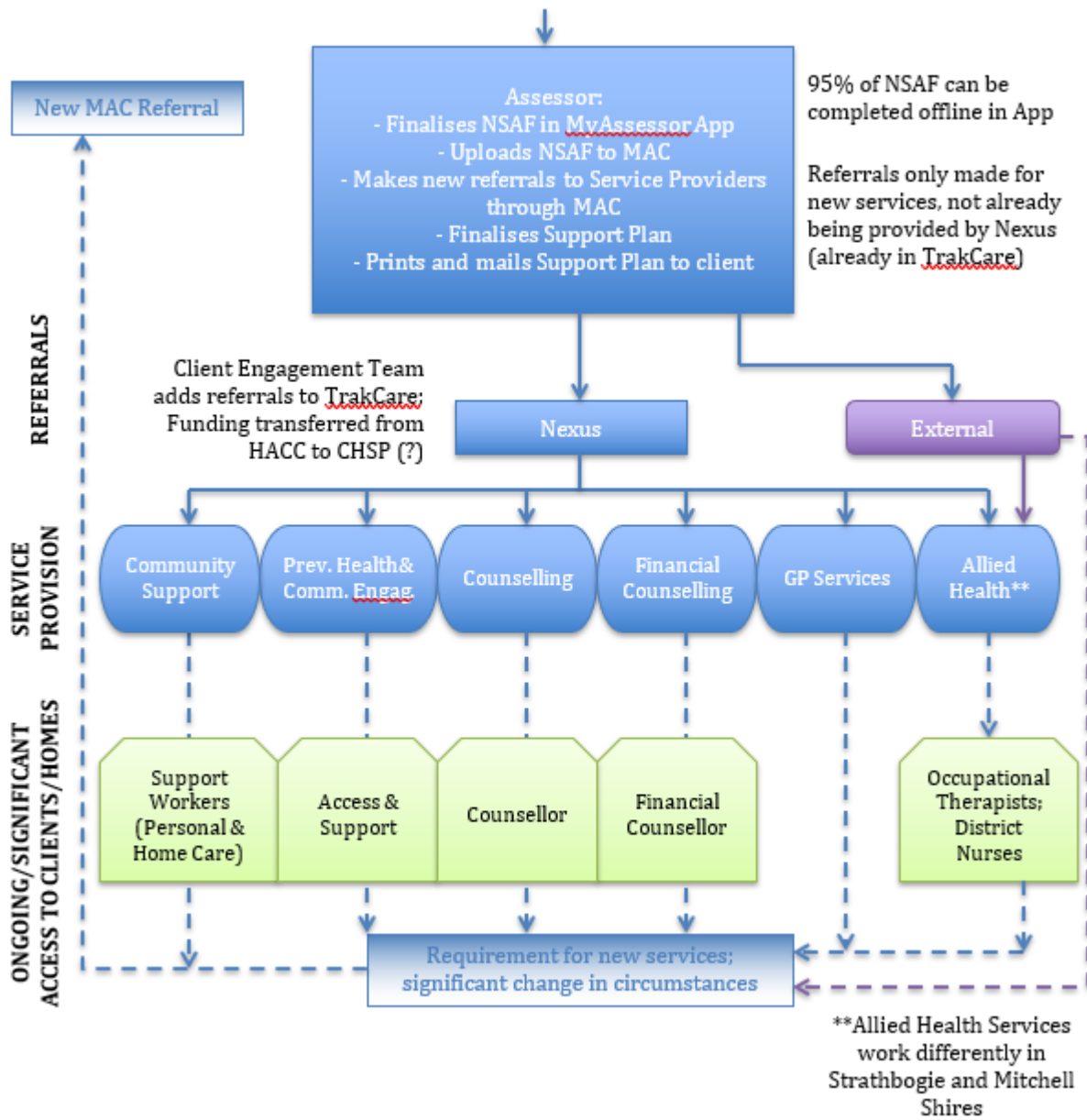


Figure 10 Client process chart Nexus Primary Care – Part 2

REFERRAL SERVICES & FUNDING
(MHA)

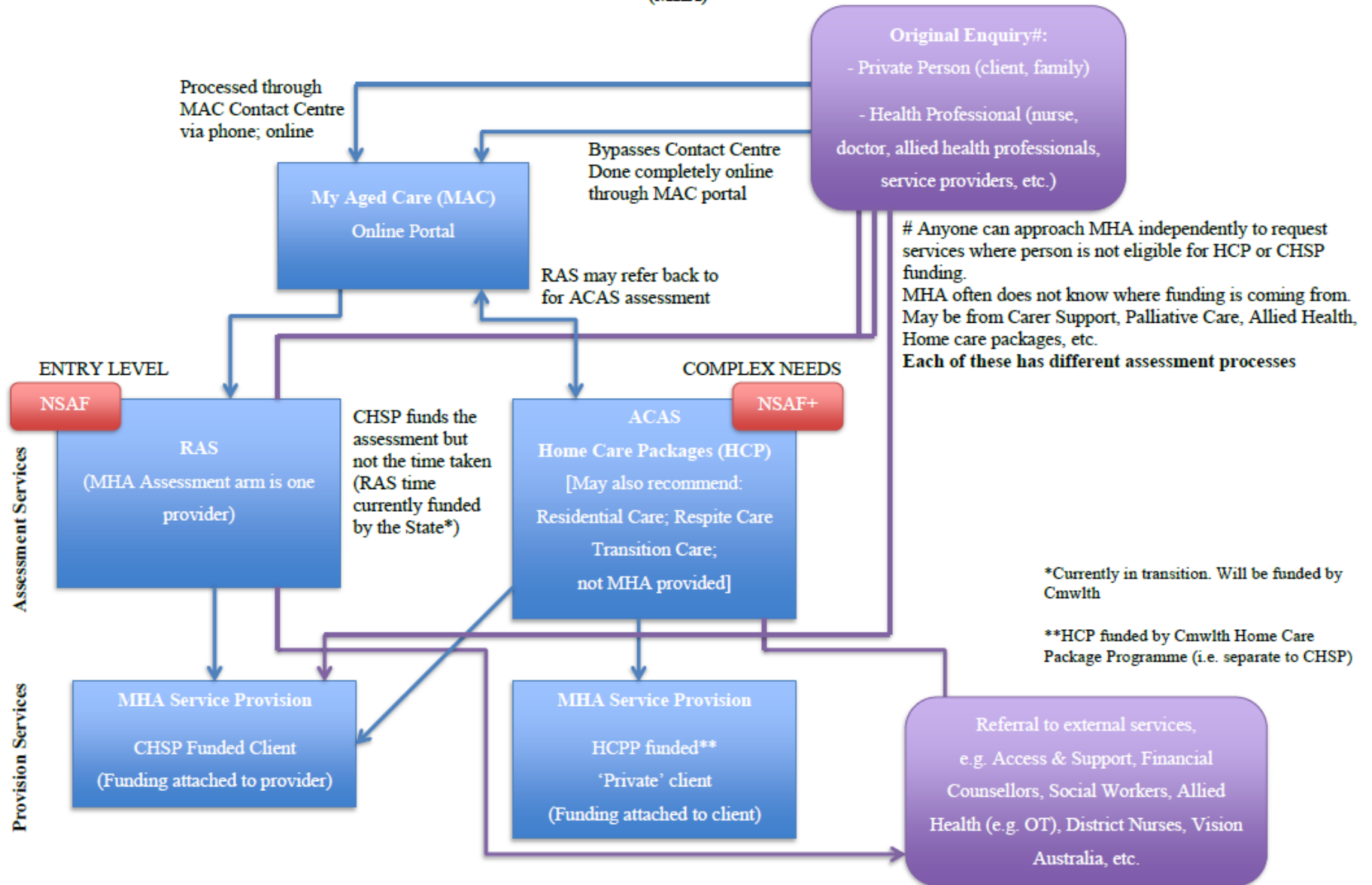


Figure 11 Client process chart MHA Care

7.4.3 Experiences with of energy hardship

During the interviews, participants described their own experiences with energy hardship among their clients. Care managers and support staff told stories where they had observed fuel poverty. They noticed that some clients could not afford to run the heater and would suffer the cold or just turn the heater on for a visitor. As one HCP case manager put it: "In some houses it's viewed as a luxury". An allied health worker spoke about the common practice of people closing the kitchen off, having a couple of heaters running in there and feeling that this was effective for them. They did not realise that moving from the heated room to unheated areas of the house might expose them to cold stress.

The type of housing contributed to poor energy efficiency. Caravans were deemed particularly inefficient. One organisation had helped one client in a poor-quality home by building a room inside another room as the dwelling shell was disintegrating. The client was reportedly was less stressed "because the window's not going to fall on him".

Other observed symptoms were closed curtains and windows to keep the heat in. Due to the potential for inadequate air quality and poor visibility, this presented a high falls risk. Advice on response on referral options was desired.

Curtains and windows open for exchange of air can be important for clients with breathing problems, emphysema, etc. they don't realise that they aren't getting enough fresh air, especially when there are 4 or 5 people in the home – high CO2 in the air. With more fresh air, we tell them, they will be less light-headed and less dizzy over time and reduce the risk of falls. [...] All we can do is provide advice on air flow and lighting, but if the client comes back and says that they can't afford to pay their bills, we can't do anything. (Allied health worker F)

I've had a client cry to me because her electricity bill was quite high, and she was quite upset with the price of the electricity bill, and she had so much other stresses going on in her life. It kinda just compounded on everything else. I felt like I couldn't help in that situation because I didn't know what services to offer for her. She was on a Home Care Package as well so all I could say was to "talk to your case manager and see what [she] can chase up." It would have been very helpful to have, maybe some information to say, "ok, I'll talk to your case manager about linking you up with this programme," something like that. (Allied health worker D)

Participants talked about limited capabilities which contributed to the vulnerability of older people in a market-based society:

They can be vulnerable to the hard sell door knockers and get caught in contracts. They're lonely, vulnerable and trusting. If it was easy to access assistance and information, and we could provide a few phone numbers of official bodies, it would be helpful. (HCP case manager)

Symptoms of energy hardship were often hidden for fear of losing independence and pride.

A lot of our aged care clients don't want to complain or say that they're not managing or struggling because they want to stay at home, and they're frightened that if they indicate they're not managing, they'll end up being placed in permanent care, so they keep quiet about some of their concerns. (Community Support Services Manager)

They're cold and rugged up and you're sitting there, cold. They wouldn't necessarily tell us because they get embarrassed. It comes back to that society view of "don't tell the neighbours we're struggling". (HCP case manager)

Participants thought that the reluctance to accept help was generational, and that baby boomers would be different and have a sense of entitlement:

When the baby boomers enter aged care [indicated that they will happily put their hands out] but their parents' generation don't want to make a fuss or ask for anything or be a bother. (HCP case manager)

Assistance sometimes consisted of notifying carers:

We had someone a few years back and their heating system wasn't working and they had a radiator. They used to sit on top of that radiator and the dressing gown would sometimes be touching. That was reported, the family was told. They had to get the heater fixed. It's challenging. Every situation is different. (Community Support Services Manager)

However, families sometimes were a contributing factor in energy hardship and fuel poverty. Participants told of families who called their elders to remind them to put on their air conditioning during hot days and to reassure them about the electricity costs. However, participants also told anecdotes of families discouraging their elders verbally from actively cooling the home. This family was linked to financial counselling. In another case, the family had removed the air conditioner's remote control to prevent active cooling. In a third case, the lack of funds for heating and cooling was due to financial elder abuse. A younger member of the family regularly stole money from the elder's purse while helping with shopping. The client did not act in the fear of losing this rare social interaction.

7.4.4 Current actions addressing energy hardship, opportunities to address it and needs

During the interviews, participants reflected on possible mechanisms and times when aspects of energy-related improvements could be integrated into the Care at Home system. These so-called windows of opportunities represented possible points in the client process which might be suitable for interventions addressing energy efficiency and energy hardship. The following list presents a summary of the proposed actions and roughly follows a client's process through the Care at Home system.

The interviews revealed that energy hardship was encountered by all types of care workers. Assistance with energy hardship or efficiency happened seldom and only in an ad hoc manner and often in emergencies. Most often, clients were referred to financial counselling. Self-referral was rare due to lack of knowledge, pride and deep-seated attitudes of frugality. Participants implied that information was needed on the adequacy of heating and energy-related financial literacy. Information should be made available in hard-copy in an accessible format and on the website. A physical and digital site with all the information and links to services was deemed very useful for clients and care providers.

7.4.4.1 Original enquiry and referrals through doctors and nurses

Client assessments by health professionals, such as general practitioners and nurses, did not include an assessment of energy related problems. The home environment tended to be neglected in conjunction with health issues and was not included in the initial contact information through the My Aged Care (MAC) screening process. Additional questions in relation to household temperature, mould, draughts, etc. were considered useful.

In addition, the closed-circuit TVs in the service providers' and general practitioners' clinic waiting rooms and pharmacies could include information on available energy services, concessions, grants, etc. and encourage clients to seek assistance with energy and energy-related financial literacy. A short course on the causes, symptoms and possible mitigation of energy hardship was regarded as also being beneficial for community nurses, disability workers and other community health workers.

7.4.4.2 My Aged Care registration and screening

The My Aged Care registration process did not prompt applicants to consider energy hardship or environmental conditions. Question could be added that would identify energy hardship and energy-related health problems. This would be particularly relevant to applications made by GPs and health professionals.

7.4.4.3 NSAF Assessment through the RAS and ACAT/ ACAS

There were no energy specific questions embedded in the National Screening and Assessment Form (NSAF) or links to such services. However, multiple sections were identified in which an additional enquiry could be made, such as in the assessment of the physical quality of the home, assessment of financial disadvantage. One RAS assessor used a hard copy of the NSAF form to identify sections that could be used to highlight energy-related problems:



- Home maintenance
- Function
- Observations about the Client
- Observation of home environment
- Health literacy
- Health conditions and connections
- Home and Personal Safety
- Risk of Vulnerability
- Personal safety
- Complexity indicators (RAS team members would need to have the tools and facilities to refer on to if issues are identified here)

An energy-related supplement questionnaire in the NSAF would trigger assessors to pay more attention to the adequacy of the thermal home environment. It could also provide tools to follow up on problems (cf. Section 7.4.4.4). The RAS participant felt that a few more questions in the assessment would not be a burden. Such a questionnaire could be sent to providers for feedback on the NSAF and could be also be used to lobby government. Participants pointed out, though, that Home Care Packages were attached to a client and not to an address. Hence, when a client moved home, this did not trigger a need for new assessment of new physical environment unless care needs changed.

7.4.4.4 Assessment workers

RAS and ACAT assessors were not specifically directed at any point to look for or ask questions on energy efficiency or affordability, physical environment or householder practices around energy usage. If this was incorporated into NSAF, education, tools and a clear referral pathway (such as information brochure for clients, a list of service providers; a website as central point for most up-to-date information on available grants, concessions, etc.) would be necessary for workers to take the next steps. The RAS assessor referred to a Victorian Government initiative in the past, i.e. the VEU program, where “people came through and put strips on doors, installed water saving shower heads and changed light globes to energy savers”. In addition, where care service providers distributed a client information pack, an energy-related brochure could be included.

7.4.4.5 Case managers

Case managers were required to carry out annual reviews of their HCP clients. Although the support plan was fashioned around specified, client-focussed goals, the review did not include a specific section for a follow-up of the goals as identified in original assessment/support plan. Like the NSAF, the review did not contain specific questions on energy hardship. Case managers only heard about possible issues if the care/support workers, the client or a representative of the client alerted them directly. Energy hardship and efficiency questions could be introduced into the annual review to monitor the condition.

Case managers also oversaw heat alert notifications. MHA had heat alert policies in place for vulnerable clients. Case managers and assessment workers, for HCP and CHSP clients respectively, phoned their clients with advice, e.g. stay hydrated, draw curtains, put on the air conditionings. The content of these messages did not follow any official guidelines or recommendations. At Nexus Primary Care, vulnerable people were added to a register, but the staff did not make calls. This was done by the council or local emergency services. Both organisations had guidelines for adding people to the Vulnerable Persons register. There was no cold alert notification system. Effective energy interventions which provided customers with confidence in heating and cooling might reduce the number of vulnerable people who have to be alerted to extreme weather conditions.

It seemed that energy initiatives was part of a care plan in some cases. One care manager said that sometimes they were told that the cost of electricity was a problem, and this would go into the care plan. Solar panels on the roof and/or proper sealing might be implemented.



7.4.4.6 Home Care Package funds

The interviews revealed that the level of fees charged by Home Care Package Providers could vary significantly. The interviews suggested that service providers were not regulated on the percentage fees that were charged, and thus taken from, the Home Care Packages. Even with generous packages, high fees could minimise the funds available for equipment, maintenance and upgrades. Some participants suggested that government regulation of provider charges could mitigate this issue. However, HCP funds did not cover the payment of bills. Hence, even where an air conditioner and heating system were present and efficient, some clients would not use them due to the fear of excessive running cost. Therefore, the condition of the physical environment and the coping strategies utilised by clients become paramount to reduce health risks. Participants suggested that framing of home environmental conditions as health issues might open up more funding options.

In addition, the dispensation of the HCP funds as small daily sums meant that householders had to wait for moneys to accrue over a long time to be able to afford bigger expenses. This made emergency relief for items such as broken space conditioning appliances difficult. On the other hand, some clients were reluctant to spend any money in fear of potential, future calamities, which might require large sums of money. Talking about a client who needed heating and cooling, one case manager reported:

The process that we went through about how it was affecting his health and wellbeing and had to submit evidential documents and did all of that. That was a quote for \$4,300, was the most competitive quote we had, and it got rejected [by MAC] because we applied within the guidelines of a purchase that was made within the package funding. There are quite strict guidelines. They used to be more flexible but they're cracked down a lot. So there's guidelines about what's considered a necessity to remain at home ... This poor client was going without essential services for 5 months to accumulate funds and then it was declined because it wasn't in the guidelines. (HCP case manager)

The guidelines also did not support the payment of utility bills or the purchase of white goods. Hence, it may be deduced that financial support for energy interventions would need to be accessible as lump sums. In one reported case, though, the care support was used to pay for fuel. The client lived in a house with lots of gaps in the disintegrating structure. She heated the dwelling well ("she has it like a sauna"). She used a lot of fire wood, and the service provider was supporting her with this.

7.4.4.7 Care and support workers

Care and support workers were front line staff with ongoing contact with client in the home. The first visit incorporated an Occupational Health and Safety (OHS) assessment. This did not include specific questions on household environmental conditions. Care workers were considered "our eyes and ears in the homes". They had an important role in monitoring the clients' wellbeing and would advise the service co-ordinators if concerns were identified such as inadequate temperatures or financial hardship. They were often more valued by the clients for providing social interactions than for the domestic services. Front line workers would report inadequate indoor environment conditions due to occupational health and safety problems. The most probable response was referral to financial counselling:

Staff feedback that houses are cold because the client won't turn the heaters on, or in summer they're sitting in extreme heat. Generally the staff will complain because they have to work in those conditions, but it's usually a financial thing. [...] If it was reported back, we can't make people turn appliances on, but we might get the staff member to suggest that they do during the time they're working. We would normally follow it up with family members, but after that we wouldn't do any more. [...] If it was deemed that it was a financial hardship thing, we could possibly talk to them about getting reduced fees or financial counselling might be suggested but that wouldn't happen very often. (Community Support Services Manager)

Front line workers were not paid for the extra time needed for reporting client observations. Hence, asking them to physically document or list might not be effective. However, participants suggested to provide awareness training to keep these considerations in the care workers' minds. Support workers would be able to hand out brochures to their regular clients.



7.4.4.8 Allied health workers

Allied health workers serviced clients under the CHSP and HCP schemes. Occupational Therapists (OT) assessed homes for safety and accessibility and referred them to services such as the State Wide Equipment Program (SWEP) for home modifications. SWEP “provides Victorian people who either have a permanent or long-term disability or are frail aged with subsidised aids, equipment and home and vehicle modifications to enhance their independence and facilitate community participation” (SWEP 2019). Indoor environmental quality was not considered in these assessments.

Allied health workers were aware of the impaired thermoregulation of clients with multiple sclerosis and Parkinson Diseases and the Medical Cooling Concession, however they would not regularly assess the thermal environment of the house for health risks. One worker thought this was more the function of the case managers. They said that it was hard to explain to people that regulating the temperature throughout the house could be beneficial, for example, by preventing a big temperature change by just going to the toilet. One participant explained that if they went into a house that was freezing in the middle of winter and the clients were wearing many layers:

I would never say they should do something about it. We might say ‘oh, it’s cold in here’ and they’d say they were saving money, but they’re not cold personally. We’re cold, but they’re rugged up so they don’t mind it. (Allied health worker F)

The allied health participants welcomed the idea of having a brochure with information, saying that it would be more comfortable for them to have the heating going and better for the care workers and with information on how to access help for that. The information brochure would be most suitable in hard copy and big print, so that they could leave it with the clients.

The allied health workers were concerned about adequate ventilation, though. One participant explained that keeping curtains and windows closed was considered a high falls risk due to the resultant poor visibility in the rooms. She said that “it would be nice to have something to give to the clients, so they have more options”. A flyer could also contain information on the benefits of keeping adequate temperatures throughout the house.

Practical help was offered for draughts, though. One allied health worker said that if they came across gaps in floorboards or under doors, they would recommend “a ‘snake’ under the door to help”. Practical help was also offered with the management of cooling and heating to older clients with memory loss. One worker described how instructions would be written on a whiteboard placed on the dining table, and the client would be asked to look at it each morning. The instructions for summer might read:

- After breakfast, close all windows and doors
- Switch on air conditioning (I would have set it to 22)
- 6pm: switch off
- 8pm: open all windows and doors (so they are getting fresh air at night) (Allied health worker F)

Additional training, either at university, as professional development or as a community-based seminar, with a few more strategies on energy saving practices were desired. The workers suggested that if RAS assessor had training, too, they could alert occupational therapist staff. The workers felt that energy-related recommendations from an occupational therapist could be used as evidence for needs-based support by case managers.

7.4.4.9 Financial counsellors

Financial counsellors were the most important information, communication and referral node for energy hardship. They were servicing all members of the community with financial needs. They had knowledge about energy concessions, energy hardship programs and the Victorian Energy Compare website, but said that they lacked information on energy-related subsidies and grants. The interviews revealed that they had assisted only few older people, as these were seldom referred to them and did not self-refer either, because older people tended to hide or disregard their hardship. The term financial counselling was tainted by stigma, and older people were too proud to seek help. In addition, participants said that older people were afraid of being moved into aged care facilities if they admitted to weaknesses or problems and, thus, shied away from asking for help. Financial counsellors did not make recommendations but referred clients on to other services or websites with information. Financial counsellors were able to link clients to low interest loans, negotiate debt waivers and bill smoothing. In one anecdote, a financial counsellor had persuaded clients to deliberately miss payment of their energy bill to become eligible for the retailer’s hardship program. They also mentioned Kildonan’s energy audits. However, they



only referred to the remote service over the telephone, which was not perceived as the most suitable way to engage people. Participants felt that the most useful tool for financial counsellors would be a central database, “a dedicated website”, with links to available services and offers.

7.4.4.10 Community Access and Support worker

The Community Access & Support worker’s role was to identify vulnerable people of all ages in the community and to link them to services. The worker was proactive about this, calling his practice “assertive outreach”. He knocked on doors, went to the post office with flyers, left business cards, advertised his services through the care provider, radio and posters in shop windows, and reached out to general practitioners to educate them about the service. His services included helping people use a computer. In one case, he had helped out an older woman who relied on firewood for heating. She was no longer able to chop her own wood any more. She had some mental health issues and physical barriers. The Community Access & Support worker helped link her with a service who would chop her wood and charge \$20 to deliver it. Later, when she was moving to a new house, he helped her with advice as she was stressed, by linking her to real estate services. In the potential case of energy hardship, the referral would be to financial counselling. The participant used cards and pamphlets to communicate service referrals. The principle was to empower people to be proactive and independent, but this had limitations: “Sometimes they just can’t do things”. The worker’s own research was Internet-based. The most useful imagined tool for the interviewed worker was an energy case management service which could combine access to grants, concessions and financial counselling in one place.

7.4.4.11 Volunteers and not-for-profit community service organisations

Volunteer services that were used by the care providers included Meals on Wheels, Food Share, an Op Shop and planned activity groups. Volunteers and their groups could be used to distribute information material, such as posters for community noticeboards and awareness campaign brochures as handouts at community events. Charity organisations could also be channels of information, such as St Vincent de Paul, Cobram Support & Information Service, as “they see this all the time” and provide support and referrals. Workers and volunteers in these organisations might find information and referral pathways advantageous for people under the age of 65 years, too.

7.4.4.12 Maintenance contractors

Maintenance contractors carried out the home modifications and maintenance. Maintenance workers did smaller jobs, such as changing smoke detector batteries, gutter cleaning, removing overhead branches and immediate safety issues. Qualified builders were charged with home modifications, such as the installation of banisters, rails, OT requirements, etc. as they had to meet Australian standards. There were no guidelines in place on energy or water saving activities, such as the replacement of globes, showerheads, or on preferred practices or use of materials for property maintenance (e.g. reparation of white ant damage; sealing windows/doors, etc.). Guidelines and inclusions of energy saving interventions might upscale the uptake of such activities.

The interviews revealed that draught proofing and the installation of energy saving light bulbs had been conducted at least once as part of one provider’s CHSP service. The householder paid for the material and was charged an hourly fee of \$12.40 for the contractor’s labour, which was funded by the CHSP. Such a service would be more expensive under the HCP, as the hourly rates would be a multiple.

When changing light bulbs, energy saver bulbs were not necessarily the default. The maintenance workers would use what the householder had or would purchase bulbs based on the client’s request. The client would be charged the cost. There were no government or organisation-specific guidelines. Pricing could be an issue, as more environmentally friendly bulbs tended to be more expensive and put a burden onto a pensioner’s budget. The CHSP did not cover the servicing or repair of an air conditioning unit, but the cleaning and application and removal of covers.

One maintenance service manager told of a plumber who tested heaters for carbon monoxide leaks once a year. He had left the town. The participant had encountered energy hardship once. The client had to heat the home around the clock for her sick son and was struggling to pay for the fuel. The client was advised about part payments and referred to the final counsellor.



7.4.4.13 Clients

The interviews revealed that many clients would not self-identify to be in energy or fuel hardship. Participants said that many clients had lived in conditions of extreme heat or cold all of their lives and, therefore, considered it 'normal'.

*If they're cold and not complaining about it, probably nothing would be done.
(Community Support Services Manager)*

There was no 'trigger' in the system (via questions/observations from staff at any level) to encourage them to consider possible energy hardship issues. Many elderly people were also reluctant to reach out for information due to shame, embarrassment due the stigma of poverty and the gossip in small towns.

To raise awareness, information brochures on energy provider comparisons, energy saving practices in the home, replacement of globes, etc. could be useful. Other possible modes of information dissemination included CCTV in GP clinics/pharmacies, local libraries, and a website for centralised, 'one stop' site for information. Local and often free papers which were distributed at the library or chemist remained a common source of information. Auspicious places would be the public notices section at the end and articles on energy. A reframing of available concessions to mitigate stigma and a focus on confidentiality might be helpful.

*There are two levels of difficulty here: we don't know what support is available, and we don't know if they need it or not. [...]. If it was a brochure or something that could be given out, they could consider it rather than having to admit hardship
(Community Support Services Manager)*

Other communication media mentioned were quarterly newsletters to paying clients, which seemed to be well received and read, and an organisation's Facebook page that enjoyed popularity among staff, volunteers, and family of clients. In addition, notice boards at the Op Shop and community centre gathering spaces, brochure stands at branch offices and information packs for use at community information talks and exhibitions could contain energy-related information and referral to services. Finally, energy-related information material could be attached to monthly paper and email accounts. However, participants flagged that many of their clients did not have access to computers or emails, which made access and understanding of the My Aged Care system difficult, too.

7.4.4.14 Government legislation on energy tariffs

Participants recounted that energy providers were often not questioning customers about possible subsidies and discounts to which they might be entitled. Hence, some customers were missing out on discounts which were not applied to bills. Participants suggested that government regulations could mitigate financial hardships created as a result.

7.4.4.15 General Public

Participants also suggested that service providers could be involved in providing support and information to the larger community via information talks, e.g. at Rotary Clubs, Probus, University of the Third Age (U3A) and community exhibitions. They suggested brochures for the information packs and bags to be handed out. Other distribution channels mentioned were community centres, community notice boards and the post offices. One Access and Support worker suggested providing a local Energy Hardship Case Management service where all of the various levels of assistance could be centralised, and relevant links could be provided and established.

7.5 Conclusion

This section has presented two service providers' experiences with energy efficiency and hardship among their clients. The study has revealed that the identification of householders is problematic, that care workers would like to address energy hardship, but that their response and referral options are limited. In response, the project produced a resource pack for the service providers for immediate assistance in referring householders to income support opportunities and retrofit providers and a risk identification tool to assist with recognising hidden energy hardships.

8. The Model

Based on the findings of the literature review, the stakeholder interviews and the information gathered in the two care service provider organisations, a model emerged on how energy hardship may be tackled through the Care at Home system.

The Model is primarily a framework to guide the integration of energy efficiency and hardship initiatives into the Care at Home system. The Model draws on the 3R approach of Recognise, Respond and Refer, which has been used successfully in initiatives addressing domestic violence (Queensland Government 2017). Similar to energy poverty, domestic violence may be a hidden problem. In response, domestic violence campaigns train and equip professionals in the community who may come into contact with victims (Rigby 2018), such as dentists (Rigby 2018) and hairdressers (Marsh & Preceel 2018).

The Model suggests that bridges may be built between the Ageing in Place and Climate Change policies. The Model suggests that Energy can be integrated into Care, but that Care should also be integrated into Energy initiatives. Figure 12 represents the Model's framework.

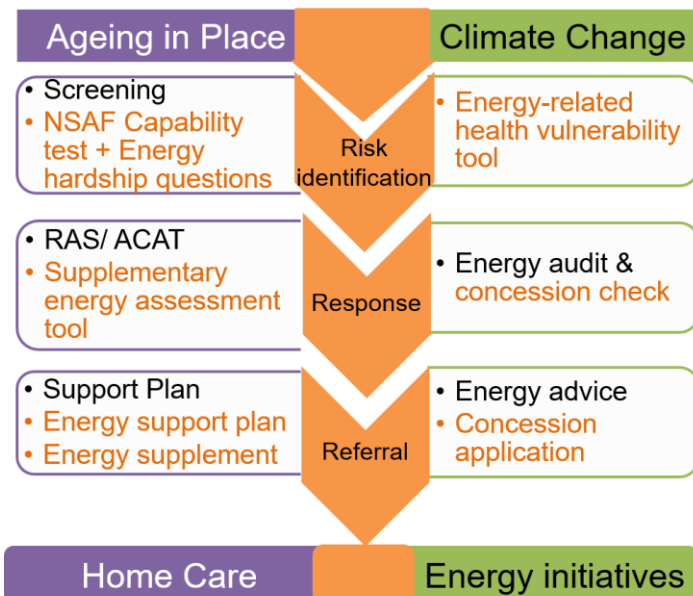


Figure 12 A diagram of the Model that may guide the integration of energy efficiency and hardship initiatives into the Care at Home system.

8.1 Risk identification

Risk identification may begin prior to the referral to the Aged Care system. Referral to My Aged Care happens through carers, health professionals, service providers or by the client themselves. Information that promotes self-help and self-referral may be made widely available in the form of videos, which may be shown in doctors' waiting rooms, and brochures that may be available free of charge. This material is likely to build a better understanding of energy hardship and pathways for help among all members in the community. General practitioners and other health care professionals may be made aware of energy-poverty related health conditions and raise concerns when referring patients to My Aged Care. Doctors who diagnose or treat patients with conditions that inhibit thermoregulations or need life support machines may provide their patients with the medical energy concession application forms. Service providers may also identify energy related health risks at their pre-service check and note their concerns when they refer their clients to the My Aged care screening process.

The screening process may be the first step in a deliberate and systematic effort to identify and record a new client's potential risk of energy hardship. Risks may be the limited capability to negotiate the energy market due to vision, hearing or speech impairments and required assistance with financial decision making. The



identification of health conditions that indicate impaired thermoregulation or the need for life support machines may raise questions about energy concessions. In addition, simple energy related questions such as “do you worry about your energy bills” may be integrated into the screening checklist.

8.2 Response

At the next stage, the RAS/ACAT assessment may follow up a documented risk of energy hardship with a supplementary energy assessment. The potential risk may also only be identified at this stage. NSAF questions on home safety, home maintenance and the adequacy of housing may prompt questions and observations about the quality of the thermal performance and quality of the home, indoor environmental quality and the condition of space heating and cooling systems and hot water appliances. The RAS/ACAT assessment may also investigate the client’s awareness of energy saving practices, home improvement measures, concessions and priorities. Concern about energy bills and thermal comfort may trigger the use of additional face-to-face services, such as financial counselling, a home energy audit and concession checks. The most appropriate energy audit tool may be the Victorian Residential Efficiency Score (RES) card as it is planned to be rolled out nationwide and because its output focuses on energy costs.

The health support plan may then be complemented by an energy hardship risk management plan, or perhaps more acceptable to householders, an Energy Support Plan. The Energy Support Plan may be developed by an energy counsellor who may be embedded in the service organisation and introduced to householders through the case managers. The goal of the Energy Support Plan may be to mitigate energy-related health risks. The Plan may consider how risks can be avoided, e.g. by installing a more efficient heater, mitigated, e.g. by draught proofing, or which risks to health and wellbeing may have to be accepted, e.g. that only one room can be adequately conditioned throughout the day. It may also involve planning to exploit a risk, e.g. by deliberately defaulting on payment to become eligible for a retailer hardship program.

8.3 Referral

The implementation of the Energy Support Plan may comprise the referral to energy advice, retrofit installations, appliance upgrades, concession applications and energy contract negotiations. The execution of the various measures may be managed and supported by the energy counsellor. The planned activities may be supported financially by an Energy Supplement, a supplement to the CHSP or HCP funds allocated to energy efficiency and hardship initiatives. Hence, money spent on energy activities would not drain the funds required for immediate health care needs. This Energy Supplement may be available as a needs-based lump sum to avoid a waiting period associated with the incremental payments of the CHSP and HCP funds. The activities may be supported or managed by the energy counsellor if needed.

8.4 People-centric energy initiatives

The findings of the project also highlighted that integrating energy initiatives into the Care at Home system may need to be complemented by more people-centric energy initiatives. Research is needed to develop an energy-related health vulnerability tool, which takes into consideration the characteristics of householders, such as health conditions, age and capabilities. These householder characteristics and conditions may also be reflected in energy audits in addition to the material qualities of dwellings. Therefore, recommendations may need to be tailored to householder needs and priorities. And, last but not least, the project found that the energy workforce may need to be trained to work with vulnerable households.

8.5 Integrating solutions to Energy, Equity and Care

The project also revealed that the ultimate goal may be to establish integrated solutions for Energy, Equity and Care. To reach older people and other vulnerable people who do not benefit from any Care at Home program, energy efficiency and hardship initiatives may also be linked to other social services. In addition, energy retailers may think of their customers as ‘energy clients’ rather than ‘energy consumers’, which implies an element of care



and the need for pro-active service. People approaching retirement may also consider the energy efficiency of their homes when planning for old age.

9. Risk identification tools and resource pack

9.1 Summary

This component of the project provided practical tools to be used immediately. This resources pack facilitates tackling energy hardship at the local level. It was developed in response to the participating care providers' desire for assistance in how to help householders who seemed to be in energy hardship. Drawing on the approach for recognition, response and referral, this section provides at-risk identification tools, a protocol for risk management and a resource pack which compiles information on energy concessions, tariff switching tools and retrofit subsidies and service providers and links to online resources.

9.2 Purpose

This component of the project explored how the risk of energy hardship among older householders may be identified through Care at Home workers and provides a pack of resources that may assist care providers to respond to identified energy-related problems. The strategy to tackle energy hardship at a local level is also based on the 3R approach of Recognise, Respond and Refer.

9.3 Definition of risk

There is no single accepted definition of the combination of the terms energy or fuel and hardship or poverty in Australia (Azpitarte, Johnson & Sullivan 2015; ESC 2016a; VCOSS 2018). Some definitions refer to the inability to heat or cool a home to adequate temperatures, difficulties in paying energy bills or relatively high expenditures on energy bills compared to income. The World Health Organisation defined fuel poverty as the inability to heat one's home to an adequate (i.e. comfortable and safe) temperature, owing to low household income and low energy efficiency" (WHO 2008, p. 64). In Europe, a working definition of energy poverty is the phenomenon that 'individuals or households are not able to adequately heat or provide other required energy services in their homes at affordable cost' (Thomson & Bouzarovski 2018, p. 54). In Australia, the term used most often is energy hardship with reference to difficulties in paying bills (ESC 2016a) or difficulties in paying bills and/or heating (VCOSS 2018). This financial problem may be temporary, fluctuating or persistent (ESC 2016a). Causes include low, limited or insecure income, high energy demand, household size and health problems (ESC 2016a). High energy demand may be due to poor thermal performance of the dwelling, high energy consumption of energy appliances or thermal sensitivities. In a neo-liberal energy market, limited capability of negotiating the market may also contribute to disadvantageous energy contracts and unnecessarily high energy bills (Willand & Horne 2018). The inability to heat adequately is a health risk in particular for older and very young people (Marmot Review Team 2011).

9.4 Risk identification tools

Based on the client journey identified in Section 1, the risk identification tools suggested mechanisms to identify overt and hidden energy hardship among Care at Home clients.

9.4.1 The ideal situation: risk identification through the Care at Home assessments

In an ideal situation, the risk identification of energy poor households through the Care at Home system would be aligned with the system's assessment and support processes. As described in Section 5.6.2.2, the first contact of older Australians with the My Aged Care system is the hotline, in which householder needs are screened. Risk of energy poverty may be integrated by adding three or four questions which would prompt self-identification. Ideally, applicants would be assessed according to an energy hardship index, which allows the measurement of the severity and extent of this problem over time.

The identification of risk may then inform the nature of the second assessment. If the risk has been identified during the screening, during the home visits of the second assessments, the RAS and ACAT assessments may be supplemented by specialist-administered energy assessment or audit tools including a check of eligibility and receipt of energy concessions. If the risk has not been identified before, energy poverty may be identified by the RAS or ACAT assessors. These assessors may indicate the need of a specialist energy assessment and response. Energy efficiency measures or hardship assistance may then form part of the support plan.



Householders would be referred to energy experts for assistance in retrofit implementation, behavioural energy advice or help in the application for concessions.

9.4.2 Energy-related health vulnerability tool

An energy-related health vulnerability tool would be useful as a Supplementary Assessment Tool to the National Screen and Assessment Form (NSAF). No such tool or index is currently available in Australia. Such a tool would need to assess the various criteria and risk factors and energy-related health outcomes. The criteria, risk factors and indicators may include the following:

Income – Risk factor: low income

- Pensioners
- Pensioners with mortgage
- Renters
- Single women
- People with a disability

Home – Risk factor: poor thermal performance

- Home built before 1991
- Extent and quality of ceiling insulation
- Quality of windows
- Air tightness of windows and doors, chimneys, exhaust fans in bathrooms and kitchen, evaporative cooling ducts
- Capability to heat and cool the home, incl. quality of appliances

Energy costs – Risk factor: high energy expenditure

- Unit prices
- Concessions
- Micro-generation

Individual capabilities – Risk factor: limited capabilities

- Energy practices
- Energy literacy
- Awareness of link between temperature and health
- Perceptions (frugality, pride, presumed resilience)
- Agency (tenure)
- Capabilities to negotiate the market, such as access to the Internet, IT skills and language background

Accessibility of energy - Risk factor: energy precariousness, power outages

- Reliance on non-reticulated fuel, e.g. wood, liquid gas
- Frequency and length of power outages.



Energy-related health outcomes may include the following criteria and indicators:

Physiological health

- Respiratory illnesses
- Cardiovascular diseases

Economic health

- Compromising nutrition,
- Compromising social activities
- Compromising on medical needs

Psychological health

- Bill anxiety
- Energy related domestic tensions or violence

Social health

- Self-limiting activities.

9.4.3 Potential identifiers of energy poverty

Ideally, energy poverty among older people should be identified by all professionals who are currently able to refer clients to My Aged Care. These include the clients themselves, the clients' carers or representatives, general practitioners and other health care professionals, Aboriginal Liaison Officers and interpreters and Care at Home services providers.

Clients may self-identify. This requires awareness of their own capabilities and adequacy of the home conditions and the willingness to ask for help. The latter may be hampered by issues of pride, trust, stigma and social norms. Identification through carers, other household member and trusted persons requires an awareness of the risk and causes of energy poverty and a general recognition of the problem in the community. Identification by medical practitioners and other third parties requires awareness of energy poverty-related health problems. Identification by service providers, which is the focus of this work, requires awareness and assessment tools.

9.4.4 National Screening and Assessment Form – Home Support Assessment

A review of the National Screening and Assessment Form (Australian Government Department of Health 2018) revealed that the current form includes questions which may highlight energy poverty risks, and which may be used to highlight the poor quality of the home:

- **Physical health – sensory concerns** (p. 12): Concerns with vision, hearing or speech may indicate a limited capability to negotiate the energy market.
- **Health conditions** (p. 16): The listing of primary and secondary health conditions may highlight impaired thermoregulation and need for life support machines. Householders with these health conditions would be eligible for energy concessions.
- **Cognition** (p. 18): The question about the need of clients with financial decision making may indicate a limited capability to negotiate the energy market.

- **Psychosocial** (p. 19): the identification of “feelings of loneliness or social isolation” may signal curbing behaviour or shame about inadequate heating.
- **Home safety** (p. 20): Observations of the home environment for safety concerns may be used to identify problems which require immediate remediation and which may be used as opportunities to improve the energy efficiency of the Dwelling. For example, the presence of old gas heater or unflued gas heater may trigger the upgrade to a more efficient, non-polluting heater. The electrical safety risk of a fan heater next to a wash hand basin may be remedied by the installation of heat lamps. The incidence of mould or dampness may indicate structural problems, inadequate heating and/or ventilation.
- **Home maintenance** (incl. gardening) (p. 20): Observations of the home environment maintenance may highlight material problems, which could be remedied with co-benefits for energy efficiency. For example, better access to a washing line may decrease the use of a clothes dryer. The exchange of incandescent or halogen light bulbs with more energy efficient LED lamps is likely to reduce energy consumption.
- **Complexity indicators** (p. 21): This NSAF item may be used to indicate whether the client is living in inadequate housing.
- **Risk of vulnerability** (p. 21): The identification of “culturally and linguistically or ethnically diverse individuals” may indicate clients who are “new to energy” (Russell-Bennett et al. 2017) or pay above average energy unit prices (ACCC 2018). The identification of “socially isolated individuals” may indicate people who may need help in negotiating the energy market.
- **Linking support** (p. 21): The question “Does the risk or issue warrant urgent intervention and/or support to minimise deterioration?” could be answered in the affirmative, if there is no functioning heating or cooling device and trigger immediate help.
- **Client motivation** (p. 22): the question “What is most important to you right now? Why?” may elicit responses that raise concerns about the lack of warmth or coolth.
- **Support considerations** (p. 23): The question “Is there any further information that provider(s) should be aware of?” may be used to identify if householders are stressed about energy bills.

9.4.5 Risk identification checklist

In the absence of agreed risk assessment tools, the following risk identification checklist was proposed (**Error! Reference source not found.**Table 4) to assess the potential vulnerability of clients. Its aim was to identify householder vulnerability to energy-related problems. On the premise that vulnerability is a function of exposure, sensitivity and adaptive capacity, the checklist was divided into three sections. The first section listed indicators of exposure, such as inadequate temperatures, other energy-related physiological health risks, bill anxiety and symptoms that indicated a limited psychosocial enjoyment of the home. The middle column listed indicators of temperature-related sensitivity, such as householder age, chronic medical conditions, medications and health symptoms which might signal inadequate indoor temperatures. The last section listed indicators of adaptive capacity, which might mitigate energy-related health problems, such as mechanisms to avoid exposure to inadequate temperatures at home, strategies focused on bodily warmth or coolth and methods to relieve bill anxiety. A few items had been allocated a red checkbox. The identification of these items in combination with cardiovascular or respiratory illnesses might indicate a high risk of energy-poverty related health risks.

The indicators were compiled from the literature. The list and indicators have not been validated but represented a starting point for care staff to identify householders whose health might be at risk due to energy issues.

Risk identification		
Vulnerability - function of exposure, sensitivity and adaptive capacity		
Exposure - Indicators	Temperature-related sensitivity	Adaptive capacity
Inadequate temperatures	Age of householder	Avoidance of inadequate temperatures at home
Dwelling uncomfortably hot during summer <input type="checkbox"/>	65 years and over <input type="checkbox"/>	'Going north' <input type="checkbox"/>
Dwelling uncomfortably hot during winter <input type="checkbox"/>	Householder has one or more of following chronic medical conditions	Seeking relief in public buildings, family or friends <input type="checkbox"/>
Dwelling not equipped with air conditioning <input type="checkbox"/>	Angina (also known as angina pectoris) <input type="checkbox"/>	<input type="checkbox"/>
Dwelling not equipped with heating <input type="checkbox"/>	A myocardial infarction/heart attack <input type="checkbox"/>	<input type="checkbox"/>
	A stroke <input type="checkbox"/>	<input type="checkbox"/>
Other physiological health risks	Any other cardiovascular disease <input type="checkbox"/>	Keeping body warm/ cold
Use of unflued gas heaters <input type="checkbox"/>	Arthritis/ rheumatism <input type="checkbox"/>	Warm bedding <input type="checkbox"/>
Evidence of mould and dampness <input type="checkbox"/>	Asthma <input type="checkbox"/>	Warm clothing <input type="checkbox"/>
Use of 'snakes' or sheets for draught proofing <input type="checkbox"/>	Anxiety/ depression <input type="checkbox"/>	Thermal blankets <input type="checkbox"/>
Use of electric fans near water sources <input type="checkbox"/>	Chest infections/ bronchitis <input type="checkbox"/>	Access to sufficient water <input type="checkbox"/>
	Chronic obstructive pulmonary disorder (COPD) <input type="checkbox"/>	Access to hot/ cold drinks <input type="checkbox"/>
Bill anxiety	Diabetes <input type="checkbox"/>	<input type="checkbox"/>
Unable to pay bills <input type="checkbox"/>	Hypertension/ high blood pressure <input type="checkbox"/>	Relief from bill anxiety
Comprising on warmth or coolth <input type="checkbox"/>	Hypothermia <input type="checkbox"/>	Bill smoothing <input type="checkbox"/>
Comprising nutrition for warmth <input type="checkbox"/>	Kidney disease <input type="checkbox"/>	
Comprising social activities for warmth <input type="checkbox"/>	Migraine <input type="checkbox"/>	
Other self-limiting responses <input type="checkbox"/>	Mental illness <input type="checkbox"/>	
	Pneumonia <input type="checkbox"/>	
Limited psycho-social benefits of home	Other respiratory problems <input type="checkbox"/>	
Limiting visitors to home <input type="checkbox"/>	Householder takes one or more of following medications	
	Allergy medicines (antihistamines) <input type="checkbox"/>	
	Blood pressure and heart medicines (beta-blockers) <input type="checkbox"/>	
	Seizure medicines (anticonvulsants) <input type="checkbox"/>	
	Water pills (diuretics) <input type="checkbox"/>	
	Antidepressants or antipsychotics <input type="checkbox"/>	
	Temperature related health problems	
	Chillblains <input type="checkbox"/>	
	Heat stress <input type="checkbox"/>	
<input type="checkbox"/> high risk in combination with cardiovascular or respiratory illness		

Table 4 Risk identification checklist

9.5 Protocol for risk management

This protocol proposes effective referral pathways for Care at Home service providers. This protocol requires the awareness of care workers for energy poverty symptoms and causes as well as collaborative efforts within the service provider organisation and energy efficiency and hardship service agencies and providers. Ideally, the protocol would extend to all potential identifiers of energy poverty as listed in Section 9.4.3.. In the absence of an integrated health-energy framework, this protocol focuses on a risk management protocol within a service provider organisation and follows the action flow of recognition, response and referral.

9.5.1 Recognition

Recognition implies the identification of risks. All workers and volunteers who come into contact with clients should be aware of the causes, risks and symptoms of energy poverty. Vulnerable householders may be identified through indicators in the NSAF, observations and reports from front-line workers and volunteers. The risk identification checklist (**Error! Reference source not found.**) may assist in this process.

9.5.2 Response

Response refers to a culturally sensitive validation of the suspected energy poverty. Careful questions may help in self-identification and avoidance of creating a stigma or creating fears. Possible responses may be “are you sometimes stressed about your energy bills?”, or “Do you know that adequate warmth/c coolth is important for our health? It is beyond the scope of this project to develop suitable responses. However, it may be assumed that it will be important to communicate that help is available and the householder control over any decision is respected. The dissemination of information material which is appropriate for seniors and thermometers may help in establishing trust. Collaboration among staff will be key in responding in a timely and effective manner.

9.5.3 Referral

Referral implies the transfer of responsibility and further actions to a local energy specialist, such as the organisation’s embedded energy counsellor or financial counsellor. The specialist may then take actions in consultation with the household. The negotiations of an optimum energy contract, where indicated, may a quick way of lowering energy costs and building trust. The specialist may be able to talk to the householder face-to-face about other opportunities to make the home more comfortable or to relieve energy-related anxiety.

9.6 Resource Pack

9.6.1 Lists of opportunities

Three lists of opportunities were compiled as part of the resource pack for the two participating care service providers. Due to the pluralistic nature of energy initiatives in Australia, as described in Section 5.7, these lists of opportunities were specific to the state of Victoria. The lists represented matrices which matched householder and home specific conditions to information tools or financial initiatives. The first list (Table 5) was designed to facilitate applications for medical energy concessions. The second list was designed to facilitate the search for an optimum energy contract and access to energy concessions (Table 6). The third list (Table 7) aimed to facilitate energy audits, retrofits and upgrades. More detailed information was compiled in three referral lists and lists of approved Victorian Energy Upgrade providers for each of the two geographical areas of the two participating service providers were compiled. The lists presented the approved providers’ contact details and websites and the retrofit and upgrade services which they offered in each of the two regional areas in Victoria.

9.6.2 Additional material

Additional material that was provided to the care providers were copies of the *Senior’s guide to energy saving* and thermometers from a Heatwave Help program. Hard copy energy-related information for older Australians was sourced from the Australian Government Department of Environment and Energy. Each service provider organisation received 25 copies of the brochure. The brochures were provided by the Department free of charge.



The Department informed the research team that the brochures are not commonly distributed but made available on request. The information is presented online (<http://yourenergysavings.gov.au/guides/seniors-guide-energy-saving>). The hard copy is not advertised. Although the research team had seen a brochure on energy targeted at older Australians a few years ago, it took several weeks to identify the publisher and request copies. Some of the behavioural tips recommended in the brochure did not seem appropriate for older citizens. The Department was alerted to this fact and has indicated improvements. The response of the focus groups members to the brochure was mixed. Although they appreciated the hard copy format, which provides access to information for people with limited Internet or IT skills, they were hesitant about distributing the information due to the reservations about the behavioural tips.

The thermometers were surplus stock left over after SECCCA's Energy Saver Study and in the possession of the research team. The so-called Heatwave Management Thermometers have been part of a Heatwave Help program by the Central Victorian Greenhouse Alliance in collaboration with seven local councils and funded by the Victorian government. The liquid crystal thermometers present the room temperatures with suggested action when the displayed temperatures should reach levels outside the comfortable or safe zones. More recommended actions are listed on the back, including emergency telephone numbers. Although, the Heatwave Help website still exists (CVGA 2019), it does not contain information on how to source these thermometers. These thermometers elicited the most enthusiastic responses from the focus group participants.



Opportunities to reduce energy costs through medical energy concessions			
	Essential Medical Equipment Payment (national)	Medical cooling concession	Life support concession
Eligibility criteria			
Commonwealth Concession Card	•	•	•
Pensioner Concession Card, Veterans' Affairs Gold Card.		•	•
needs heating, cooling or certain equipment for their medical needs	•	•	
client or carer pays for running costs	•	•	•
Medical condition criteria			
Spinal cord injury at or above the T7 level	•		
Stroke	•		
Brain injury	•		
Neurodegenerative disorders, incl.	•		
Parkinson's disease (PD) and PD-related disorders	•	•	
Motor neurone diseases (MND)	•	•	
Muscular dystrophies	•		
Full thickness burns on more than 20% of your body	•		
Rare sweating disorders including congenital absence or mal-development of sweat glands	•		
Chronic erythrodermas	•		
Multiple Sclerosis		•	
Lymphoedema		•	
Fibromyalgia		•	
Post-polio Syndrome/Poliomyelitis		•	
Medical equipment criteria			
Dialysis machine	•		
Ventilator	•		
Respirator	•		
Parenteral or enteral feeding device	•		
Heart pump	•		
Suction pump	•		
Nebuliser - used daily	•		
Positive airways pressure device	•		
Phototherapy equipment	•		
Air bed vibrator	•		
Electric wheelchair, or	•		
Insulin pump	•		
uses at least 1,880 kilowatt hours of electricity annually, e.g.			
Intermittent peritoneal dialysis machines (electricity)			•
Oxygen concentrators (electricity)	•		•
Haemodialysis machines (electricity and water).			•

Table 5 Opportunities to reduce energy costs through medical energy concessions

Opportunities to reduce energy costs through optimisation of energy contract and energy concessions

	Victorian Energy Compare website	\$50 Power Saving Bonus (until 31.12.)	Energy supplement (national)	Annual electricity concession	Excess electricity concession;	Service to property charge concession (electricity)	Winter gas concession	Excess gas concession	Non-mains energy concession	Controlled load electricity concession	Electricity transfer fee waiver
Eligibility criteria											
none	•	•									
Commonwealth Seniors Health Card claimed before 20 March 2017			•								
Commonwealth Concession Card				•	•	•	•	•	•	•	•
Pensioner Concession Card, Veterans' Affairs Gold Card.				•	•	•	•	•	•	•	•
Energy concession criteria											
If annual electricity bill is over \$171.60				•							
If domestic mains electricity usage and service costs above \$2,820				•	•						
If electricity use on a bill is lower than the service charge						•					
If annual gas bill is over \$62.40							•				
If gas usage and service costs above \$1,555 for the six-month winter period 1 May to 31 October 2018							•	•			
Has non-mains sources of energy:											
Liquefied petroleum gas (LPG)									•		
Firewood for domestic heating, cooking or hot water									•		
Heating oil									•		
Electricity accessed via an embedded network									•		
Generator fuel									•		
Has controlled load electricity										•	
When client moves home											•

Table 6 Opportunities to reduce energy costs through optimisation of energy contracts and energy concessions

Opportunities to reduce energy costs through home improvements

	VIC	Victorian Energy Upgrade Program - Rebates															VIC Solar Homes	VIC	
	Residential Energy Scorecard, \$250-500	New	Replace				New			Replace		New		New		Solar PV rebate up to max. \$2225	Solar Hot Water rebate max \$1000	Affordable Retrofits Program	
		Weather proofing*	HE ducted reverse-cycle heating system	HE gas ducted heating	New gas ductwork	HE gas/LPG space heater	HE reverse-cycle heating	HE ducted reverse-cycle heating system 5-star rating	Ducted evaporative cooler	HE split system	High efficiency or instant gas water heater	Solar water heater	Heat pump water heater	New energy-efficient fridge or freezer	Disposal of old fridge or freezer	New HE Television	New energy-efficient clothes dryer	New energy-efficient pool pump	
HE = high efficiency																			
Eligibility criteria																			
none	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Solar Homes program																			
- combined household taxable income of less than \$180,000 per annum;																		•	•
- owner-occupiers;																			
- home valued at <\$3 million																			
Affordable Retrofits program																			
- Victorian home owner or renter;																			•
- current health care card, low income health care card, pensioner concession card or DVA Gold Card;																			
- able to contribute min \$1500 to home energy retrofit																			
Poor thermal performance of building envelope																			
Energy audit	•																		•
Draughts through windows, doors, evaporative cooling ducts, chimneys		•																	•
Poor insulation																			•
Old and inefficient heating device																			
Energy audit	•																		•
Old electric central heating system			•	•															•
Old ducted reverse-cycle heating			•																•
Old gas ducted heating				•															•
Old gas ductwork					•														•
Electric storage heater (heat bank)						•	•	•											•
Old wall gas furnace						•	•	•											•
Unflued gas heater						•	•	•											•
Portable electric heater – radiant or fan						•	•	•											•
No heating						•	•	•											•
Old and inefficient cooling system																			
Energy audit	•																		•
Old fixed room refrigerated or ducted refrigerated air conditioner								•											•
Old ducted refrigerated air conditioner								•											•
Inefficient split system									•										•
Old and inefficient hot water system																			
Energy audit	•																		•
Electric water heater										•	•	•							•
Gas hot water system											•								•
Existing solar hot water system was installed on or after the 19 August 2018																		•	•
Poor efficiency of removable appliances																			
Energy audit	•																		•
Old fridge and freezer - still used													•						•
Old fridge and freezer - not used														•					•
Old television															•				•
Old clothes dryer																•			•
Inefficient pool pump																	•		•
Solar PV system																			
None																		•	•
Solar PV system installed before 1 November 2009																		•	•
* refrain from weather proofing if someone in the household smokes or if there is an unflued gas heater																			

Table 7 Opportunities to reduce energy costs through home improvements

10. Panel discussion at the RMIT Engaging for Impact event

A 90 minutes panel discussion was conducted on 18 February 2019 as part of the RMIT Engaging for Impact signature event. The program entry read:

Tackling energy hardship - Creating synergies with Ageing in Place initiatives panel

Home support and care enables 750,000 older Australians to live independently as they age. However, current services do not address the significant energy-related challenges they may face, due to a combination of poor housing, low incomes and rising energy prices. An innovative RMIT-funded project examined ways to better support the 280,000 older Australians experiencing energy poverty by integrating efficiency and affordability initiatives into the Care at Home system. Hear from industry partners and researchers as they reflect on their findings, explore upscaling opportunities and share their insights on how other multi-disciplinary efforts could reduce energy-related problems.

The session began with a presentation on the project rationale, the results and the Model. Panel speakers were:

- Martin Jones, Victorian Government Department of the Environment, Land, Water and Planning (DELWP)
- Sophia Petrov, Council on the Ageing (COTA), National Aged Care Alliance (NACA)
- Kerry Connors, Energy Consumers Australia (ECA)
- Tanya Christie, Nexus Primary Health
- Michael Hogan, Moira Health Care Alliance (MHA).

In general, the panel members supported the Model and called for collaborations amongst stakeholders identified in this report. However, Mrs Petrov (NACA) expressed doubt that the NSAF could easily be changed at this stage. Mrs Christie (Nexus) stated that she would be able to ask questions around energy affordability and comfort as part of the need's assessment conversation, and that she did not need a formal integration of energy questions into the NSAF. Mr Hogan (MHA) stated that his organisation could be a "catalyst" and would be able to start identifying and referring vulnerable householders with the help of the resource pack. He asked for more thermometers to give to householders. At the end of the discussion, Mrs O'Neill (VCOSS), who sat in the audience, stated that her organisation also supported the integration of energy initiatives through care providers and the idea to train doctors and health professionals in basic energy advice and concessions.

The panel discussion revealed one new initiative to facilitate the dissemination of information to a broad population. Mr Jones (DELWP) announced the development of an "Energy Information Hub" by the Victorian state government. The Consumer Policy Research Centre (CPRC) was developing a central website for resources around energy that were community cohort specific. It was not clear if one of these cohorts were older people.

11. Discussion

This RMIT Knowledge Transfer Seed Fund project explored the idea of integrating energy efficiency initiatives and energy hardship assistance into the Care at Home system. Data consisted of a desktop review, stakeholder interviews and ethnographic research in two service provider organisations. The findings indicate that there is an eagerness to tackle problems with energy efficiency and affordability among the front-line workers, representatives of older Australians and across all levels of influence in the Energy and Equity domains. However, the project also revealed that there are challenges in gaining the support of Health policy makers.

The idea implied the building of bridges between two distinct domains of Energy and Health and across policies, programs and practice. This was an innovative effort for the Australian context. In contrast to countries such as the UK (Brown, T 2018), New Zealand (Mason et al. 2018) or the USA (U.S. Department of Health and Human Services 2009), in Australia there is little national or state-wide acknowledgement of the importance of housing for health, wellbeing and other social outcomes. In contrast to other countries, where small and larger scale approaches to integrate practical support for housing, energy and health have proven successful (Brown, T 2018), such endeavours are rare in Australia. This project showed that a joint effort to tackle energy poverty among older people and provide Care at Home is possible, but that it requires collaborative actions from both the Health and the Energy domain and the willingness to learn new skills and try new practice approaches.

The comparison of the Care at Home system with initiatives in the Energy sector highlighted the limited political leadership on tackling climate change mitigation at a national scale, the resultant fragmented approach to information and support in energy costs and retrofits and the burden of responsibilities on the states and individual consumers and clients. The project revealed the frustrations among some stakeholders, community and industry bodies and the helplessness among care providers to address energy-related risks to health and wellbeing. For a concerted effort to tackle climate change mitigation, energy affordability and equity, Energy policy makers may be guided by the Care at Home system and harmonise assessment tools and initiatives, energy concessions and funding, address current inequities systematically and a focus on the needs of the person. This would facilitate a linking of energy initiatives into the Care at Home system, which may then lead to an uptake in energy efficiency initiatives and increase the workforce engaged in energy audits and retrofit and upgrade services. Lessons learned from the service approach of the Care at Home system also suggest that ongoing engagement with householders and quality assurance will be needed. Linking energy efficiency initiatives into the Care at Home system also promises to improve procedural justice due to the high standards around procedural fairness in the Care at Home system. Considering the limited monitoring of quality of retrofit services and hardship programs, a quality and regulatory framework could be developed with the vision to promote efficient, effective and equitable energy efficiency and hardship services and providing quality control.

The project also has implications for future work tackling complex problems. Part of the success of this project was the integration of the two commonly distinct disciplines of health and the social sciences (Albert, Laberge & Hodges 2009). Interdisciplinary research is encouraged to tackle wicked problems with technical and social significance (ARC 2018). However, this project showed that developing a joint approach and implementing solutions requires the willingness to collaborate and to try innovative approaches at various levels of decision making, from political agencies to practitioners at the front line of service. This openness was evident among Energy and Equity stakeholders, however building relationships with the health sector proved difficult at all levels of influence, suggesting a practice of distinction (Bourdieu & Nice 2010). However, for interdisciplinary research to have real world impact, interdisciplinary shared decision making, which overcomes individual and sector specific ambitions, is needed.

Going forward, the project suggests treating the transition process in both the aged care and climate change policies as opportunities to affect positive social change. The reform process in the Care at Home system may bring clarification on the scope of home modification and maintenance. In the highly competitive aged care market, innovative providers may offer energy initiatives as unique service offers. And the expected shift in the care recipient cohort, the enhanced digital capabilities of the baby boomer generation and their expected stronger sense of entitlement, may bring about a stronger demand for assistance with energy initiatives. With regards to Climate Change policy, the fragmented landscape has been criticised nationally (Finkel et al. 2017) and internationally (OECD 2019). Australia's chief scientist Alan Finkel and the OECD have called for a nationally coherent strategy (Finkel et al. 2017; OECD 2019). This would greatly facilitate the integration of initiatives with the streamlined Care at Home system. In addition, the Paris Agreement calls for the consideration of vulnerable people and the right to health (United Nations 2015). As Australia is a signatory to the Paris Agreement, future



policies to reduce carbon emissions may deliberately seek opportunities for synergies with health and social services.

12. Conclusion

The research translation project has shown that linking energy efficiency initiatives into the Care at Home system is a possible way to access and assist vulnerable householders. The project revealed an eagerness of the Energy domain to tackle energy hardship to improve health, even if the outcome may be counterproductive to its own main aim of carbon emission reduction. By contrast, the policy and program levels of the Health domain were characterised by a lack of awareness, disinterest and apparent lack of openness for cross-disciplinary cooperation. Despite the sector-specific challenges and potential difficulties in joining care and health services, the endeavour enjoyed the support of the Energy and Equity sector and front-line care organisations. Continued support from community organisations representing older Australians is possible. Support from the federal Department of Health, which governs the Care at Home system, seems unlikely. Nonetheless, the project has developed possible mechanisms that may facilitate risk identification and referral of householders to energy retrofit services and energy concessions which can be employed at a local scale.

13. References

- ABC News 2018, *Power bills targeted in Victorian Coalition's trade-in scheme for energy-efficient TVs, fridges*, Australian Broadcasting Corporation, 16 November 2018, <<https://www.abc.net.au/news/2018-11-16/vic-election-coalition-cheap-tvs-fridges-to-help-power-bills/10503476>>.
- ABS 2010, *4602.2 - Household Water, Energy Use and Conservation, Victoria, Oct 2009*, vol. First Issue, Australian Bureau of Statistics, viewed 6 May 2017, <<http://www.abs.gov.au/ausstats/abs@.nsf/0/7E391A69F25A1F30CA25774A0013BF89?opendocument>>.
- ABS 2011a, *6530.0 - Household Expenditure Survey, Australia: Summary of Results, 2009-10. Data set for Victoria*, Canberra, 2009-2010, <<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6530.02009-10?OpenDocument>>.
- ABS 2011b, *6530.0 Household Expenditure Survey*, Canberra, <[http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/CB07CC895DCE2829CA2579020015D8FD/\\$File/65300_2009-10.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/CB07CC895DCE2829CA2579020015D8FD/$File/65300_2009-10.pdf)>.
- ABS 2013, *4670.0 - Household Energy Consumption Survey, Australia: Summary of Results, 2012* Australian Bureau of Statistics, viewed 6 May 2017, <<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4670.0main+features100032012>>.
- ABS 2015, *3236.0 - Household and Family Projections, Australia, 2011 to 2036*, Australian Bureau of Statistics, viewed 18 June 2018, <<http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3236.0Main%20Features42011%20to%202036>>.
- ABS 2017, *4130.0 - Housing Occupancy and Costs, 2015-16*, Australian Bureau of Statistics, Canberra, August 2016, <<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4130.02015-16?OpenDocument>>.
- ACCC 2018, *Restoring electricity affordability and Australia's competitive advantage. Retail Electricity Pricing Inquiry—Final Report*, Australian Competition & Consumer Commission, <https://www.accc.gov.au/system/files/Retail%20Electricity%20Pricing%20Inquiry%E2%80%94Final%20Report%20June%202018_0.pdf>.
- Acil Allen Consulting 2017, *Multiple Impacts of Energy Efficiency. An Assessment Framework*, Energy Consumers Australia, Melbourne, <<http://energyconsumersaustralia.com.au/wp-content/uploads/Multiple-Impacts-of-Energy-Efficiency-An-Assessment-Framework.pdf>>.
- ACOSS 2017, *ACOSS submission to ACCC Retail Electricity Price Inquiry: preliminary report*, Australian Council of Social Services, <<https://www.acoss.org.au/wp-content/uploads/2017/12/Final-Submission-to-ACCC-retail-competition-preliminary-report-draft-15122017.pdf>>.
- ACOSS 2018, *ACOSS submission to National Energy Guarantee Draft Design Consultation Paper*, Australian Council of Social Service, Strawberry Hills, NSW, <<https://www.acoss.org.au/wp-content/uploads/2018/03/ACOSS-Final-Submission-to-ESB-on-NEG-Discussion-Paper.pdf>>.
- ACOSS 2019, *What We Do*, Australian Council of Social Service, viewed 13 January 2019 <<https://www.acoss.org.au/what-we-do/>>.
- ACOSS, ACT COSS, Anglicare Australia, Better renting, Brotherhood of St Laurence, Choice, Community Housing Industry Association, Consumer Action Law Centre, Council to Homeless Persons, Council of Single Mothers and

their Children, Ethnic Communities Council of NSW Inc., Life without Barriers, National Shelter, NCOSS, NTShelter, NTCOSS, Public Interest Advocay Centre, Public Health Association Australia, QCOSS, Renew, Shelter New South Wales, Shelter, Shelter TAS, Shelter WA, St Vincent de Paul Society, TasCOSS, The Salvation Army, Uniting Communities, Uniting, Tenancy WA, Tenants Queensland Inc, Tenants' Union of New South Wales, Tenants' union of Tasmania, Tenants Victoria, VCOSS & WACOSS 2018, *Consumers call for action on housing energy performance standards for all Australian homes*, <http://library.bsl.org.au/jspui/bitstream/1/11043/1/Joint_Statement_Consumers_call_for_action_on_housing_energy_performance_standards_Dec2018.pdf>.

ACOSS & Brotherhood of St Laurence 2018, *Energy Stressed in Australia*, Australian Council of Social Services, Strawberry Hills, NSW, <<https://www.acoss.org.au/wp-content/uploads/2018/10/Energy-Stressed-in-Australia.pdf>>.

ACOSS, BSL & TSI 2017, *Empowering disadvantaged households to access affordable, clean energy*, Australian Council of Social Service, <http://www.acoss.org.au/wp-content/uploads/2017/07/ACOSS_BSL_TCI_Empowering-households.pdf>.

ACRC 2019, *Royal Commission into Aged Care Quality and Safety*, Royal Commission into Aged Care Quality and Safety, viewed 9 January 2019, <<https://agedcare.royalcommission.gov.au/Pages/default.aspx>>.

ACSA 2015, *The Future of Housing for Older Australians*, Aged & Community Services, Deakin ACT, <<https://www.acsa.asn.au/getattachment/Publications-Submissions/Submissions/2015-submissions/ACSA-Housing-Position-Paper-January-2015-1.pdf.aspx?lang=en-AU>>.

ACSA 2019, *About us*, Aged & Community Services Australia, viewed 11 January 2019, <<https://www.acsa.asn.au/About-us>>.

Actsmart 2018, *Home Energy Action Kit*, Australian Capital Territory Government, viewed 31 August 2018 <<https://www.actsmart.act.gov.au/what-can-i-do/homes/home-energy-action-kit>>.

AEMC 2018a, *Better hardship programs for customers who need help paying their bills*, Australian Energy Market Commission, viewed 13 January 2019 <<https://www.aemc.gov.au/news-centre/media-releases/better-hardship-programs-customers-who-need-help-paying-their-bills>>.

National Energy Retail Amendment (Strengthening protections for customers in hardship) Rule 2018 No. 6 2018b.

AER 2015, *Review of energy retailers' customer hardship policies and practices*, Australian Energy Regulator, Melbourne, <https://www.aer.gov.au/system/files/AER%20Review%20of%20energy%20retailers%27%20customer%20hardship%20policies%20and%20practices%202015_0.pdf>.

AER 2018, *Hardship Guideline. Issues Paper. December 2018*, AE Regulator, Melbourne, <https://www.aer.gov.au/system/files/AER%20issues%20paper%20-%20Hardship%20Guideline%20-%2010%20December%202018_1.pdf>.

Aged Care (Living Longer Living Better) Act 2013. No. 76, 2013. Includes amendments up to: Act No. 126, 2015 2013.

Aged Care Act 1997. Compilation No. 67 1997.

Aged Care Guide 2019, *COTA Home Maintenance Service* by COTA, DPS Publishing, viewed 11 January 2019, <<https://www.agedcareguide.com.au/cota-home-maintenance-service>>.

Aged Care Sector Committee 2016, *Aged Care Roadmap*, Department of Health, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/04_2016/strategic_roadmap_for_aged_care_web.pdf>.



Aged Care Workforce Strategy Taskforce 2018, *A Matter of Care. Australia's Aged Care Workforce Strategy*, Department of Health, Canberra, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/09_2018/aged_care_workforce_strategy_report.pdf>.

Aguirre-Bielschowsky, I 2013, *Electricity Saving Behaviours and Energy Literacy of New Zealand Children*, Doctor of Philosophy thesis, University of Otago, New Zealand, Wellington.

AIHW Gen 2018a, *Glossary*, Australian Institute of Health and Welfare, viewed 29 August 2018, <<https://www.gen-agedcaredata.gov.au/Resources/Glossary>>.

AIHW Gen 2018b, *People using aged care*, Australian Institute of Health and Welfare, viewed 29 August 2018, <<https://www.gen-agedcaredata.gov.au/Topics/People-using-aged-care>>.

AISC 2018, *Aged Services Industry Reference Committee – Nominations closed*, Australian Industry and Skills Committee, viewed 13 August 2018, <<https://www.aisc.net.au/irc/aged-care-industry-reference-committee>>.

Akerlind, GS 2012, 'Variation and commonality in phenomenographic research methods', *Higher Education Research & Development*, vol. 31, no. 1, pp. 115-127.

Albert, M, Laberge, S & Hodges, BD 2009, 'Boundary-work in the health research field: Biomedical and clinician scientists' perceptions of social science research', *Minerva*, vol. 47, no. 2, pp. 171-194.

Aliento, W 2018, *Victoria's energy efficiency scorecard: Good. Now make it mandatory*, The Fifth Estate Pty Ltd, 12 January 2019, <<https://www.thefifthestate.com.au/innovation/residential-2/victorias-energy-efficiency-mandatory/100811/>>.

Anglicare Australia 2018, *2018 Rental Affordability Snapshot*, Anglicare Australia, Ainslie ACT.

ARC 2018, *ARC Statement of Support for Interdisciplinary Research*, Australian Research Council, viewed 14 November 2018, <<https://www.arc.gov.au/policies-strategies/policy/arc-statement-support-interdisciplinary-research>>.

ASBCE & Climate Works Australia 2018, *Built to Perform. An industry led pathway to a zero carbon ready building code*, <<https://www.asbec.asn.au/wordpress/wp-content/uploads/2018/10/180703-ASBEC-CWA-Built-to-Perform-Zero-Carbon-Ready-Building-Code-web.pdf>>.

ATO 2018, *Non-government funded home care*, Australian Taxation Office, viewed 11 January 2019, <<https://www.ato.gov.au/business/gst/in-detail/your-industry/gst-and-home-care/?anchor=NonGovernmentFundedHomeCare#NonGovernmentFundedHomeCare>>.

Australian Associated Press 2018, *Victorian Labor offers half-priced solar panels for homeowners in \$1.24bn pledge*, Guardian News and Media Limited, 16 November 2018, <<https://www.theguardian.com/australia-news/2018/aug/19/victorian-labor-offers-half-priced-solar-panels-for-homeowners-in-124bn-pledge>>.

Australian Government COAG Energy Council 2015, *National Energy Productivity Plan* Australian Government COAG Energy Council, <http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/National%20Energy%20Productivity%20Plan%20release%20version%20FINAL_0.pdf>.

Australian Government Department of Health 2018, *National Screening and Assessment Form*, Australian Government Department of Health, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/06_2018/national_screening_and_assessment_for_m_fact_sheet_-_june_2018.pdf>.

Australian Government Department of Health & Public Health Networks 2015, *Needs Assessment Guide*, Australian Government Department of Health, Canberra,

[https://www.health.gov.au/internet/main/publishing.nsf/Content/98D184E26BF30004CA257F9A000718F4/\\$File/PHN%20Needs%20Assessment%20Guide.pdf](https://www.health.gov.au/internet/main/publishing.nsf/Content/98D184E26BF30004CA257F9A000718F4/$File/PHN%20Needs%20Assessment%20Guide.pdf).

Australian Government Department of Human Services 2018a, *Commonwealth Seniors Health Card - Eligibility*, Australian Government Department of Human Services, viewed 6 October 2018

<https://www.humanservices.gov.au/individuals/services/centrelink/commonwealth-seniors-health-card/eligibility>.

Australian Government Department of Human Services 2018b, *Energy Supplement*, Australian Government Department of Human Services, viewed 6 October 2018

<https://www.humanservices.gov.au/individuals/services/centrelink/energy-supplement>.

Australian Government Department of Human Services 2018c, *Payment rates for Energy Supplement*, Australian Government Department of Human Services, viewed 6 October 2018

<https://www.humanservices.gov.au/individuals/services/centrelink/energy-supplement/payment-rates-energy-supplement#a4>.

Azpitarte, F, Johnson, V & Sullivan, D 2015, *Fuel poverty, household income and energy spending. An empirical analysis for Australia using HILDA data*, Brotherhood of St Laurence, Fitzroy,

<https://www.bsl.org.au/research/browse-publications/fuel-poverty-household-income-and-energy-spending-an-empirical-analysis-for-australia-using-hilda-data/>.

Bailey, C & Hodgson, P 2018, 'On the defence: UK cultural narratives of mistrust between energy users and providers', *AIMS Public Health*, vol. 5, no. 1, pp. 31-48.

Bajomi, AZ & Gosztonyi, Á (eds) 2016, *Good practices aiming to end energy poverty*, European Union, Brussels, <http://meszerics.eu/pdf/energy-poverty-good-practices.pdf>.

Blasch, J, Boogen, N, Daminato, C & Filippini, M 2018, 'Empower the consumer! Energy-related financial literacy and its socioeconomic determinants. Working paper', *ETH Zuerich Research Collection*, vol.

Bourdieu, P & Nice, R 2010, *Distinction: A Social Critique of the Judgement of Taste*, Routledge Classics, Taylor & Francis Group.

Bouzarovski, S & Tirado Herrero, S 2017, 'The energy divide: Integrating energy transitions, regional inequalities and poverty trends in the European Union', *European, Urban and Regional Studies*, vol. 24, no. 1, pp. 69-86.

Bowden, JA 2000, 'The nature of phenomenographic research', in JA Bowden & E Walsh (eds), *Phenomenography*, RMIT University Press, Melbourne, pp. 1-12.

Brent, DA & Ward, MB 2018, 'Energy efficiency and financial literacy', *Journal of Environmental Economics and Management*, vol. 90, pp. 181-216.

Brown, B 2018, *Comparison of aged care costs at home a step closer*, The Australian Financial Review, <https://www.afr.com/personal-finance/comparison-of-aged-care-costs-at-home-a-step-closer-20181119-h182ej>.

Brown, T 2018, 'Collaboration between housing, health and social care', *Housing, Care and Support*, vol. 21, no. 3/4, pp. 69-77.

Brunner, K-M, Spitzer, M & Christanell, A 2012, 'Experiencing fuel poverty. Coping strategies of low-income households in Vienna/Austria', *Energy Policy*, vol. 49, no. 0, pp. 53-59.

CAHA, Horsburgh, N, Armstrong, F & Mulvenna, V 2017, *Framework for a National Strategy on Climate, Health and Well-being for Australia* Climate and Health Alliance,

https://d3n8a8pro7vhm.cloudfront.net/caha/pages/40/attachments/original/1498008324/CAHA_Framework_for_a_National_Strategy_on_Climate_Health_and_Well-being_v05_SCREEN_%28Full_Report%29.pdf?1498008324.

Cairney, P & Jones, MD 2016, 'Kingdon's Multiple Streams Approach: What Is the Empirical Impact of this Universal Theory?', *The Policy Studies Journal*, vol. 44, no. 1, pp. 37-58.

Cardozo, G 2018, *Aged Care Better Practice awards mean smiles all round*, Fair Fax Media, 28 August 2018, <<https://www.thesenior.com.au/story/5605997/aged-care-organisations-shine-at-national-awards/>>.

CAV 2018a, *New renting laws pass through Parliament*, Consumer Affairs Victoria, viewed 13 January 2019, <<https://www.consumer.vic.gov.au/latest-news/new-renting-laws-pass-through-parliament-legislation-update>>.

CAV 2018b, *Products and services*, Consumer Affairs Victoria, viewed 21 August 2018 <<https://www.consumer.vic.gov.au/products-and-services/energy-products-and-services>>.

CAV 2019, *Our role, scope and compliance policy*, Consumer Affairs Victoria, viewed 13 January 2019, <<https://www.consumer.vic.gov.au/about-us/who-we-are-and-what-we-do/our-role-scope-and-policies>>.

CCA 2018, *Climate Change Authority* Climate Change Authority, viewed 11 August 2018,

Centre for International Economics 2007, *Capitalising on the building sector's potential to lessen the costs of a broad based GHG emissions cut*, Canberra & Sydney, <http://www.asbec.asn.au/files/Building-sector-potential_Sept13.pdf>.

CHA 2018, *Aged Care Update: A Closer Look at the 2018-19 Aged Care Budget*, CH Australia, <<https://www.cha.org.au/images/agedcare/Aged%20Care%20Update%20-%20A%20Closer%20Look%20at%20the%202018-19%20Aged%20Care%20Budget.pdf>>.

Chen, K-L, Liu, S-Y & Chen, P-H 2015, 'Assessing Multidimensional Energy Literacy of Secondary Students Using Contextualized Assessment', *International Journal of Environmental & Science Education*, vol. 10, no. 2, pp. 201-218.

Chester, L & Morris, A 2011, 'A new form of energy poverty is the hallmark of liberalised electricity sectors', *Australian Journal of Social Issues*, vol. 46, no. 4, pp. 432-459.

Clarke, B, Swinburn, B & Sacks, G 2018, 'Understanding health promotion policy processes: A study of the government adoption of the achievement program in Victoria, Australia', *International Journal of Environmental Research and Public Health*, vol. 15, no. 11, pp. 1-19.

Climate Works 2013, *Tracking Australia's Progress towards a Low Carbon Economy. 4. Buildings*, Melbourne, <http://climateworksaustralia.org/sites/default/files/documents/publications/climateworks_trackingprogress_buildings_fullreport_july2013.pdf>.

COAG Energy Council 2017, *National Energy Productivity Plan 2015-2030. Annual Report 2017*, Commonwealth of Australia.

Cooper, P, Gordon, R, Waitt, G, Petkovic, D, Burroughs, N, Tibbs, M, Butler, K, Roggeveen, K, McDowell, C, Kokogiannakis, G, Gomis, LL & Magee, C 2016, *EE3A: Pathways and initiatives for low- income older people to manage energy. Final Report*.

COTA Australia 2017, *Minimum housing standards for health and safety urgently needed* viewed 14 January 2019 <<https://cotavic.org.au/2017/06/minimum-housing-standards-for-health-and-safety-urgently-needed/>>.

COTA Australia 2018, *COTA Australia: 5 urgent fixes needed in aged care right now*, COTA Australia,, Barton, ACT, 26 September 2018, <<https://www.cota.org.au/wp-content/uploads/2018/09/COTA-MR-1809-Five-fixes-needed-now-for-aged-care-with-summary.pdf>>.

COTA Australia 2019a, *Climate Change*, COTA Australia, viewed 12 January 2019, <<https://www.cota.org.au/policy/climate-change/>>.

COTA Australia 2019b, *Consumer Rights*, COTA Australia, viewed 12 January 2019, <<https://www.cota.org.au/policy/consumer-rights/>>.

CVGA 2019, *Heatwave Help Downloads*, Central Victorian Greenhouse Alliance, viewed 28 January 2019, <<https://heathealth.cvga.org.au/heatwave-help-downloads/>>.

Davison, CM 2009, 'Knowledge translation: Implications for evaluation', *New Directions for Evaluation*, vol. 2009, no. 124, pp. 75-87.

DCCEE 2012, *Low Income Energy Efficiency Program*, Australian Government Department of Climate Change and Energy Efficiency, viewed 23 September 2012, <<http://www.climatechange.gov.au/lieep>>.

DCCEE 2013, *Chapter 5 - Low Income Households*, Australian Government Department of Climate Change and Energy Efficiency, viewed 5 March 2013, <<http://www.climatechange.gov.au/government/initiatives/nesiip/chapter-5.aspx>>.

De Souza, R, Evans-Agnew, R & Espina, C 2019, 'Federal weatherization and health education team up: Process evaluation of a new strategy to improve health equity for people with asthma and chronic obstructive pulmonary disease', *Journal of Public Health Management & Practice*, vol. 25, no. 1, pp. E21-E24.

DELWP 2016, *Victoria's Climate Change Framework*, L The State of Victoria Department of Environment, Water and Planning, Melbourne, <https://www.climatechange.vic.gov.au/_data/assets/pdf_file/0021/55254/DELWPClimateChange_Framework.pdf>.

DELWP 2018a, *Affordable Retrofits Program*, Victorian Government Department of the Environment, Land, Water and Planning, viewed 12 January 2019, <<https://www.energy.vic.gov.au/affordable-retrofits-program>>.

DELWP 2018b, *Getting an assessment*, Victorian Department of the Environment, Land, Water and Planning, viewed 13 August 2018, <<https://www.victorianenergysaver.vic.gov.au/save-energy-and-money/get-a-home-energy-assessment/getting-an-assessment>>.

DELWP 2018c, *Save with these energy-efficient products*, Department of Environment Land Water and Planning, viewed 23 August 2018 <<https://www.victorianenergysaver.vic.gov.au/save-energy-and-money/discount-energy-saving-products/save-with-these-energy-efficient-products>>.

DELWP 2018d, *Victorian Residential Efficiency Scorecard*, Victorian Department of the Environment, Land, Water and Planning, viewed 13 August 2018, <<https://www.energy.vic.gov.au/energy-efficiency/residential-efficiency-scorecard>>.

Department of Health 2014, *Consultation Process on the Definition of 'Significant Refurbishment'*, Department of Health, viewed 12 January 2019, <<https://agedcare.health.gov.au/aged-care-reform/reforms-by-topic/aged-care-financing-authority/consultation-process-on-the-definition-of-significant-refurbishment>>.

Department of Health 2016, *Home Support and Care Program, Commonwealth Home Support Program (CHSP) Guidelines Overview*, Australian Government Department of Health, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/10_2016/commonwealth-home-support-programme-guidelines.pdf>.

Department of Health 2017a, *Commonwealth Home Support Programme. Guidelines*, Department of Health, Canberra, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/04_2018/commonwealth_home_support_programme_guidelines_-_effective_as_of_1_july_2018.pdf>.

Department of Health 2017b, *Home care fees for existing home care package consumers before 1 July 2014*, Department of Health, viewed 12 January 2019, <<https://agedcare.health.gov.au/programs/home-care/home-care-fees-for-existing-home-care-package-consumers-before-1-july-2014>>.

Department of Health 2017c, *Home Care Packages Program. Data Report 2017*, Department of Health, Canberra, <<https://www.gen-agedcaredata.gov.au/Resources/Home-care-packages-program-data-report-2017>>.

Department of Health 2018a, *Aged Care Sector Committee* Australian Government Department of Health,, viewed 13 August 2018, <<https://agedcare.health.gov.au/aged-care-reform/aged-care-sector-committee>>.

Department of Health 2018b, *Aged Care Subsidies and Supplements. New Rates of Payment from 20 September 2018*, Australian Department of Health, <https://agedcare.health.gov.au/sites/default/files/documents/09_2018/aged-care-subsidies-and-supplements-from-20-september-2018_1.pdf>.

Department of Health 2018c, *Commonwealth Home Support Programme – Program Manual 2018*, Australian Government Department of Health, Canberra, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/08_2018/chsp-manual-effective-as-of-1-july-2018.pdf>.

Department of Health 2018d, *Home Care Supplements*, Australian Government Department of Health, viewed 29 November 2018 <<https://agedcare.health.gov.au/aged-care-funding/home-care-supplements>>.

Department of Health 2019, *Information for Victorian Health Professionals: CHSP funded nursing and allied health services transition to My Aged Care*, Department of Health,, viewed 11 January 2019, <<https://agedcare.health.gov.au/programs/my-aged-care/information-for-victorian-chsp-service-providers>>.

Department of Human Services 2018, *Essential Medical Equipment Payment*, Australian Government Department of Human Services, viewed 19 October 2018, <<https://www.humanservices.gov.au/individuals/services/centrelink/essential-medical-equipment-payment>>.

Department of State Development Business and Innovation 2014, *Business Impact Assessment Victorian Energy Efficiency Target*, <<http://greens.org.au/sites/greens.org.au/files/VEET%20BIA.pdf>>.

DHHS 2016, *Housing Design Guidelines. Version 1.0 June 2016*, Department of Health and Human Services, Melbourne.

DHHS 2018a, *Life support concession* Victorian Department of Health and Human Services, viewed 19 October 2018, <<https://services.dhhs.vic.gov.au/life-support-concession>>.

DHHS 2018b, *Medical cooling concession* Victorian Department of Health and Human Services, viewed 19 October 2018, <<https://services.dhhs.vic.gov.au/medical-cooling-concession>>.

DHHS 2019a, *EnergySmart Public Housing Project*, Victorian Government Department of Health and Human Services, viewed 12 January 2019, <<https://housing.vic.gov.au/about/housing-news/energysmart-public-housing-project>>.

DHHS 2019b, *Who's who in aged care*, Victorian Government Department of Health & Human Services, viewed 11 January 2019, <<https://www.betterhealth.vic.gov.au/health/servicesandsupport/whos-who-in-aged-care>>.

DoEE 2015, *Australia's 2030 climate change target*, Department of the Environment and Energy, viewed 6 October 2018 <<http://www.environment.gov.au/climate-change/publications/factsheet-australias-2030-climate-change-target>>.

DoEE 2018a, *Appliance energy rating app*, Department of the Environment and Energy, viewed 31 August 2018 <<https://www.energy.gov.au/rebates/appliance-energy-rating-app>>.

DoEE 2018b, *Energy productivity and energy efficiency*, Australian Government Department of Environment and Energy, viewed 6 October 2018, <<https://www.energy.gov.au/government-priorities/energy-productivity-and-energy-efficiency>>.

DoEE 2018c, *Light bulb energy-efficiency app*, Department of the Environment and Energy, viewed 31 August 2018 <<https://www.energy.gov.au/rebates/light-bulb-energy-efficiency-app>>.

DoEE 2018d, *Your Energy Savings - Energy-efficient lights*, Department of the Environment and Energy, viewed 4 September 2018 <<http://yourenergysavings.gov.au/energy/lighting/energy-efficient-lights>>.

DoEE 2018e, *Your Energy Savings - Rebates*, Department of the Environment and Energy, viewed 31 August 2018 <<http://yourenergysavings.gov.au/webform/contact-us>>.

DoEE 2018f, *Your Energy Savings - Renters*, Department of the Environment and Energy,, viewed 31 August 2018 <http://yourenergysavings.gov.au/guides/renting?items_per_page=All>.

DoEE 2018g, *Your Energy Savings - Seniors guide to energy saving*, Department of the Environment and Energy, viewed 7 September 2018 <http://yourenergysavings.gov.au/guides/seniors-guide-energy-saving?items_per_page=All>.

DoEE 2019, *COAG Energy Council*, Department of the Environment and Energy, viewed 12 January 2019, <<https://www.energy.gov.au/government-priorities/energy-markets/coag-energy-council>>.

Dyrbol, S & Aggerholm, S 2011, *Implementation of the EPBD in Denmark*, CA EPBD, <http://www.epbd-ca.org/Medias/Pdf/country_reports_14-04-2011/Denmark.pdf>.

ECA 2018, *How to make a PowerCall*, Energy Consumers Australia, viewed 22 November 2018, <<https://energyconsumersaustralia.com.au/powercall/>>.

ECA 2019, *About us*, Energy Consumers Australia, viewed 13 January 2019, <<https://energyconsumersaustralia.com.au/about-us/>>.

Ecologic 2019, *How it works*, Ecologic Apps, viewed 12 January 2019, <<http://www.getecologic.com/#how-it-works>>.

Edward, FR 1984, *Strategic management: a stakeholder approach*, Pitman, Boston, Massachusetts.

EEC 2016, *Australian Energy Efficiency Policy Handbook. July 2016*, Energy Efficiency Council, <<http://www.eec.org.au/uploads/Documents/Platofrm%20Documents/Australian%20Energy%20Efficiency%20Policy%20Handbook%20%E2%80%93%20July%202016.pdf>>.

Energy + Illawarra 2019, *Videos*, Energy + Illawarra, viewed 12 January 2019, <https://www.energyplusillawarra.com.au/?page_id=84>.

Energy Rating 2018a, *Apps*, energyrating.gov.au, viewed 4 September 2018 <<http://www.energyrating.gov.au/apps>>.

Energy Rating 2018b, *Labelling*, energyrating.gov.au, viewed 31 August 2018 <<http://www.energyrating.gov.au/about/what-we-do/labelling>>.

Environment Victoria 2018, *Win for Victorian renters: new energy efficiency standards set to cut power bills and climate pollution*, Environment Victoria, viewed 13 January 2019, <<https://environmentvictoria.org.au/2018/09/07/win-for-victorian-renters-new-energy-efficiency-standards-set-to-cut-power-bills-and-climate-pollution/>>.

Environment Victoria 2019, *One Million Homes Alliance*, Environment Victoria,, viewed 13 January 2019, <<https://environmentvictoria.org.au/our-campaigns/sustainable-living/one-million-homes-alliance/>>.

ESC 2016a, *Supporting Customers, Avoiding Labels. Energy Hardship Inquiry. Final Report*, Essential Services Commission, <<https://www.esc.vic.gov.au/sites/default/files/documents/Energy-Hardship-Inquiry-Final-Report-February-2016-1.pdf>>.

ESC 2016b, *Victorian Energy Efficiency Target Guidelines. June 2016*, Essential Services Commission, Melbourne.



ESC 2019, *Energy Retail Code Version 12. 1 January 2019*, ES Commission, Melbourne, <<https://www.esc.vic.gov.au/sites/default/files/documents/energy-retail-code-draft-version-12-tracked-changes-20180705.pdf>>.

Fedorowytch, T 2018, *SA election: What has Steven Marshall actually promised to do if elected?*, Australian Broadcasting Corporation, 16 November 2018, <<https://www.abc.net.au/news/2018-03-19/heres-what-steven-marshall-has-promised/9562270>>.

Financial Literacy Foundation 2007, *Financial literacy. Australians understanding money*, Commonwealth of Australia Barton ACT, <<https://www.moneysmart.gov.au/media/209293/australians-understanding-money.pdf>>.

Finkel, A, Moses, K, Munro, C, Effeney, T & O'Kane, M 2017, *Independent Review into the Future Security of the National Electricity Market. Blueprint for the Future*, Department of Environment and Energy, Canberra, <<https://www.energy.gov.au/sites/g/files/net3411f/independent-review-future-nem-blueprint-for-the-future-2017.pdf>>.

Garnaut, R 2008, *The Garnaut Climate Change Review. Final Report*, Commonwealth of Australia, Melbourne.

Geertz, C 2008, 'Thick description: Toward an interpretive theory of culture', in *The Cultural Geography Reader*, Routledge, pp. 41-51.

George Wilkenfeld & Associates Pty Ltd 2008, *Victoria's Greenhouse Gas Emissions 1990, 1995, 2000 and 2005: End-use allocation of emissions*, State Government of Victoria, Sydney, <http://www.climatechange.vic.gov.au/_data/assets/pdf_file/0020/73253/VictoriasGreenhouseGasEmissions199019952000and2005.pdf>.

Graham, ID 2012, 'Knowledge synthesis and the Canadian Institutes of Health Research', *Syst Rev*, vol. 1, p. 6.

Grösche, P & Vance, C 2009, 'Willingness to pay for energy conservation and free-ridership on subsidization: Evidence from Germany', *The Energy Journal*, vol. 30, no. 2, pp. 135-153.

HAAG 2017, *Shocking New Census Data*, Housing for the Aged Action Group, Melbourne, 9 August 2017, <<https://www.older tenants.org.au/publications/shocking-new-census-data-shows-most-older-renters-severe-poverty>>.

Hall, SM, Hards, S & Bulkeley, H 2013, 'New approaches to energy: equity, justice and vulnerability. Introduction to the special issue', *Local Environment*, vol. 18, no. 4, pp. 413-421.

Hanger, I 2014, *Report of the Royal Commission into the Home Insulation Program*, Co Australia, Barton, ACT, <<http://www.homeinsulationroyalcommission.gov.au/Documentation/Documents/ReportoftheRoyalCommissionintotheHomeInsulationProgram.pdf>>.

Harrison, T (ed.) 2016, *Financial Literacy and the Limits of Financial Decision-Making*, Palgrave Macmillan.

health.vic 2018, *Older Persons High Rise Support Program*, Department of Health and Human Services, viewed 25 November 2018, <<https://www2.health.vic.gov.au/ageing-and-aged-care/supporting-independent-living/low-cost-accommodation-support-program/older-persons-high-rise-support-program>>.

Hudson, M 2018, *The too hard basket: a short history of Australia's aborted climate policies*, The Conversation Media Group, <<https://theconversation.com/the-too-hard-basket-a-short-history-of-australias-aborted-climate-policies-101812>>.

IEA 2018, *Energy Policies of IEA Countries. Australia 2018 Review*, OECD & IEA, <<http://www.iea.org/publications/freepublications/publication/EnergyPoliciesofIEACountriesAustralia2018Review.pdf>>.

IES 2016, *Manymak Energy Efficiency Project*,
<https://www.powerwater.com.au/_data/assets/pdf_file/0019/127414/Power_and_Water_LIEEP_Summary_v10.pdf>.

Industry Commission 1997, *Community Service Obligations: Policies and Practices of Australian Governments*, Industry Commission, Belconnen, ACT.

Jenkins, K, McCauley, D, Heffron, R, Stephan, H & Rehner, R 2016, 'Energy justice: A conceptual review', *Energy Research & Social Science*, vol. 11, pp. 174-182.

Kildonan Uniting Care 2018a, *Contact Us/ Feedback*, Kildonan Uniting Care, viewed 23 August 2018
<<https://www.kildonan.org.au/contact-us/>>.

Kildonan Uniting Care 2018b, *Energy Visits*, Kildonan Uniting Care, viewed 23 August 2018
<<https://www.kildonan.org.au/energy-visits/>>.

Kingdon, JW 2003, *Agendas, alternatives, and public policies*, 2d ed., Longman.

Kitzinger, J 1995, 'Qualitative Research: Introducing focus groups', *Bmj*, vol. 311, no. 7000, pp. 299-302.

KPMG 2014, *Review of Home Modification and Home Maintenance service types under the Commonwealth HACC Program. Final report*.

KPMG 2017, *The rise of energy poverty in Australia. Census Insights Series*, KPMG,
<<https://assets.kpmg/content/dam/kpmg/au/pdf/2017/census-insights-energy-poverty-australia.pdf>>.

Larsson, J & Holmstrom, I 2007, 'Phenomenographic or phenomenological analysis: does it matter? Examples from a study on anaesthesiologists' work', *International Journal of Qualitative Studies on Health and Well-being*, vol. 2, no. 2007, pp. 55-64.

LASA 2019a, *About LASA*, Leading Age Services Australia, viewed 11 January 2019, <<https://lasa.asn.au/about-lasa/>>.

LASA 2019b, *LASA Affiliates*, Leading Age Services Australia, viewed 11 January 2019,
<<https://lasa.asn.au/affiliates/>>.

LASA 2019c, *LASA Purchase Power*, Leading Age Services Australia, viewed 11 January 2019,
<<https://lasa.asn.au/membership/purchasepower/>>.

LASA 2019d, *LASA staff support dementia awareness*, Leading Age Services Australia, viewed 11 January 2019,
<<https://lasa.asn.au/news/lasa-staff-support-dementia-awareness/>>.

LASA 2019e, *Supply Partners Pty Ltd*, Leading Age Services Australia, viewed 11 January 2019,
<<https://lasa.asn.au/affiliates-directory/supply-partners-pty-ltd/>>.

Legislated Review of Aged Care 2017 2017, Canberra.

LHA 2017, *Livable Housing Design Guidelines*, Livable Housing Australia, Forest Lodge NSW,
<http://www.livablehousingaustralia.org.au/library/SLLHA_GuidelinesJuly2017FINAL4.pdf>.

Lomas, J 2000, 'Using 'Linkage And Exchange' to move research into policy at a Canadian foundation', *Health Affairs*, vol. 19, no. 3, pp. 236-240.

Lynch, D, Tuck, J, Hurley, C, Fraser, P & Brown, J 2016, *Glenelg SAVES. Final Report*, Glenelg SAVES Consortium.

Marmot Review Team 2011, *The Health Impacts of Cold Homes and Fuel Poverty*, Marmot Review Team, London.



Marsh, E & Precel, N 2018, *Hairdressers at the frontline of family violence*, The Age, 17 January 2019, <<https://www.theage.com.au/melbourne-news/hairdressers-at-the-frontline-of-family-violence-20180918-p504gp.html>>.

Mason, K, Lindberg, K, Read, D & Borman, B 2018, 'The importance of using public health impact criteria to develop environmental health indicators: The Example of the indoor environment in New Zealand', *International Journal of Environmental Research and Public Health*, vol. 15, no. 8, pp. 1-22.

Mavromaras, K, Knight, G, Isherwood, L, Crettenden, A, Flavel, J, Karmel, T, Moskos, M, Smith, L, Walton, H & Wei, Z 2017, *The Aged Care Workforce, 2016*, Department of Health, Canberra, <https://www.gen-agedcaredata.gov.au/www_ahwgen/media/Workforce/The-Aged-Care-Workforce-2016.pdf>.

McCallum, J, Rees, K & Maccora, J 2018, *Accentuating the positive: Consumer experiences of aged care at home*, National Seniors Australia, Brisbane, <https://nationalseniors.com.au/uploads/04182993PAR_AccentuatingThePositive_RrchRpt_Web_0.pdf>.

Meals on Wheels Victoria 2018, *Frequently Asked Questions*, Meals on Wheels Victoria,, viewed 29 August 2018 <<http://mealsonwheelsvictoria.org.au/faqs.htm#q04>>.

Mitchell Shire Council 2018, *Sustainability*, Mitchell Shire Council, viewed 21 August 2018, <<https://www.mitchellshire.vic.gov.au/services/environment-and-waste/sustainability>>.

MOD.A 2019, *Welcome to Home Modifications Australia*, Home Modifications Australia, viewed 13 January 2019 <<http://www.moda.org.au/>>.

Murphy, L, Meijer, F & Visscher, H 2012, 'A qualitative evaluation of policy instruments used to improve energy performance of existing private dwellings in the Netherlands', *Energy Policy*, vol. 45, pp. 459-468.

Murrindindi Shire Council 2018, *Council supports program for residents to go solar with peace-of-mind*, Murrindindi Shire Council, viewed 21 August 2018, <<http://www.murrindindi.vic.gov.au/News-Media/Council-supports-program-for-residents-to-go-solar-with-peace-of-mind>>.

My Aged Care 2018a, *ACAT Guidance Framework for Home Care Package Level, Stage 2. Version 1.1*, Australian Government Department of Health, Canberra, <<https://agedcare.govcms.gov.au/acat-guidance-framework>>.

My Aged Care 2018b, *My Aged Care Assessment Manual. version 1.1 June 2018*, Australian Government Department of Health, Canberra, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/06_2018/my-aged-care-assessment-manual-june-2018-v1-1.pdf>.

My Aged Care 2018c, *NSAF User Guide. A guide to the information required to be considered and recorded during the My Aged Care assessment process Home Support Assessors and Comprehensive Assessors. May 2018*, Australian Government Department of Health, Canberra, <https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/06_2018/national_screening_and_assessment_for_m_user_guide_-_may_2018.pdf>.

My Aged Care 2018d, *Which type of in home services are you looking for?*, My Aged Care, viewed 29 August 2018, <<https://www.myagedcare.gov.au/find-and-set-up-services>>.

My Aged Care 2019a, *Finances and aged care financial advice*, My Aged Care, viewed 13 January 2019, <<https://www.myagedcare.gov.au/costs/finances-and-financial-advice>>.

My Aged Care 2019b, *For health professionals*, My Aged Care, viewed 11 January 2019, <<https://www.myagedcare.gov.au/for-health-professionals>>.

NABERS 2018a, *Apartment Buildings*, NABERS, viewed 30 August 2018 <<https://www.nabers.gov.au/apartment-buildings>>.

NABERS 2018b, *Energy Explorer*, NABERS, viewed 30 August 2018 <<http://home.nabers.com.au/>>.

NABERS 2018c, *Office Buildings*, NABERS, viewed 30 August 2018 <<https://www.nabers.gov.au/ratings/spaces-we-rate/office-buildings>>.

NACA 2013, *Client Questionnaire Home Modifications and Maintenance, Goods and Equipment*, National Aged Care Alliance, Melbourne, <http://www.naca.asn.au/Working_Groups/HomeSup/Service%20Group%205%20-%20Sub%20Group/09122013/Client%20Questionnaire_HMM_G&E_06122013.pdf>.

NACA 2018a, *Position paper. Assistive Technology for Older Australians*, National Aged Care Alliance, <http://www.naca.asn.au/Publications/NACA_Assistive_Technology_for_Older_Australians_Position_Paper.pdf>.

NACA 2018b, *Position paper: A secure, affordable home for older Australians*, NAC Alliance, Melbourne, <http://www.naca.asn.au/Publications/NACA_Housing_Position_Paper.pdf>.

National Seniors Australia 2017, *ACCC Inquiry into retail electricity prices and supply*, National Seniors Australia, Brisbane, <<https://www.accc.gov.au/system/files/National%20Seniors%20Australia.pdf>>.

National Seniors Australia 2018, *Energy affordability. Our energy affordability campaign will work to cut energy bills for you and other older Australians*, National Seniors Australia, viewed 6 October 2018 <<https://nationalseniors.com.au/campaigns/current/energy-affordability>>.

National Seniors Australia 2019, *About Us*, National Seniors Australia, viewed 12 January 2019, <<https://nationalseniors.com.au/about>>.

Nauleau, M-L 2014, 'Free-riding on tax credits for home insulation in France: An econometric assessment using panel data', *Energy Economics*, vol. 46, pp. 78-92.

NCCARF & CAHA 2018, *Human Health and Wellbeing Climate Adaptation Plan for Queensland (H-CAP). Discussion Paper*, CaHA (CAHA), <https://d3n8a8pro7vnm.cloudfront.net/caha/pages/1572/attachments/original/1519016682/QLD_H-CAP_Discussion-Paper_Feb-2018.pdf?1519016682>.

Nelson, T, McCracken-Hewson, E, Sundstrom, G & Hawthorne, M 2019, 'The drivers of energy-related financial hardship in Australia – understanding the role of income, consumption and housing', *Energy Policy*, vol. 124, pp. 262-271.

Newgate Research 2018, *State of the (Older) Nation Report 2018*, COTA Australia, <<https://www.cota.org.au/wp-content/uploads/2018/12/COTA-State-of-the-Older-Nation-Report-2018-FINAL-Online.pdf>>.

Novais, MA, Ruhanen, L & Arcodia, C 2018, 'Destination competitiveness: A phenomenographic study', *Tourism Management*, vol. 64, pp. 324-334.

NTCOSS 2017, *Review of the Northern Territory Pensioner Carer Concession Scheme (NTPCCS)*, Northern Territory Council of Social Service, <https://ntcoss.org.au/wp-content/uploads/2017/11/NTCOSS-NTPCCS-report_FINAL.pdf>.

OECD 2019, *OECD Environmental Performance Reviews. Australia. 2019*, OECD Publishing, Paris, <https://read.oecd-ilibrary.org/environment/oecd-environmental-performance-reviews-australia-2019_9789264310452-en>.

OECD DAC 1991, *Principles for Evaluation of Development Assistance*, Organisation for Economic Co-operation and Development.

OECD DAC 2010, *Glossary of key terms in evaluation and results based management*, Organisation for Economic Co-operation and Development, Paris, <<http://www.oecd.org/dac/evaluation/2754804.pdf>>.

OECD DAC 2018, *DAC Criteria for Evaluating Development Assistance*, Organisation for Economic Co-operation and Development, viewed 15 November 2018, <<http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>>.

Organo, V, Head, L & Waitt, G 2013, 'Who does the work in sustainable households? A time and gender analysis in New South Wales, Australia', *Gender, Place & Culture*, vol. 20, no. 5, pp. 559-577.

Otway Health 2018, *About Property Maintenance*, Otway Health, viewed 19 October 2018, <<https://www.otwayhealth.org.au/services/property-maintenance/>>.

Pasanen, T 2018, *2018: time to update the DAC evaluation criteria?*, Overseas Development Institute (ODI), viewed 29 November 2018, <<https://www.odi.org/comment/10594-2018-time-update-dac-evaluation-criteria>>.

Pitt & Sherry & Swinburne University of Technology 2014, *National Energy Efficient Building Project. November 2014. Final Report*, <http://www.sa.gov.au/data/assets/pdf_file/0004/135544/NEEBP-final-report-November-2014.pdf>.

Point Advisory 2018, *Victorian Residential Efficiency Scorecard: commercialisation opportunities. Public background paper*, Department of the Environment Land Water and Planning, Melbourne, <https://www.energy.vic.gov.au/data/assets/pdf_file/0016/251080/DELWP_Scorecard-Commercialisation_Background-Paper.PDF>.

Positive Charge 2018a, *Banyule Free Energy Audit Application - Positive Charge*, Moreland Energy Foundation, viewed 21 August 2018 <<https://www.positivecharge.com.au/banyule-residential-energy-audit/>>.

Positive Charge 2018b, *Draught proofing*, Moreland Energy Foundation, viewed 21 August 2018, <<https://www.positivecharge.com.au/household/draught-proofing/>>.

Positive Charge 2018c, *Heating and cooling for households*, Moreland Energy Foundation, viewed 21 August 2018 <<https://www.positivecharge.com.au/household/heating-cooling-households/>>.

Positive Charge 2018d, *Home energy assessments*, Moreland Energy Foundation, viewed 21 August 2018 <<https://www.positivecharge.com.au/household/home-energy-assessments/>>.

Prime Minister of Australia 2018, *Transcript. Press Conference with the Minister for Health and the Minister for Senior Australians & Aged Care*, Prime Minister of Australia, viewed 11 January 2019, <<https://www.pm.gov.au/media/press-conference-minister-health-and-minister-senior-australians-aged-care>>.

Probyn, A 2018, *Federal Government to announce \$500m to target chronic aged care shortages*, Australian Broadcasting Corporations, 19 December 2018, <<https://www.abc.net.au/news/2018-12-16/550-million-for-aged-care-in-myefo/10625114>>.

Productivity Commission 2011a, *Caring for Older Australians, Report No. 53, Final Inquiry Report. Volume 1*, Australian Government Productivity Commission, Canberra, <<https://www.pc.gov.au/inquiries/completed/aged-care/report/aged-care-volume1.pdf>>.

Productivity Commission 2011b, *Caring for Older Australians, Report No. 53, Final Inquiry Report. Volume 2*, Australian Government Productivity Commission, Canberra, <<https://www.pc.gov.au/inquiries/completed/aged-care/report/aged-care-volume2.pdf>>.

Productivity Commission 2015, *Housing Decisions of Older Australians*, Commonwealth of Australia, Canberra, <<https://www.pc.gov.au/research/completed/housing-decisions-older-australians/housing-decisions-older-australians.pdf>>.

QCROSS 2014, *Energising concessions policy in Australia. Best practice principles for energy concessions*, Queensland Council of Social Service, Brisbane, <<https://www.qcross.org.au/energising-concessions-policy-australia>>.

QCOSS, MDA & MEFL 2016, *Bright Actions – the energy to save. Delivering an Energy Efficiency Service to People from a Refugee Background. Final Report of the Bright Actions project*, Queensland Council of Social Service.

Queensland Government 2017, *Recognise, respond, refer e-learning program* Queensland Government, viewed <<https://www.csyw.qld.gov.au/gateway/end-domestic-family-violence/our-progress/shifting-community-attitudes-behaviours/recognise-respond-refer-e-learning-program>>.

Rees, K, Maccora, J & McCallum, J 2018, *You don't know what you don't know: The current state of Australian aged care service literacy*, National Seniors Australia, Brisbane, <<https://nationalseniors.com.au/uploads/09183073PAR-RBD18-ResearchReport-AgedCareLiteracy-Web.pdf>>.

Renew 2019, *Energy consult*, Renew, viewed 12 January 2019, <<https://renew.org.au/what-we-do/energy-consult/>>.

Rigby, M 2018, *Dentists trained to recognise the signs of domestic violence in their patients*, Australian Broadcasting Corporation, 17 January 2019, <<https://www.abc.net.au/news/2018-01-19/dentists-the-new-frontline-against-domestic-violence/9339586>>.

RMIT 2018, *The RMIT Seed Fund*, RMIT University, viewed 14 November 2018, <<http://www1.rmit.edu.au/browse:ID=rqllz54i3bkr>>.

Roberts, P 2011, 'Who's responsible for what?', in *Effective Project Management : Identify and Manage Risks Plan and Budget Keep Projects Under Control*, Kogan Page, London ; Philadelphia.

Romero, JC, Linares, P & López, X 2018, 'The policy implications of energy poverty indicators', *Energy Policy*, vol. 115, pp. 98-108.

Rowe, A & Maddocks, R 2018, *Energy Justice – we need to look after our neighbours*, Moreland Energy Foundation, <<https://www.mefl.com.au/mefl2016/wp-content/uploads/2018/08/MEFL-Energy-Justice-thought-leadership.pdf>>.

Russell-Bennett, R, Bedggood, R, Glavas, C, Swinton, T, McAndrew, R, O'Mahony, C, Pervan, F & Willand, N 2017, *Power Shift Project One: Driving Change – Identifying what Caused Low-Income Consumers to Change Behaviour, Final Report*, Energy Consumers Australia, Brisbane, <<http://energyconsumersaustralia.com.au/wp-content/uploads/Driving-Change-What-caused-low-income-consumers-to-change-behaviour.pdf>>.

Sauerborn, R, Nitayarumphong, S & Gerhardus, A 1999, 'Strategies to enhance the use of health systems research for health sector reform', *Tropical Medicine and International Health*, vol. 4, no. 12, pp. 827-835.

Scarpellini, S, Sanz Hernández, MA, Llera-Sastresa, E, Aranda, JA & López Rodríguez, ME 2017, 'The mediating role of social workers in the implementation of regional policies targeting energy poverty', *Energy Policy*, vol. 106, pp. 367-375.

SECCCA 2016, *Energy Saver Study. Final report. Low Income Energy Saver Direct Care and Motivators Project*, Narre Warren, VIC.

SECCCA 2019, *Energy Saver Study. Project Outcomes*, South East Councils Climate Change Alliance, viewed 12 January 2019, <<http://www.seccca.org.au/energy-saver-study-product-outcomes/>>.

Senate of Australia Environment and Communications References Committee 2018, *Current and future impacts of climate change on housing, buildings and infrastructure*, Senate Printing Unit, Canberra.

Simshauser, P, Nelson, T & Doan, T 2011, 'The Boomerang Paradox, Part I: How a Nation's Wealth Is Creating Fuel Poverty', *The Electricity Journal*, vol. 24, no. 1, pp. 72-91.

Skatssoon, J 2018, *Providers disappointed aged care remains on outer ministry - Australian Ageing Agenda*, Intermedia, <<https://www.australianageingagenda.com.au/2018/08/27/providers-disappointed-aged-care-remains-on-outer-ministry/>>.

Social Innovation to Tackle Fuel Poverty 2018, *Transforming a challenge... into an opportunity*, ASHOKA & Schneider Electric Foundation, viewed 16 December 2018, <<http://tacklefuelpoverty.com/2017-2018-edition/>>.

Sovacool, BK & Dworkin, MH 2015, 'Energy justice: Conceptual insights and practical applications', *Applied Energy*, vol. 142, pp. 435-444.

Spradley, JP 2016, *Participant Observation*, Waveland Press.

St Ives Home Care 2018, *Getting the most out of your home care budget*, St Ives Home Care, viewed 19 October 2018, <<https://www.stiveshomecare.com.au/blog/home-care-budget/>>.

St Vincent de Paul Society & Consulting, A 2016, *Households in the dark. Mapping electricity disconnections in South Australia, Victoria, New South Wales and South East Queensland*, St Vincent de Paul Society, <<https://www.vinnies.org.au/content/Document/VIC/2016-June-Households-in-the-dark2.pdf>>.

Stieß, I & Dunkelberg, E 2013, 'Objectives, barriers and occasions for energy efficient refurbishment by private homeowners', *Journal of Cleaner Production*, vol. 48, pp. 250-259.

Strathbogie Shire Council 2018a, *Senior Citizen's Grants*, Strathbogie Shire Council,, viewed <<https://www.strathbogie.vic.gov.au/community/community-funding/senior-citizens-grants>>.

Strathbogie Shire Council 2018b, *Strathbogie Champions of Solar*, Strathbogie Shire Council, 21 August 2018, <<https://www.strathbogie.vic.gov.au/council/news-a-newsletters/latest-news/1304-strathbogie-champions-of-solar>>.

Strathbogie Shire Council 2018c, *Top 10 tips for the Climate-Smart Strathbogie resident*, Strathbogie Shire Council, viewed 21 August 2018 <<https://www.strathbogie.vic.gov.au/environment-head/environment-sub/living-smarter>>.

Straus, SE, Tetroe, J & Graham, I 2009, 'Defining knowledge translation', *Canadian Medical Association Journal*, vol. 181, no. 3-4, pp. 165-168.

Straus, SE, Tetroe, JM & Graham, ID 2011, 'Knowledge translation is the use of knowledge in health care decision making', *Journal of Clinical Epidemiology*, vol. 64, no. 1, pp. 6-10.

Sullivan, D, Byrne, G, Jorgensen, B, Jungbluth, L, Smith, L, Ward, M, Brent, D, Johnson, V, O'Mullane, L & Hoch, L 2016, *Home Energy Efficiency Upgrade Program. Final Report*, Department of the Environment and Energy, <https://www.energy.gov.au/sites/default/files/brotherhood_of_st_laurence_the_home_energy_efficiency_upgrade_program.pdf>.

Sustainability Victoria 2018, *Victorian Healthy Homes Program*, Sustainability Victoria, viewed 6 October 2018 <<https://www.sustainability.vic.gov.au/About-Us/Grants-and-Funding/Victorian-Healthy-Homes-Program>>.

SWEP 2019, *Home Page*, viewed 31 January 2019, <<https://swep.bhs.org.au/>>.

Taylor, A 2018, *Statement on appointment as Minister for Energy*, Canberra, 28 August 2018, <<http://www.environment.gov.au/minister/taylor/media-releases/mr20180828.html>>.

Taylor, D 2018, *Record number of older Australians in poverty, with switch to 'principal and interest' a struggle*, Australian Broadcasting Corporation, 13 January 2019, <<https://www.abc.net.au/news/2018-10-16/elderly-financial-hardship-increases/10378570>>.

The Allen Consulting Group 2004, *The Energy Efficiency Gap. Market Failures and Policy Options*, The Allen Consulting Group Pty Ltd, Melbourne, <http://www.pc.gov.au/data/assets/pdf_file/0007/85669/sub047attachment1.pdf>.

The Centre for Liveability Real Estate 2013, *Rent Smart. Your guide to creating a healthy, efficient, comfortable home. 4th edition*, The Centre for Liveability Real Estate.



The Centre for Liveability Real Estate 2018a, *At a Glance – A Comparison of Home Energy Rating Assessment Tools*. June 2018, Commonwealth Scientific and Industrial Research Organisation, <<https://liveability.com.au/wp-content/uploads/2013/01/Liveability-Home-Rating-Tools-in-Australia.pdf>>.

The Centre for Liveability Real Estate 2018b, *How much is your home worth?*, The Centre for Liveability Real Estate, viewed 1 September 2018 <<https://liveability.com.au/appraisal/>>.

The Centre for Liveability Real Estate 2018c, *The Renovator's Guide to the 17 Things*, The Centre for Liveability Real Estate, viewed 1 September 2018 <<https://liveability.com.au/17things>>.

The Hon Lily D'Ambrosio 2018, *Helping vulnerable households save one energy bills*, Premier of Victoria, Melbourne, 21 October 2018, <<https://www.premier.vic.gov.au/wp-content/uploads/2018/10/181021-Helping-Vulnerable-Households-Save-On-Energy-Bills.pdf>>.

Thomson, H & Bouzarovski, S 2018, *Addressing Energy Poverty in the European Union: State of Play and Action*, European Commission.

Torner, M & Pousette, A 2009, 'Safety in construction--a comprehensive description of the characteristics of high safety standards in construction work, from the combined perspective of supervisors and experienced workers', *Journal of Safety Research*, vol. 40, no. 6, pp. 399-409.

Treasury Laws Amendment (Improving the Energy Efficiency of Rental Properties) Bill 2018.

Trebble, TM, Hansi, N, Hydes, T, Smith, MA & Baker, M 2010, 'Process mapping the patient journey: an introduction', *Bmj*, vol. 341, p. c4078.

U3A 2019a, *Bernard Wheelahan*, University of the Third Age, viewed 12 January 2019, <<http://www.u3amelbcity.org.au/Wheelahan>>.

U3A 2019b, *Ian Walker*, University of the Third Age, viewed 12 January 2019, <http://www.u3amelbcity.org.au/Ian_Walker>.

U3A 2019c, *Julian Mercer*, University of the Third Age, viewed 12 January 2019, <http://www.u3amelbcity.org.au/Julian_Mercer>.

U.S. Department of Health and Human Services 2009, *The Surgeon General's Call to Action To Promote Healthy Homes* US Department of Health and Human Services Office of the Surgeon General, <https://www.ncbi.nlm.nih.gov/books/NBK44192/pdf/Bookshelf_NBK44192.pdf>.

Paris Agreement 2015.

User Rights Principles 2014. Compilation No. 6 2018.

VCOSS 2018, *Battling On. Persistent Energy Hardship*, Victorian Council of Social Service, Melbourne, <<https://vcoss.org.au/wp-content/uploads/2018/11/Persistent-Energy-Hardship-FINAL-Web-Single-Page.pdf>>.

Victorian Government Department of Sustainability and Environment 2006, *Energy Efficiency for Victoria. Action Plan*, The State of Victoria Department of Sustainability and Environment, Melbourne, ISBN 1 74152 431 8, <http://www.sustainability.vic.gov.au/resources/documents/Energy_Efficiency.pdf>.

Visram, S, Goodall, D & Steven, A 2014, 'Exploring conceptualizations of knowledge translation, transfer and exchange across public health in one UK region: a qualitative mapping study', *Public Health*, vol. 128, no. 6, pp. 497-503.

Wahlquist, C 2018, *Victorian election roundup: Andrews pushes solar while Guy backs coal*, Guardian News and Media Limited 16 November 2018, <<https://www.theguardian.com/australia-news/2018/nov/09/victorian-election-roundup-andrews-pushes-solar-while-guy-backs-coal>>.

Walker, G, Simcock, N & Day, R 2016, 'Necessary energy uses and a minimum standard of living in the United Kingdom: Energy justice or escalating expectations?', *Energy Research & Social Science*, vol. 18, pp. 129-138.

Weiss, J, Dunkelberg, E & Vogelpohl, T 2012, 'Improving policy instruments to better tap into homeowner refurbishment potential: Lessons learned from a case study in Germany', *Energy Policy*, vol. 44, pp. 406-415.

WHO 1987, *Health impact of low indoor temperatures. Report on a WHO meeting. Copenhagen 11-14 November 1985*, Copenhagen, <http://whqlibdoc.who.int/euro/ehs/EURO_EHS_16.pdf>.

WHO 2008, *Closing the gap in a generation: Health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health*, Geneva, <http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf>.

WHO 2018, *WHO Housing and Health Guidelines*, World Health Organization, Geneva, <<https://www.who.int/sustainable-development/publications/housing-health-guidelines/en/>>.

Wilkins, R & Lass, I 2018, *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16*, University of Melbourne, Melbourne, <https://melbourneinstitute.unimelb.edu.au/_data/assets/pdf_file/0009/2874177/HILDA_2018_stat_report_FINAL-fig-2.2.edits.pdf>.

Willand, N 2017, Residential energy efficiency and health – A mixed methods study of a quasi-randomised controlled trial of energy efficiency improvements of the homes of low-income Home and Community Care recipients near Melbourne, Australia, Doctor of Philosophy thesis, RMIT University, Melbourne.

Willand, N & Horne, R 2013, 'Low carbon residential refurbishments in Australia: Progress and prospects', paper presented to State of Australian Cities SOAC 2013, Sydney, 26-29 November 2013, <<http://www.soacconference.com.au/wp-content/uploads/2013/12/Willand-Environment.pdf>>.

Willand, N & Horne, R 2018, "'They are grinding us into the ground' – The lived experience of energy (in)justice amongst low-income older households', *Applied Energy*, vol. 226, pp. 61-70.

Willand, N, Horne, R & Moore, T 2018, *As power prices soar, we need a concerted effort to tackle energy poverty*, The Conversation Media Group, 4 July 2018, <<https://theconversation.com/as-power-prices-soar-we-need-a-concerted-effort-to-tackle-energy-poverty-98764>>.

Willand, N, Maller, C & Ridley, I 2017, "'It's not too bad" - The lived experience of energy saving practices of low-income older and frail people', *Energy Procedia*, vol. 121, pp. 166-173.

Williams, P 2018, 'Emission targets a hurdle to policy: Sims', *The Australian*, 5 October 2018, p. 22.

Williamson, TJ, Coldicutt, S & Penny, REC 1991, 'Aspects of thermal preferences in housing in a hot humid climate, with particular reference to Darwin, Australia', *International Journal of Biometeorology*, vol. 34, no. 4, pp. 251-258.

Wyatt, K 2018a, *2 Million in Extra Support to Tackle Elder Abuse*, Australian Government Department of Health, Canberra, 8 August 2018, <[http://www.health.gov.au/internet/ministers/publishing.nsf/Content/209887D699F4342ACA2582E300034B32/\\$File/KW115.pdf](http://www.health.gov.au/internet/ministers/publishing.nsf/Content/209887D699F4342ACA2582E300034B32/$File/KW115.pdf)>.

Wyatt, K 2018b, *Better Practice Awards celebrate excellence in aged care*, Department of Health, 24 August 2018, <[http://www.health.gov.au/internet/ministers/publishing.nsf/Content/500DAF8B9C87B9A8CA2582F3001079CD/\\$File/KW121.pdf](http://www.health.gov.au/internet/ministers/publishing.nsf/Content/500DAF8B9C87B9A8CA2582F3001079CD/$File/KW121.pdf)>.



Yang, A, Martinelli, A, Settle, D, Erwin, R & Crawley, N 2016, *The Future Powered Families Report*, Environment Victoria.

Yates, I 2017, *Brief comment to the Australia Energy Regulator (AER) Customer Price Information Issues Paper*. 6 November 2017, C Australia, <<https://www.cota.org.au/wp-content/uploads/2017/11/COTA-Submission-to-AER-re-Customer-Information-Issues-Paper-November-2017.pdf>>.

Ybema, S, Yanow, D, Wels, H & Wels, H (eds) 2009, *Organizational Ethnography. Studying the Complexity of Everyday Life*, SAGE Publications Ltd, London, Thousand Oaks, New Dehli, Singapore.