

# **Assessing Energy Inequity and the Distributional Effects of Energy Policies**

**Final Report**

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## About GEER Australia

The Group of Energy Efficiency Researchers (GEER) Australia is the peak research body on residential energy efficiency. It comprises researchers and industry partners from across Australia who are committed to driving change in the energy sector towards improved outcomes for Australian households. Its purpose is to improve the energy-related wellbeing in households and communities in Australia, through collaborative research, which achieves practical outcomes and informs future practice and policies. GEER's research and activities therefore focus on energy efficiency as it relates to quality of life, health, affordability and environmental sustainability.

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## EXECUTIVE SUMMARY

When households are unable to use energy in their homes without suffering negative consequences, such as a decline in mental and/or physical health, thermal discomfort or economic distress, then everything possible should be done to alleviate the situation.

Broadly, the aim of this project was to determine: 1) the level of energy disadvantage in Australian households, and 2) whether energy programs and policies are effectively addressing the issue. This information is necessary to design programs and policies that will protect households from unfair or unpredicted consequences through the energy transition. As such, this national-level, broad investigation sought to identify the impacts of energy programs and policies and reveal any policy gaps, and to use the findings to inform new and improved efforts to ensure a better future for households facing vulnerability.

The aims and findings for each component of this investigation are outlined below and are further detailed in each chapter of this report.

### **Aim 1: Determine how energy disadvantage is understood and measured, incorporating commonly used metrics**

**Findings:** Recent developments in the international literature suggest that households should be considered by their circumstances (*e.g.*, level and/or changes in energy costs relative to income, health status, extended stays by visitors, *etc.*) rather than by their characteristics (*e.g.*, those who are culturally and linguistically diverse, single parents, senior citizens, *etc.*). However, few advancements have been made that capture the lived experience of households facing energy-related challenges, commonly referred to as energy inequity, disadvantage, poverty and/or hardship. After reviewing the options, ‘hardship’ was deemed the most suitable term to describe the ‘state’ of the energy challenges confronting households. Further, most research has treated energy hardship as though it was static and non-diverse, whereas recent findings in the literature reveal that hardship can be transient and manifest in different ways. Building on recent research findings, this investigation developed the **ABATE Hardship Framework**, which distinguishes various household experiences (‘states’) by the extent and duration of their hardship. ABATE captures four ‘states’ of hardship (Battle-On, Acute, Transient and Extreme) and the associated factors that can ‘Amplify’ any given state. This opens a whole new canvas to inform progressive programs and policies so they may better assist those who are *unable to use energy in their home without suffering* (which is our short definition of energy hardship).

The review of the literature also revealed that commonly used metrics reflect only some aspects of household experiences. However, the separation of the factors that cause households to enter a ‘state’ of energy hardship from the consequences households experience as a result of suffering was not clearly articulated. In response, 31 factors were identified (25 from the literature and an additional six identified from this investigation,) and separated into **D**rivers, **I**ndicators and **O**utcomes of energy hardship – which forged the **DIO Framework**. A similar situation was identified when it came to strategies (initiatives/programs) to assist households in hardship. Little delineation was evident in the literature between the state the household is experiencing before entering hardship and after. We distinguish the two by using ‘vulnerable’ to describe the pre-hardship state, as these households are at risk of suffering though they are not suffering yet. Households are then referred to as experiencing energy hardship when they have entered a hardship state. This lack of difference may also explain why the literature has not clearly conceptualised how initiatives might vary depending on whether they aim to **P**revent hardship from occurring, from initiatives that treat hardship once it occurs (*e.g.*, provide **R**elief from

suffering and Support the household in moving out of hardship). In extending the current body of knowledge, this investigation delineated these types of initiatives and developed the **P-S-R Framework**, which may usefully guide future efforts. We recommend that policies devise a range of ‘prevention’ initiatives to build the resilience of those who are highly vulnerable, as well as ensure ‘support’ and ‘relief’ initiatives are provided to those in hardship, and which are suited to the unique situation of households in each of the ABATE hardship states.

## Aim 2: Ascertain whether existing data are suitable and robustly capture the full extent of energy hardship

**Findings:** This part of our investigation examined existing data, which were drawn mainly from Household Income Labour Dynamics in Australia (HILDA), the Australian Energy Regulator (AER) and the Australian Bureau of Statistics (ABS). The analysis revealed only part of the picture is captured by this data and does not include many of the households who may be suffering energy hardship. The DIOs developed in the literature review were used to identify what existing data can reveal, what is missing and what is needed.

### Insights from Existing Data

- Energy costs have been rising on average from 2008 to 2019, but they appeared to flatten or decrease in 2018–19.
- Over this period, electricity and gas prices increased more rapidly than wages and more rapidly than other costs.
- **Increasing energy costs are disproportionately impacting low-income households:** the share of household income spent on energy nearly doubled for low-income households from 2006 to 2018, while the same measure for higher-income households remained relatively stable. This is evident from the following:
  - ⇒ **households with low incomes tend to:** spend more proportionally on energy; have higher per-person energy costs; live in older, less energy-efficient homes that cost more to heat/cool; and tend to be unable to access solar panels or modern energy-efficient appliances that would reduce energy costs
  - ⇒ **disconnections are increasing** and are often applied to households with low debt
  - ⇒ **payment plans do not appear to prevent households from being disconnected** due to accruing debt.
- From estimating energy hardship using two metrics (income and energy bill, with cut-offs of income below 60% of the median income and electricity bills above 6% of income), approximately 2.5% of Australian households were in energy hardship in 2018. This figure is more than double the estimated 1.1% of households that were in retailer electricity hardship programs in the same year, according to AER reported data (a figure which is fairly consistent from 2017 to 2020). Further, **the estimated 2.5% of households in hardship is likely to underestimate the true extent of energy hardship in Australia.**

### Limitations of Existing Data

- There are very limited details captured in existing data regarding households in retailer hardship programs, including when they exit the program. This means the effectiveness of these programs cannot be measured or established.
- Variables are not consistently captured in a single dataset, which means it was often not possible to assess the relationships between variables across datasets.
- There are no agreed standards for measures, which means household income cut-offs and energy hardship cut-offs are arbitrary. We generated a definition for ‘low-income households’ based on Australian Taxation Office (ATO) cut-offs and international practices.
- Available energy hardship-relevant data are limited and cross-sectional, to the extent that it is not possible to track households or variables over time.

- Existing data cannot be used or reconfigured to accurately measure the level and extent of energy hardship in Australia.

We note that this review focused on national-level data sources and that data availability differs between states and territories. Our findings that relate to the extent and level of energy hardship and energy costs relative to incomes are based on comprehensive and representative samples from *all* states and territories. Our findings that relate to energy hardship programs, energy debt levels and disconnections are based on less comprehensive data relating primarily to Queensland, New South Wales, the Australian Capital Territory, South Australia and Tasmania.

Of the 25 DIOs identified from the literature, only seven were represented in existing data. The available data has substantial limitations in its ability to capture the extent of energy hardship in Australia. Measures must be drawn from the same household and have sufficient breadth (*e.g.*, longitudinal studies) to capture the complexity of the situation. An additional preliminary review revealed that **similar limitations were evident in the data reported across jurisdictions**.

### Aim 3: Identify whether energy programs and policies in Australia are effective in reducing energy hardship

A tri-level approach was adopted to capture perspectives from different levels: micro, meso and macro. Note, the terms energy ‘program’ or energy ‘initiative’ are deemed to have the same meaning.

#### a) Micro-level Insights

Those experienced in working with households who are struggling to use and pay for energy in their homes were interviewed. Participants were drawn from all jurisdictions and reflected on their own learnings and insights developed from working with households who experience energy hardship. They revealed a range of strengths and weaknesses of current or recent energy assistance programs/initiatives (including both energy retailer hardship programs and community/government-based support programs). Further, a range of case studies were used to provide deeper insights.

#### Findings

##### Strengths of Current Programs

- When assistance is **provided by community-based organisations (CBOs)**, households have greater trust in the people they already know from CBOs, and therefore are more willing and comfortable in accessing and using the support offered from these sources.
- When assistance is **tailored** to the household’s unique circumstances and needs, it is more effective.
- When assistance is offered **proactively**, households feel cared for.
- The fact that **assistance is available** to help those in need is generally considered most favourably.

##### Weaknesses of Current Programs

- Many initiatives offering support are inadequate**, as they are insufficient in addressing the need or are not fit for purpose.
- Households **struggle to access support** that is provided due to unclear or unsuitable eligibility criteria or poor processes when implementing initiatives.
- Initiatives can **create ‘agency’ problems** for households who may not be able to afford/access the ‘support’ due to barriers. For example, households may have unsupportive landlords, be unable to take up an offer (*e.g.*, fixed appliance upgrades, access to viable solar options) due to being a tenant or being unable to afford partial payments for subsidy-type programs, or have limited cognitive bandwidth due to dealing with other crises in their life. This can mean households are unable to engage with or receive

support (e.g., unable to learn about tips for saving energy when the household is facing eviction or job loss).

Overall, current programs are not sufficiently attending to household needs and are not effective in reaching many of those who need support, leaving many households stuck in hardship.

### ***Coping Strategies for Households in Hardship***

Households experiencing energy hardship invariably resort to a range of strategies to cope and therefore reduce (or at least manage) the extent to which they suffer. This investigation revealed 31 coping strategies that are commonly used. These were grouped as being either under-consumption or debt-management coping strategies.

**Under-consumption coping strategies** include:

- forgoing energy use (e.g., not using heating/cooling, having cold showers, going to bed early to stay warm)
- sacrificing comfort (e.g., staying away from home, self-disconnecting, bathing elsewhere, sleeping in parks)
- forgoing other essentials (e.g., going without food, not buying clothes, forgoing medical needs).

**Debt-management coping strategies** include:

- pawning items
- taking out 'payday loans' (creates new debt)
- hyper-budgeting
- moving house to 'start afresh'.

In summary, if coping strategies are a way for households to avoid accumulating energy debt, then the current measures of energy hardship (which are based on debt level) will grossly underestimate the size of the problem.

### ***Structural Barriers***

Analysis of participant insights revealed many households are confronted with six structural barriers within the energy sector/system that create or worsen the extent of their suffering:

- **Poor retailer behaviour**, which hinders households accessing and receiving support – even when they are entitled to that support – is a barrier noted across all jurisdictions (e.g., not supporting those seeking help, even though the retailer might be mandated to do so).
- **Needless sector complexity** creates consumer confusion and disengagement due to the high number of and constantly changing factors for households to consider (we note complexity is due to factors beyond the number of retailers and energy offers in a region and includes the sector's structure, billing practices, terminologies used and frequent changes in both retailers' offers and energy assistance initiatives).
- **Poor housing quality**, which describes homes that typically contain poor thermal shells and energy-hungry, inefficient appliances, can create thermal discomfort and health problems, as well as increase energy consumption and bills for many households facing hardship.
- **Insufficient social housing** produces a shortfall of affordable housing, which means people have little option but to remain in overcrowded and/or very poor quality housing.
- **Low social welfare**, which is received by many households experiencing energy hardship, provides insufficient funds to pay for essentials.

Note: participants reported that due to the increased social benefit provided by Jobseeker during COVID-19, fewer households were calling on CBOs for support in paying energy bills.

- **High energy prices** continue to be a barrier confronting many households, making it difficult for them to use energy in the home to meet their basic needs. Despite recent pricing reductions, energy prices have soared over the last decade (see Chapter 2).

## b) Meso-level Insights

The project team interviewed individuals experienced in designing programs and policies for households facing energy hardship from across all jurisdictions. Analysis revealed their insights regarding the efficacy of current and recent efforts to address energy hardship.

### Findings

#### *Strengths of Current Programs*

- There is evidence that there are a **variety of initiatives** that could be classified as providing either prevention, support or relief. This validates the relevance of the P-S-R Framework as components of it are being applied.
- There is generally a high level of **commitment** among program delivery teams towards alleviating energy hardship.
- Individual teams are making bottom-up innovations and incremental improvements to their programs – some of which are very **insightful** and seem to be having a **positive impact**.

#### *Weaknesses of Current Programs*

- **More than ‘energy’**: energy hardship involves more than just ‘energy’ for many households, which means that current programs are incapable of properly addressing the issue without input from other areas (*i.e.*, different portfolios).
- **Siloed programs**: no single program or group has the responsibility, tools or funding to address more than a small part of energy hardship, and so programs are not designed or implemented to the scale required.
- **No specified goal**: there is no overarching goal to coordinate actions and evaluate progress (at either the state, territory or national level) towards a meaningful contribution to the energy hardship issue as a whole.

#### *Key Policy Challenges*

- Although energy hardship is about more than energy for many households, initiatives are narrowly focused.
- The energy affordability gap is growing as the discord between energy price rises and low incomes widens.
- Poor-quality housing and appliances result in high consumption (and waste) of energy, further increasing bills and hardship.
- Billing practices are lumpy and lagging, making it difficult for households to budget and reduce their energy use.

## c) Macro-level Insights

### Gap Analysis of Energy Policies

An exploration and critical evaluation was conducted on 51 published energy policy documents drawn from all jurisdictions. For the purpose of clarity, this evaluation did not involve analysing energy programs/initiatives. Publicly available policy documents were collected (July to August 2020) and were assessed using the 5E Framework. The 5E approach evaluates a social welfare policy in terms of its effectiveness, efficiency, ethical considerations, evaluation of alternatives and establishment of

recommendations. Policies were then assessed as to their utility in providing all three types of assistance: prevention, support and relief (a depiction of the classification of the policies examined is provided in Chapter 5, Figure 12).

#### **Findings – Using the 5E Framework:**

- **Efficiency:** Policies were found to contain minimal details on costs or expected impacts, were generally small-scale (e.g., retrofits to a limited number of homes) and focused on immediate, though only partial, support rather than the long-term removal of structural barriers.
- **Ethical:** Policies were found to be generally ethical. However, some policies are fragmented between jurisdictions, portfolios and even within departments or appear to operate in silos. Some policies contain ‘tunnel vision’ when it comes to consumer protection (e.g., have limited focus on unintended consequences or do not sufficiently curtail poor retailer behaviour).
- **Evaluation of alternatives:** Minimal evidence was available to ascertain whether alternative policy options had been evaluated and assessed prior to developing new policies.
- **Establishment of recommendations:** Policies were found to be mostly high level and vague, with minimal focus on tangible implementation.
- **Effectiveness:** Policies were invariably found to be poorly targeted and not necessarily capable of reaching those in need. This may partly explain an earlier finding that many households do not meet eligibility criteria or are unable to access assistance (see Chapter 3). The outcome is that many households are not receiving the help they need despite policy that is meant to do so (e.g., rebates, solar, interest-free loans).

Overall, it was found that policies contain some favourable features, although many could be improved with regard to all 5E Framework elements. However, **polymakers’ focus should be to improve the effectiveness and efficiency of energy policies**. While the other three E’s are still important, effectiveness and efficiency are arguably the two most important. The primary objective of any policy should be its effectiveness. A highly efficient policy would achieve maximum positive outcomes (effectiveness) with minimum wasted expense.

#### **Findings – Using the P-S-R Framework:**

- **Prevention:** Policies to help prevent households from falling into hardship were found to focus on preventing structural barriers. These were usually limited to retailer regulations, which are important to have but leave five other structural barriers not being properly addressed.
- **Support:** A major gap was found when it comes to policies providing support (initiatives that help households to better manage energy and move out of hardship).
- **Relief:** Numerous policies focused on providing relief in the form of, for example, concessions, subsidies and vouchers, but were deemed too small to provide adequate relief to enable householders to move out of energy hardship, especially for those experiencing acute or extreme hardship.

In their current form, the general and high-level nature of energy policies means they fall short in adequately addressing energy hardship, which may explain the increasing number of households falling into this state (findings from Chapter 2).

#### **Overall Policy Gaps**

The policy gap analysis revealed four key issues that require attention:

- **Policy oversight:** There is a lack of policy directly related to addressing energy hardship.
- **Vague policy:** Policies are high-level, ambiguous and lack clear strategy, goals and objectives.
- **Policies poorly linked to practice:** Policies are not well linked to initiatives, programs or laws.
- **Treating symptoms not causes:** High-level, general policies hinder the root causes from being treated.

## Gap Analysis of the Trajectory for Low Energy Buildings (Chapter 6)

The Trajectory for Low Energy Buildings ('the Trajectory') is an overarching document agreed to in late 2018 by the former COAG (Council of Australian Governments) Energy Council and Building Ministers' Forum [1]. It sets out a high-level aspirational goal for new and existing buildings to have sufficiently low energy use, so they can achieve net-zero energy (and carbon) usage. It includes timelines for specific committed actions and commitments to investigate proposed new actions.

**Findings:** A key finding of this investigation is that poor housing quality plays a crucial role in households experiencing hardship and is identified as one of six structural barriers that need to be addressed. For this reason, the potential role of the Trajectory in focusing on improving the energy efficiency and distributed energy resource (DER) readiness of new and existing buildings is important. However, **energy efficiency and DER readiness are limited subsets of the suite of policy initiatives required to address the drivers, indicators and outcomes of energy hardship**. Moreover, the level, type (P-S-R) and funding of programs required to provide energy efficiency and DER for households in or vulnerable to energy hardship will differ across households.

### Key Weaknesses of the Trajectory in Addressing Energy Hardship

- Most policies proposed in the Trajectory that have the potential to alleviate energy hardship have not yet been accepted by ministers at a national level or by a majority of jurisdictions
- The proposed actions are only defined at a very high level and do not presently address the specific goals, funding levels and mechanisms or design best practices that will be required if they are to reach those in need and adequately alleviate energy hardship.
- The proposed actions include an 'in principle' commitment to developing initiatives that would assist households facing vulnerability and hardship; however, specific details are needed to provide a roadmap for the additional features required to ensure the Trajectory actions do not have perverse and regressive consequences (this report provides this roadmap, see Chapters 7 and 8).

**We conclude that the Trajectory** proposes much-needed policy that, when (and if) fully implemented, will alleviate some of the barriers for households facing energy vulnerability and hardship, but, **on its own, contains insufficient policy to properly address this issue**. The funding underpinning policies and programs that are developed under the Trajectory need to be materially sufficient to meet the extent of the problem, as this investigation identified that previous efforts fall short (see findings from all three levels of analysis). **Proposed actions in the Trajectory around financial incentives for upgrades, minimum energy standards for rental properties – and home energy disclosure frameworks – need to be augmented, designed and funded in ways that ensure they are sufficient and targeted to the particular challenges of households in or vulnerable to energy hardship**. Moreover, these proposed actions only address a subset of the drivers of energy hardship. As such, significant additional policy is needed to remove the other structural barriers imposed on households (see Chapters 3 and 4). Five of the 17 policy solutions provided in Chapter 7 outline the additional actions needed in the Trajectory that would better address energy vulnerability and hardship.

### Aim 4: Provide a suite of policy solutions to alleviate energy hardship

In synthesising the research findings from this investigation, we developed elements of good policy or best practice principles and identified key policy challenges that need addressing. We then identified **a suite of 17 policy solutions that, if implemented, would considerably reduce energy hardship in Australia**. Underpinning these solutions is the need to **develop better policy rather than more policy**. Challenges in achieving this lie in

the complexity of the drivers of energy hardship and that potential solutions typically sit outside the direct control of energy ministers. **Working across portfolios is needed**, where coordination between housing, planning and social services, along with energy/environment departments, will yield significantly better results.

Details of the 17 policy solutions are provided in Chapter 7 and centre on addressing the following **four key policy areas**:

1. **Equity in energy pricing** (4 initiatives).
2. **Access to energy efficiency and distributed energy resources** (6 initiatives).
3. **Energy billing practices and consumer protection** (3 initiatives).
4. **Linkages to broader social and economic hardship support** (4 initiatives).

#### **Aim 5: Provide a list of evidence-based recommendations**

This investigation revealed that many Australian households are suffering in more ways than previously realised, and that current efforts to measure the extent and nature of energy hardship in Australia underestimate its prevalence and severity. Further, findings show that current efforts are falling short of alleviating energy hardship. Given this situation, it seems highly likely that, unless things change, many households will be left behind in the energy transition. This can be addressed, but only with substantive investment in terms of design, approach, funding and coordinated efforts to ameliorate the impact of the numerous obstacles negatively affecting, and sometimes imposed on, households. The Trajectory provides the impetus for substantive improvements in housing quality in Australia, which is an imperative outcome. However, as identified in this investigation, addressing housing quality alone will not properly address and alleviate energy hardship. It is vital that all structural barriers identified in this report are addressed. As mentioned above, and as was the case with the Trajectory, cross-portfolio input (beyond energy) will be required to action some elements of the recommendations provided.

The following six main recommendations were drawn from the analyses conducted at all three levels of this investigation (Chapters 3–6) and were guided by our critical review of the broader literature (Chapter 1) and analysis of existing data (Chapter 2). Each recommendation contains a list of sub-recommendations (further detailed in the report) and shows how the 17 policy solutions (from Chapter 7) are mapped to each. The last recommendation refers to the next phase of research required to fill some of the gaps in the data collected (identified in Chapter 2).

#### **Recommendations**

1. **Create a coordinated, cohesive and strategic bi-partisan approach** to reducing energy hardship because current efforts are not sufficient.
2. **Reform social housing** by building a sufficient number of energy-efficient homes to address the need within each jurisdiction, and retrofitting existing social housing to improve energy efficiency.
3. **Upgrade existing poor-quality housing** to improve its energy efficiency – additions to the Trajectory are needed to protect consumers facing vulnerability or who have already fallen into hardship.
4. **Explore ways of ensuring energy is affordable** by re-imagining how energy is costed and priced and by increasing the social benefit amount.
5. **Reconsider and update retailer obligations** to reduce the flaws in common retailer practices and retailer hardship programs.

#### 6. Fund and conduct phase 2 of Finkel 6.6 to:

- develop a targeted, suitable measurement tool, and use it to more accurately measure the extent of energy hardship (primary data collection to establish a baseline), which can be subsequently used to evaluate the impact of future programs and policies (tracking)
- produce a taxonomy for the initiatives and policies within the P-S-R Framework tailored to suit each ABATE hardship state
- devise a 'best practice' method for accelerating the uptake of energy efficiency and DER, particularly for households facing vulnerability and hardship, to ensure 'no-one is left behind'
- conduct a cost–benefit analysis of policy solutions provided in this report.

In conclusion, insights from this investigation reveal flaws and gaps in current efforts to address energy hardship in Australia, which limit their ability to ameliorate household suffering. Findings also highlight the strengths and positive features of certain aspects of policies and initiatives that have worked or are well-designed, which can be used to inform areas to both emulate and to improve in future. Many promising initiatives previously or currently running across jurisdictions show the progressive thinking around addressing energy hardship but are not currently geared to address hardship to the extent and form that is warranted. By applying the frameworks developed from this investigation and implementing the policy solutions and recommendations provided in this report, we believe that energy hardship will be substantially reduced and will help ensure that Australian households can move towards a future of shared benefits and energy wellbeing in the journey towards low-carbon living.

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## The Finkel Report: Identifying inequity in the electricity market

In October 2016, the COAG Energy Council asked Dr Alan Finkel AO to lead a review of the National Electricity Market (NEM). Presented in June 2017, the Finkel Report delivered a plan to maintain security and reliability in the NEM as the sector transitions to a new future. The report found that structural issues in the energy market mean that vulnerable consumers, such as low-income households, are experiencing limited benefits from new DER technologies such as rooftop solar. From these findings, the Finkel Report produced Recommendation 6.6:

*The COAG Energy Council should engage with relevant portfolio areas including housing, and with state, territory and local governments, to identify:*

- *Opportunities to accelerate the roll out of programs that improve access by low income households to distributed energy resources and improvements in energy efficiency.*
- *Options for subsidised funding mechanisms for the supply of energy efficient appliances, rooftop solar photovoltaic and battery storage systems for low income consumers.*

Designing initiatives to deliver the benefits of the energy transition to all households requires a comprehensive understanding of these households, particularly their circumstances, their interaction with the energy sector, and the barriers they face. This understanding will require new frameworks to understand and articulate energy hardship, as well as new metrics to evaluate the performance of energy sector initiatives and progress towards alleviating energy hardship.

Since the release of the Finkel Review final report in 2017 the affordability and wellbeing challenges for many Australian households have intensified due to high energy prices and rising cost of living. These developments have led to a growing number of Australians unable to use energy in their homes without suffering or compromising other essential needs.

### The Current Project: Developing an understanding of energy hardship

The response to Finkel Recommendation 6.6 has evolved into the current project, Assessing Energy Inequity and the Distributional Effects of Energy Policies. This project is being delivered under the COAG Energy Council's National Energy Productivity Plan (NEPP), which aims to support best practice services for vulnerable consumers and reduce the barriers vulnerable consumers face in effectively engaging with energy productivity measures.

Specifically, this project is focused on enabling all consumers to share in the benefits of the energy transition, in particular consumers with low incomes, experiencing vulnerability, or otherwise facing barriers to accessing the benefits of distributed energy resources and energy efficiency improvements (e.g. renters). Based on the advice of experts and stakeholders who attended a project scoping workshop in February 2020, the project was divided into two phases:

#### Phase 1

The current phase of the project, Phase 1, seeks to understand the causes and impacts of households experiencing energy hardship, explore data and metrics as markers of energy hardship, and identify best practice approaches to alleviate it.

#### Phase 2

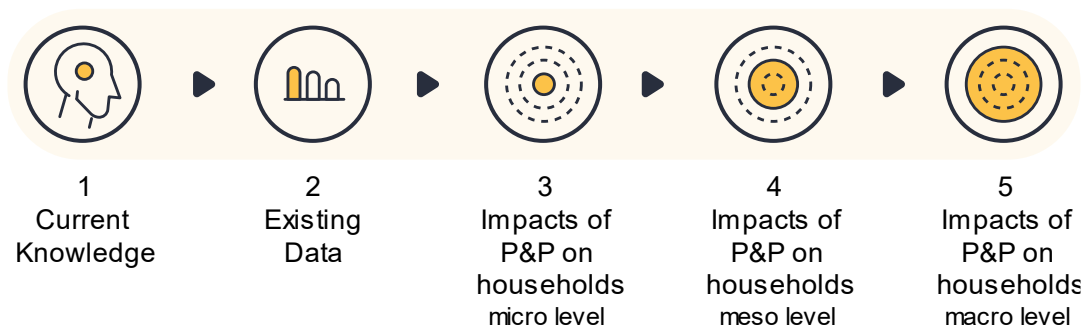
Phase 2 will build on the outputs of Phase 1, and fill the identified key knowledge gaps by establishing a data regime to inform the development and operationalisation of the overarching Energy Equity.

## OVERVIEW OF THIS INVESTIGATION

Aligning with the project scope, the GEER Consortium (comprising six organisations and a team of 12 people) first explored existing knowledge and data sources to understand the nature and extent of energy hardship in Australia. We then conducted a tri-level investigation which involved obtaining insights from a:

- micro level: exploring the impacts of programs and policies on households from the perspective of individuals who work with households
- meso level: exploring the impacts of programs and policies on households from the perspective of individuals who are program leads or policy experts
- macro level: exploring why there might be gaps by conducting a policy gap analysis using policy documents.

This triangulation produced results that contributed to building a deep understanding of energy hardship and identifying how to improve ways of addressing it. The insights gained are provided throughout this report across the five project scope areas listed below.



\*P&P = Energy-related programs and policies

**Chapters 1 and 2:** The first two chapters explore the existing body of knowledge on energy inequity or disadvantage (literature review) and a range of existing data (data analysis and evaluation from various sources). These chapters forged the basis for the primary data collection components.

**Chapters 3 and 4:** The next two chapters share insights into research findings drawn from interviewing those who work with households vulnerable to hardship (micro-level) and program/policy experts in the field (meso-level). The results reveal details about households' lived experiences and the impact of programs and policies that help or hinder their struggles. Together, the findings shed light on what and why households face hardship.

**Chapters 5 and 6:** The following two chapters present a broad look at energy policy documents (macro-level), including an evaluation of policy documents drawn from all regions and an evaluation of the proposed Trajectory for Low Energy Buildings (residential), referred to in this report as 'the Trajectory'. The analysis conducted sheds light on the gaps in the current policy suite.

**Chapters 7 and 8:** The last two chapters present the implications of our synthesised research findings and key insights that emerged from this investigation. They provide a set of policy solutions that address four key policy challenges and which can be informed by best practice principles (Chapter 7); this is followed by key recommendations for approval and implementation (Chapter 8). These include next steps for research, policy development and actions that can be implemented immediately to relieve and address energy hardship in Australia.

# CHAPTER 1

## Understanding Energy Inequity

### Literature Review and Framework Development

#### Introduction

Previous research has established that households suffer when they cannot afford to use energy in the home and that this is prevalently due to systemic issues around housing quality and sector practices. In addition, changing household behaviour has been shown to yield minor changes in energy bills and consumption [2]. Moreover, it has been established that the negative impact on households goes beyond energy use and bills and can negatively affect their physical health, stress, comfort, confidence, attitude and self-efficacy, among other outcomes [3].

With notable complexity in the sector being mirrored with a plethora of research in the literature, we critically reviewed research findings from the last 20 years to delineate key concepts and trends that will inform future efforts to alleviate energy hardship. Our approach to understanding how energy inequity is defined, conceptualised and measured was informed by searching the international body of knowledge to establish a common language and understanding of the extent of energy inequity in Australia. The results of this literature review are presented here.

#### Terms and Concepts

##### Key Terms

From a search of over 800 sources, with a refined 108 relevant papers/reports, we found significant variations in how energy ‘inequity’ is defined, understood and measured. Common terms used globally include energy poverty (Europe and Latin America), fuel poverty (the United Kingdom and France), energy disadvantage (North America) and energy hardship (Australia) [4, 5, 6]. In terms of capturing the lived experience of households that face difficulty in using energy and paying bills, where sacrifices in health, comfort and wellbeing are common [7, 8, 9], we selected a term that we believe reflects the ‘state’ of suffering. We recommend that the best term to use is ‘energy hardship’ for the following reasons:

**Recommended Term:**  
**Energy Hardship**

- a deeper analysis of words and their meanings suggests this term would suitably reflect the ‘state of being’ in hardship (*i.e.*, synonyms include deprivation, austerity, distress, pain, suffering)
- households do not necessarily identify with being ‘in poverty’ or ‘disadvantaged’, and are more likely to identify with experiencing ‘hard times’; therefore, ‘hardship’ is likely to be a less stigmatised term
- ‘hardship’ already has a high adoption rate in Australia, though we note the term should be extended beyond the current limited use for retailer ‘hardship programs’
- the term embraces a recent development in the literature where the term should describe the situation the household is experiencing and should not involve causes or consequences (*e.g.*, inequity) (discussed further below).

## Framing Vulnerability and Hardship

### Understanding Vulnerability

Vulnerability can be broadly defined as the *risk* to one's physical, emotional and/or psychological wellbeing when subjected to stressful environments or adverse events [10, 11]. People experiencing vulnerability have less resilience to adverse events or changes to their environment, finding them difficult to cope with or overcome [12]. Therefore, **vulnerability refers to one's potential to experience harm** and suffering. Baker *et al.* [13] explain that "vulnerability is often a misunderstood and/or misused concept, equated erroneously with demographic characteristics, stigmatisation, unmet needs, discrimination, or disadvantage" (p134). It is possible that other terms, such as fuel poverty or disadvantage, could be similarly misunderstood.

### Vulnerability within the Energy Literature

Studies in Europe have demonstrated that different regions define and approach energy 'vulnerability' in unique ways [14]. While some adopt a narrow view, focusing solely on the "difficulty in affording energy costs" [15, p22], others emphasise specific circumstances often associated with heightened levels of vulnerability, such as ongoing health conditions (particularly serious permanent diseases/conditions/disabilities), transient health conditions (*e.g.*, alcohol/drug addiction, illnesses, *etc.*), socio-economic disadvantage (both long-term and transient) and racial inequality [16–20].

### Retailer Responsibilities to Addressing Consumer Vulnerability

Given that certain situations trigger vulnerability, service providers (such as energy retailers) must ensure that their behaviour does not create or exacerbate such situations [21]. Organisations that regularly interact with consumers must take particular care to preserve consumer dignity while providing them with support [22]. For example, retail consumers often face structural barriers that limit their access to goods and services, service failures that limit their opportunity for redress, or personal circumstances that reduce their capacity to deal with escalating bills and prices (*e.g.*, energy-inefficient housing that inflates energy bills) [12, 23]. As a result, consumers become dependent on markets and retailers creating fair exchanges [13]. Although consumers can experience a range of vulnerabilities, the primary one that retailers are well-positioned to support is financial vulnerability, wherein retailers provide assistance to consumers who are experiencing debt or difficulty in paying (and accessing) consumables [24].

Retailers should support consumers who are facing high vulnerability, not only to make a social contribution but because they have a moral and financial obligation to do so. Indeed, as a corporate citizen, all corporations have a moral responsibility to those citizens who inadvertently provide them with a social licence to operate [25, 26]. Retailers can and should provide tailored, appropriate support for people experiencing vulnerability [21, 24]. Evidence indicates that consumers can overcome or cope with vulnerability more effectively when they can draw on resource strengths or when service providers implement a more "resource-sensitive" approach [27, 28]. Evidence in Australia suggests a wide variability in energy retailer practices where in some instances, consumers receive prompt and appropriate support and do not fall into debt or hardship, and many instances where the retailer was lax or obstructive in providing necessary supports, which either did not attend to or worsened the extent of hardship [26, 29, 30].

## Moving from Characteristics to Circumstances

### Recent Shift in Understanding

Smith and Cooper-Martin's [31] early definition of consumer vulnerability helped propel the field towards understanding vulnerability but is plagued with referring to the characteristics of the person: "those who are more susceptible to economic, physical, or psychological harm ... because of characteristics that limit their ability to maximize their utility and well-being" (p6). They emphasise demographic characteristics, particularly race and education, as limiting factors that prevent consumers from "maximising utility and wellbeing in economic transactions" (p6). In contrast, others, such as Baker *et al.* [13], argue that defining vulnerability on the basis of demographic characteristics creates a perception that some people or groups are *always* vulnerable, which risks defining them by 'who they are' rather than by the challenges they face. This perspective supports the notion that it is the individual's condition or circumstance that heightens or reduces their exposure and risk of harm (vulnerability) rather than their individual characteristics.

Such views reflect a **recent and important shift in the literature away from an emphasis on personal characteristics and towards the specific circumstances that determine resilience and vulnerability** [21, 32–34]. Using a person's/household's characteristics to understand and measure energy hardship has been subject to increasing criticism as it de-emphasises key social, structural and technical barriers and places an unnecessary and sometimes unsavoury judgement on the household [35–37]. Instead, the issue must be approached from the perspective of **consumers finding themselves in vulnerable circumstances rather than as individuals who are inherently vulnerable** [38]. Accordingly, our understanding has now developed to reveal that 'vulnerability' is something that anyone can experience. It appears that these experiences can stem from two broad sources where a person may become vulnerable due to:

1. Their **past experiences, choices or personal events**. For example, loss or bereavement may heighten or trigger vulnerability; therefore, "anybody can become vulnerable at any time" [38, p4]. These can be termed 'personal factors'.
2. **Factors imposed on a person/household** and which may not be directly linked to the person/household affected [17]. For example, vulnerability can be caused or worsened by poor policies and actions from both government and retailers. This might occur if new regulation increases energy prices or removes consumer protections which changes the circumstances of the household and, if they are unable to adjust, they may experience harm (*e.g.*, stress, fear, poor health, *etc.*). It could also occur if retailer actions or policies are inflexible or if they are unhelpful in addressing consumer concerns. These can be termed 'structural barriers'.

While some continuing circumstances are more likely to create vulnerability than others (*e.g.*, those who face racism, gender bias, unemployment, disability), there are numerous additional short-term factors that can affect any member of society and exacerbate their level of vulnerability [14, 18]. For example, sudden loss of income (*e.g.*, job loss), visitors staying for extended periods or household members becoming ill may all compromise the household's ability to afford energy.

### Hardship as a Circumstance

We believe that further advancement is needed to overcome an uncited flaw in current logic. Even those who have advanced the field (*i.e.*, [13]) describe vulnerability as the end-state condition and not the precondition, which we argue unnecessarily deviates from the definition of the word itself. For example, if 'vulnerability' means 'susceptibility to harm', it seems strange to use the same word to describe the precondition as well as

the result once harm occurs. This is why we advocate for a move away from using the term ‘vulnerability’ – which is best used as an umbrella description of the condition prior to experiencing harm, whereas once the person has been harmed, they enter a different state. As such, all households are ‘vulnerable’ to suffering due to energy (e.g., a blackout); vulnerability is reduced as resilience grows (e.g., install a generator/solar power) and is increased as resilience declines (e.g., tenancy can reduce resilience and increase vulnerability due to a lack of agency in making changes to the dwelling).

This conceptual development formed an additional, compelling reason for selecting ‘hardship’ as a suitable term as it closely depicts a ‘situation’ (hard times). We therefore recommend using ‘hardship’ to describe households who are already in a ‘state’ of suffering and in need of assistance (see Figure 1).

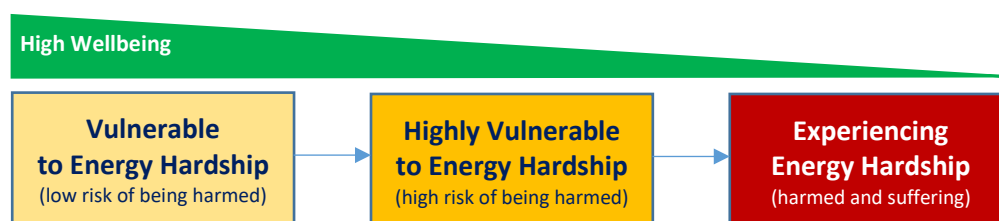


Figure 1: Delineating the Difference between Vulnerability and Hardship

This separation of terms and conceptualising hardship as a ‘state’ has an additional benefit: it opens a new canvas for program and policy reconsideration.

### Definition of Energy Hardship

Consistent with these developments in the literature, we offer the following new definition as it clearly defines the ‘state’ of energy hardship, without including terms that are causes of the state (e.g., affordability, income, efficiency of thermal shell/appliances, etc.). It also describes the circumstance, with the additional benefit of indicating both hardship and wellbeing – ‘unable’ indicates the hardship state, whereas if this becomes ‘able’ it would describe the wellbeing state.

**Recommended definition for ‘energy hardship’**  
**When a household is unable to use energy services in the home to live a comfortable, dignified and healthy life without restricting other essential needs.**



#### Short Definition of ‘energy hardship’

**When a household is unable to use energy without suffering.**

Conceptualising energy hardship as a situation also provides us with an opportunity to re-think how we understand and measure the concept. It also overcomes a flaw in the literature where energy hardship has been commonly conceptualised and measured largely using static-based characteristics of the household members.

### Measures and Metrics of Energy Hardship

Most metrics used to measure energy hardship have been largely informed by the data that are available rather than the data that are needed [14, 39, 40]. Common measures used can be grouped as being:

- **Expenditure** measures, which typically refer to metrics that use thresholds to indicate whether a household's income-to-energy spending ratio is too high (e.g., >10% of income spent on utility bills) [41–46].
- **Objective** measures, which include metrics typically collected during home audits (e.g., indoor temperature, mould, appliance efficiency, etc.) [42, 47–49].
- **Self-report** measures, which rely on the views of households (subjective) and are typically captured by a survey (e.g., perceived thermal comfort, restriction behaviours, financial stress, etc.) [5, 50–53].
- **Composite** measures, which are those that incorporate an array of the above measures in an unweighted or weighted index (e.g., the multidimensional energy hardship index) [6, 45, 54].

Table 1 provides a summary of the strengths and limitations of these measures. For details of the common metrics used for each measure, see Appendix A.

**Table 1: Strengths and Limitations of Energy Hardship Measures**

| Measure   | Strengths  | Limitations   |
|---|--|---|
| <b>Expenditure measures</b><br>(Ratio of household income and spend on energy)  | <ul style="list-style-type: none"> <li>• Objectively calculated</li> <li>• Transparent</li> <li>• Empirical and quantitative allowing for comparison</li> <li>• New formulas take self-imposed under-consumption into account but are more complex</li> </ul>  | <ul style="list-style-type: none"> <li>• May exclude under-heating households</li> <li>• Rich households may be classified in a similar class as those experiencing energy hardship</li> <li>• Cut-offs (such as 10%) are arbitrary with little justification</li> <li>• Cross-comparison between country difficult without more robust and detailed datasets</li> <li>• Some papers examine gross rather than net income, thereby underreporting the extent of the problem</li> <li>• The formula reduces the influence of energy pricing, obscuring energy market impact</li> </ul> |
| <b>Objective measures and consensual-social indicators</b><br>(Homes are audited or devices are used to objectively measure energy issues and related indicators) | <ul style="list-style-type: none"> <li>• Measures curtailment behaviours that households may not talk about</li> <li>• Real-world, observable metrics can be obtained by a trained surveyor</li> <li>• Captures wider elements such as social exclusion and material deprivation</li> <li>• Audits can be customised to households and offer energy efficiency advice</li> <li>• Measures actual outcomes</li> </ul> | <ul style="list-style-type: none"> <li>• Time-consuming to evaluate fully</li> <li>• Data capture and reliability depends on the degree of household participation</li> <li>• Households may change their behaviour when they know they are being monitored (the Hawthorne effect)</li> <li>• Households may say they are energy conscious or behave in energy-efficient ways to save face (the social desirability effect)</li> <li>• Complex data analysis may be needed to assess results</li> </ul>   |
| <b>Self-report measures</b><br>(Survey questions)   | <ul style="list-style-type: none"> <li>• Questions are designed to be simple and measure distinct concepts</li> <li>• Relevant non-energy topics can be assessed</li> </ul>  | <ul style="list-style-type: none"> <li>• Subjective indicators differ strongly with personal standards or even 'feelings'</li> <li>• Many studies caution their interpretation</li> </ul>   |

|  |  |  |
|--|--|--|
|  | <ul style="list-style-type: none"> <li>• More cost-effective and economical method</li> <li>• Large amounts of data can be gathered relatively quickly</li> <li>• Questions can be adapted if needed</li> <li>• Can be supplemented with follow-up questions or visits to speak with householders for more long-form research, such as interviews</li> </ul> | <ul style="list-style-type: none"> <li>• People may want to avoid any embarrassment by not answering truthfully</li> <li>• Online surveys may allow the same people to fill in multiple questionnaires if not carefully monitored</li> </ul>   |
| <b>Composite measures</b><br>(Uses various metrics that are combined to form an index that may or may not be weighted) | <ul style="list-style-type: none"> <li>• Argued as being a more coherent framework for measurement</li> <li>• A more refined classification of households can be obtained to deliver targeted policies</li> <li>• Measures a wide variety of energy issues capturing different elements</li> </ul>   | <ul style="list-style-type: none"> <li>• Weighting is somewhat arbitrary</li> <li>• No obvious threshold for inclusion or exclusion categories</li> <li>• Using a variety of measures that have their own limitations bring their disadvantages into a composite measure</li> <li>• Error of exclusion is still a possibility</li> <li>• Many data sources are required that may be difficult to obtain</li> </ul> |

## New Frameworks to Better Understand and Address Energy Hardship

We drew on recent developments in the literature and from our critical review (*i.e.*, the difference between pre- and post-states, the framing from characteristics to circumstance, and the confusion between causes and consequences) to develop new frameworks that can be used to better inform the design of future energy programs and policies.

### Introducing the DIO Framework

As mentioned earlier, one area contributing to a lack of development in the literature is a failure to properly delineate between the factors that trigger households to fall into energy hardship and the consequences once they are experiencing it [14, 53]. This has meant a lack of alignment and progression of research findings, which has produced a high level of complexity [55] rather than clarity.

In response, we have conceptualised all the previously explored factors into one of three components of energy hardship and developed a new framework (see Figure 2). Termed the **DIO Framework**, it represents Drivers (causes or triggers of hardship), Indicators (symptoms of the ‘state’ of hardship) and Outcomes (consequences of being in hardship).

The delineation between the drivers, indicators and outcomes is important to ensure that people are not defined by factors that may not involve them experiencing hardship. For example, income can be a driver that can lead to hardship but is not a measure of hardship itself. This can be seen in the following brief example: if energy-efficiency upgrades reduce energy bills, the household’s low income may not have changed, but they

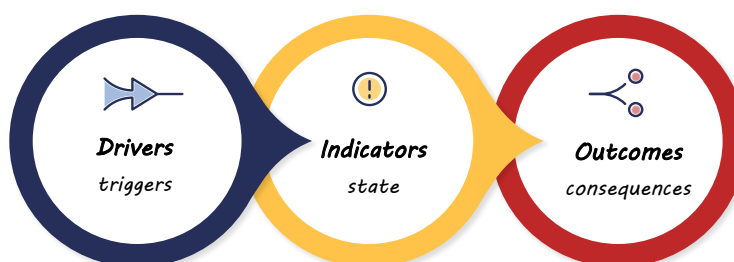





Figure 2: A Model of the Causes and Consequences of Energy Hardship (DIOs)

can now afford to pay their energy bills and therefore may no longer suffer hardship. This point emphasises the importance of adopting a holistic view of the circumstances the household faces, rather than focusing solely on their income vs energy bill, *per se*. However, ‘low-income households’ have been commonly used as the term in Australia for targeting policy and programs to address energy hardship (e.g., the national Low-Income Energy Efficiency Program 2013–16). It is therefore crucial to make the distinction between the concepts in the DIO Framework to ensure that the way it is measured in future more accurately reflects the situation and the position faced by households; DIOs captures the ‘journey’ of hardship and should also serve to better inform how to assist households to ‘journey’ out of it.

For the purpose of this review, a content analysis was conducted on all the DIO components and energy hardship metrics used across the literature (following Saldana’s [56] and Schreier’s [57] guidelines). This analysis classified each component (or construct) that was measured as being either a driver, indicator or outcome of energy hardship. By so doing, we also established the suitability and validity of framing energy hardship measures using DIOs. Table 2 outlines the DIOs identified from this content analysis. We view ‘indicators’ as evidence of the ‘state’ of energy hardship – that suffering is occurring and the indicator will suggest it, while the outcome is the nature or flow-on effect of the suffering. For example, low indoor temperatures in cold weather would be an ‘indicator’ that the household members might be struggling to stay warm, whereas lacking thermal comfort due to the low indoor temperature is an outcome (for some households, low thermal comfort may produce an additional outcome, such as poorer health) [58, 59]. We believe that a considered delineation such as this will inform:

- what causes hardship so that structural barriers can be prevented and personal household factors that may amplify the situation can be ameliorated or buffered, which would also build energy resilience and wellbeing
- more insightful ways of measuring the level of energy hardship by bundling the elements in this way
- the energy policies and initiatives that are needed to relieve energy hardship and direct more fit-for-purpose solutions.

**Table 2: Components of Energy Hardship Classified as Drivers, Indicators and Outcomes**

|  Drivers (9)   |  Indicators (8)   |  Outcomes (8)   |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Household income</li> <li>• Health status</li> <li>• Size of household</li> <li>• Type of dwelling</li> <li>• Unique energy needs</li> <li>• Dwelling energy efficiency</li> <li>• Energy cost</li> <li>• Access</li> <li>• Financial/energy literacy</li> </ul> | <ul style="list-style-type: none"> <li>• Thermal comfort</li> <li>• Indoor temperature</li> <li>• Energy consumption compared with household/dwelling size</li> <li>• Heating/cooling expenditure</li> <li>• Bill compared with income (e.g., 10%+)</li> <li>• Under-consumption of energy</li> <li>• Difficulty paying bill</li> <li>• Mould, damp, rot, drafts, leaks</li> </ul> | <ul style="list-style-type: none"> <li>• Under-consumption of other essentials</li> <li>• Payment default, arrears, debt</li> <li>• Poor health</li> <li>• Energy disconnection</li> <li>• Social constrictions</li> <li>• Landlord issues</li> <li>• Poor living conditions</li> <li>• Stress, anxiety, depression</li> </ul> |

While these 25 DIOs can be found in the literature, they are not collectively utilised or measured in Australia or elsewhere; that is, previous studies have utilised metrics that measure a limited number of drivers, indicators or outcomes of energy hardship but have not included measures across all three components. The result is that most select only one or two factors to capture energy hardship. This suggests that **commonly used measures of energy hardship must underestimate the extent of hardship** (in terms of both number of households in

hardship and the severity of their suffering). Given the variety of factors at play, we propose that the DIO Framework is adopted to better understand the causes of energy hardship, the indicators that suggest households are experiencing it and its adverse effects or consequences. We do not suggest that all factors need to be measured, but a broad and insightful composite needs to be formed. The viability of adopting the DIO Framework is discussed in Chapter 2, and a proposal for achieving this is provided in our recommendations for Phase 2 of Finkel 6.6.

### *Introducing the ABATE Hardship Framework*

The literature does not distinguish the different levels or types of hardship states that many households experience. Households may fall into and out of energy hardship at various times and for numerous reasons. Similarly, experiences of hardship are likely to vary. Currently, there is no framework for capturing this variability. As such, we developed the **ABATE Hardship Framework**. The first letter of 'A' reflects the *amplifying* influence of personal factors/structural barriers, and the other letters reflect each of the four hardship states (Battle-on, Acute, Transient and Extreme). We believe it is important to develop such a framework to allow programs and policies to properly address the differences in household needs based on their lived experience. The 'state' of being in hardship differs in terms of duration and severity, which informed the development of the **four hardship states** (see Figure 3).

#### **Temporary States of Hardship**

**Transient Hardship:** reflects a short-term and mild level of energy hardship. Households may receive support or find their own path and move out of hardship. However, households in this state are likely to move into a more severe state if they cannot change their circumstances. It is likely that this state captures households who find themselves falling into and moving out of hardship frequently.

**Acute Hardship:** reflects a short-term and severe level of energy hardship. Households may have had a sudden and adverse event occur, changing their situation, which places them in a more extreme state of suffering. Households will need assistance to reduce the extent of suffering in the first instance, and then they will need support to help move out of hardship. Without support, households risk living in this severe state for longer or moving into an extreme state.

## Enduring States of Hardship

**Battle-On Hardship:** reflects a long-term and mild level of energy hardship. Households in this state are likely to struggle with every energy bill and somehow manage to cope until the next bill comes. Households will likely need assistance to get out of this hardship state and to prevent them from falling into the extreme state.

**Extreme Hardship:** reflects a long-term and severe level of energy hardship. Households in this state likely experience multiple forms of hardship and are in critical need of assistance to reduce the severity of their suffering. This assistance will be required beyond ‘energy’. Once their crisis is averted, support will be needed to help them move out of hardship.

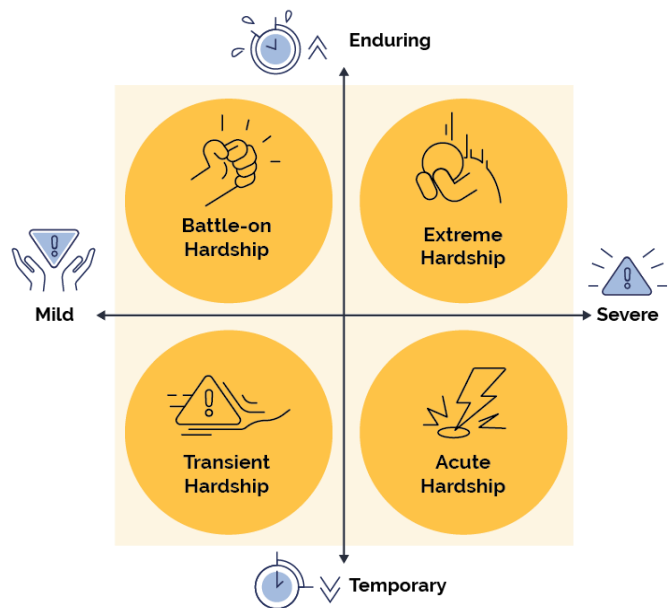


Figure 3: The ABATE Hardship Framework: Four States by Duration and Severity of Suffering

We imagine that households would first fall into hardship by entering either the transient or acute hardship state and would move out of hardship from either the battle-on or transient hardship states. Importantly, to prevent or alleviate energy hardship, programs and policies need to understand how hardship states could worsen if household needs are not attended to while also considering how the household’s situation could be improved in each state by nuanced programs and policies.

## The Amplifier Effect

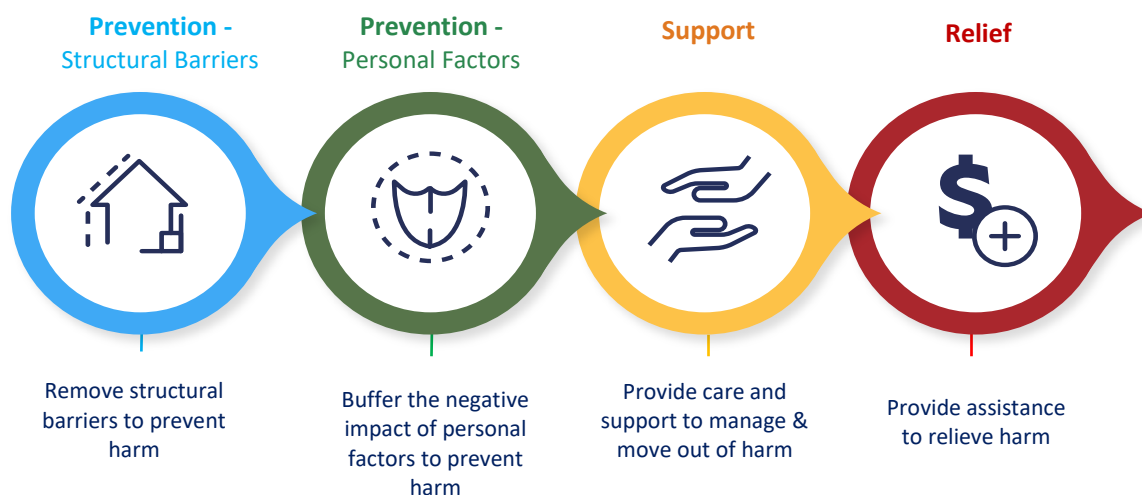
Hardship states can be amplified depending on the extent to which the household has the motivation, opportunity and ability (MOA) to change their circumstance [60–62; see [24] for an application of MOA to energy hardship). Collectively, amplifiers are those factors that may reduce the ‘agency’ of the household. These can be grouped as representing **structural barriers** (e.g., barriers at the household level such as housing quality or retailer behaviour, or at the sector level such as energy prices, regulation and industry behaviour) or **personal factors** (internal factors such as culture, language, disability, frailty, etc. or external factors such as geographic location, family/friends, responsibilities or obligations, landlord/tenant relationship, etc.). These factors can amplify energy hardship by either triggering hardship, worsening the duration or severity of hardship or creating/heightening vulnerability (pre-hardship state).

## Introducing the P-S-R Framework

As previously explained, prior to entering the state of hardship (i.e., before harm or suffering has occurred), households are ‘vulnerable’ to or at risk of being harmed [24]. It follows that some programs and policies should be designed specifically to **prevent** households from falling into a state of hardship by actively building household resilience and thereby reducing vulnerability.

However, we argue that a different suite of programs and policies is needed for households already in hardship. Households may be struggling, unable to pay bills or buy other essentials, such as food. These households need

assistance in the form of **relief** so that their suffering is reduced. Once relief has been provided, the household then needs **support** to better manage how they can use and pay for energy and learn about the options available to them (which could also serve to help them move out of hardship; see Figure 4). Policies and programs will have less impact if they provide assistance in the form of ‘prevention’ when ‘relief’ or ‘support’ is needed. Conceptualising assistance using the **P-S-R Framework** may provide insight as to the impact of current efforts, as explored in subsequent chapters.



*Figure 4: The P-S-R Framework to Guide Strategies to Alleviate Energy Hardship*

These three frameworks – the DIO Framework, the ABATE Hardship Framework and the P-S-R Framework – were subsequently used to guide the remainder of our investigation and to ascertain whether current programs and policies warrant attention, given the new insights these frameworks provide.

## Summary

This literature review presents the findings of a comprehensive investigation into how energy hardship can be understood, measured and used to inform efforts to alleviate it. While there has been a plethora of research conducted, the field is complex due to a lack of conceptual development. Our critique revealed the inadequacy of current measures and metrics, largely due to the limited way the concept has been framed in the past, which means accurately knowing the full extent of hardship in any region or how it varies for households has not been well captured. The DIO, ABATE Hardship and P-S-R frameworks, uniquely developed as part of our investigation, should be useful tools to more accurately measure the extent of energy hardship and to inform the design and implementation of future endeavours to assist households in reducing their suffering.

## CHAPTER 2

# Understanding the Extent of Energy Hardship in Australia

## Exploring Existing Data



### Introduction


After obtaining a clear understanding of recent developments in the literature, this investigation then sought to determine whether it was possible to accurately measure the extent of energy hardship in Australia using existing data (*i.e.*, data previously captured for other purposes). Existing datasets were examined in an attempt to measure the scale and distribution of energy hardship. We drew on the key drivers, indicators and outcomes identified in the literature review to guide the measures used. We also investigated whether existing data are sufficiently detailed to reveal the number of households that experience hardship across the four ABATE hardship states. Consistent with the scope of this project, only national-level or broad datasets were used. The national-level data sources examined comprised: a range of summary figures on energy consumption and prices from the Australian Bureau of Statistics (ABS) on the consumer price index (CPI) and St Vincent de Pauls on consumers' bills; Australian Energy Regulator (AER) retailer reporting of electricity debt and hardship programs; Household, Income and Labour Dynamics in Australia (HILDA) data on energy expenditure, demographics and hardship information; and other publicly available data. Details of the datasets used are provided below.

### Insights and Missing Elements in Existing Data

The following table presents a summary of the data that were found and the components that were missing. Only seven of the 25 DIOs identified in the literature were represented in existing data, and within those, there were numerous omissions or limitations of the data itself (see Table 3).

**Table 3: Existing Data for Measuring the Extent of Energy Hardship**

| DIOs   | Accessible Data* and What it Tells Us  | Missing DIOs  |
|--|--|---|
| <br><b>Drivers</b>    | <p><b>Energy cost</b></p> <ul style="list-style-type: none"> <li>• Bills have increased (data: St. Vincent de Paul [63])</li> <li>• Consumption has decreased (data: AEMO [64])</li> </ul> <p><b>Income</b></p> <ul style="list-style-type: none"> <li>• Income rises have not kept pace with energy cost rises (data: ABS [65])</li> </ul> <p><b>Size of household</b></p> <ul style="list-style-type: none"> <li>• Larger households use more energy and have higher bills (data: HILDA [66])</li> </ul> | <ul style="list-style-type: none"> <li>• Dwelling energy efficiency</li> <li>• Type of dwelling</li> <li>• Energy consumption patterns</li> <li>• Financial/energy literacy</li> <li>• Access to support</li> <li>• Health/unique energy needs</li> </ul>   |
| <br><b>Indicators</b> | <p><b>Energy bills relative to income</b></p> <ul style="list-style-type: none"> <li>• Energy hardship is defined as energy costs &gt; 6% of income for low-income households (data: HILDA [66])</li> </ul> <p><b>Energy bills relative to household/dwelling size</b></p> <ul style="list-style-type: none"> <li>• Larger households gain economies of scale per person, even though their overall bills are higher (data: HILDA [66])</li> </ul>   | <ul style="list-style-type: none"> <li>• Heating/cooling expenditure</li> <li>• Indoor temperature</li> <li>• Mould/damp, rot, drafts, leaks</li> <li>• Thermal comfort</li> <li>• Difficulty paying bill</li> <li>• Under-consumption of energy</li> </ul> |

|  |  |   |
|--|--|---|
| <br><b>Outcomes</b> | <p><b>Payment plans, debt, arrears</b></p> <ul style="list-style-type: none"> <li>Although we acknowledge that current data capture only a portion of households in hardship, there appears to be a shortfall between the 2.5% who have low incomes relative to energy bills (data: HILDA [66]) and the 1.1% of retailer customers on retail hardship programs in 2018–19 (data: AER [67]).</li> </ul> <p><b>Disconnections</b></p> <ul style="list-style-type: none"> <li>The total number of households disconnected from electricity was 72,100 (2017–18) and 70,795 (2018–19). This drop masks an apparent broader <b>increasing trend</b> of disconnections (up almost 8,000 from 2016–17) (data: AER [67]).</li> <li>The number of households being disconnected who were on a payment plan in the 12 months prior to disconnection has increased quite significantly – by 72% (2016–19) (data: AER [67]).</li> <li>The number of disconnections for households on concessions has increased by 43% (data: AER [67]).</li> </ul> | <ul style="list-style-type: none"> <li>Negative health outcomes</li> <li>Social constrictions</li> <li>Landlord issues</li> <li>Poor living conditions</li> <li>Stress/anxiety/depression</li> <li>Under-consumption of other essentials</li> </ul> |
|--|--|---|

\* Some data are publicly available (e.g., ABS, AER) while others require approval prior to access (e.g., HILDA)

\*\* For figures reported using AER data, we acknowledge the estimates are below actual figures as data from three jurisdictions are not included

## Key Datasets Used

### HILDA Survey Data

The HILDA survey monitors spending and income from a large number of households and arguably provides the most detailed mechanism for tracking household income and expenditure over time in Australia. This dataset includes cases from all states and territories in Australia and is often used to analyse households' income, wealth and wellbeing progression through life stages. From these data, we drew information on the energy costs paid by Australian households. We also used these data to calculate different measures of energy hardship based on energy expenditure relative to income in an Australian context [66].

### AER Retailer Performance Data

The data reported by retailers and compiled by the AER records customer information relating to debt and hardship, including the number of residential and small business customers in energy hardship programs and the amount and duration of energy debt [67](AER, 2020). The data contain information on both electricity and gas customers and are reported quarterly for New South Wales, Queensland, the Australian Capital Territory, South Australia and Tasmania. On the advent of the COVID-19 pandemic, in order to provide more timely tracking of customer hardship, AER data included weekly information on measures of total debt, deferred debt and payment plans [68]. Data for Western Australia, Victoria and the Northern Territory are not reported by AER and are collected through separate mechanisms. Their formal inclusion was beyond the scope of this project. Therefore, our specific conclusions about AER retailer records of debt, hardship programs and disconnections will not necessarily apply to Victoria, Western Australia and the Northern Territory. However, we made some preliminary observations on the separate retailer reporting from these jurisdictions to help provide more context around the recommendations provided in this report.

## Australian Housing Conditions Dataset

The Australian Housing Conditions (AHC) survey collected information on physical characteristics and condition of dwellings, affordability and adequacy of housing, and housing history. This survey was run once in 2016 in New South Wales, Victoria and South Australia and the collection period was synchronised to correspond to the Census period. Conclusions from this dataset will not necessarily apply to states and territories other than New South Wales, Victoria and South Australia. The dataset also does not cover information about energy costs or bills. Other similar datasets (which cover more jurisdictions) are older and were collected by the ABS in the Australian Housing Survey from 1994 and 1999 [69].

## St Vincent de Paul Electricity Tariff Data

Electricity tariff data is manually collected by Alviss Consulting for the St Vincent de Paul organisation and includes samples from all Australian states and territories. It is possible to estimate energy costs for consumers using this tariff data if surveys collect information on which retailer is used by the consumer. Other data sources rarely collect tariff or retailer information. St Vincent de Paul tariff information is used to estimate average annual electricity bills for residential consumers. In this report, we present their estimates [63].

## ABS Data and Other Datasets

We used CPI and Wage Price Index (WPI) data published by the ABS to ascertain the changes in prices of all consumer goods and wages relative to electricity and gas prices [70]. We also used other information to provide more structure and context to the information. For example, climate zones information was extracted from the Australian Building Codes Board [71].

## Summary Note on Datasets

Note that this review focuses on national-level or broad data sources and that data availability differs between different states and territories. Overall, our findings that relate to the extent and level of energy hardship and energy costs relative to incomes are based on comprehensive and representative samples from all states and territories. Our findings that relate to energy hardship programs, energy debt levels and disconnections are based on less comprehensive data and relate primarily to Queensland, New South Wales, the Australian Capital Territory, South Australia and Tasmania.

## Key Definitions

### Low income

A 'low-income household' has been defined in this report as a household with a disposable income that is less than 60% of the median income. This threshold has been chosen because it matches the Australian Taxation Office (ATO) low-income tax offset threshold. It serves as a *de facto* poverty line for Australian households (although we note that there is no formal poverty line defined in Australia). Other analyses use 50% of the median income to define the poverty line (e.g., [72]). Internationally, poverty line definitions vary: the OECD uses 50% of the median income, while the European Union uses 60% of the median income. It is important to note that changing the low-income definition used will change the estimate of households that experience energy hardship.

## Energy Hardship

Our estimate of households in energy hardship reflects the percentage of households in 2018 that the HILDA survey data indicated have a low income (as defined above) and have high energy costs (at least 6% of their income or three times the median energy cost). This estimate is not a definitive assessment of how many Australian households are in real energy hardship because it depends on how the thresholds for low income and high energy costs are set and whether these are the only variables that should be used. There are different approaches to expenditure-based measures of energy hardship that are used internationally (see Appendix A). If the energy-cost threshold was set at 10%, there would be 1.4% of Australian households fitting this criterion. On the other hand, if we consider low-income households that pay more than twice the median of their peers for energy (as suggested in some of the scientific literature, *e.g.*, [42]), then the median yearly percentage figure for energy hardship is 7% across all years and 3.1% for 2018. Additionally, it should be noted that our analysis of HILDA survey data may underestimate the percentage of the population in energy hardship.

## Key Insights from Exploring Existing Data

The following nine key insights emerged from our analysis of existing data.

1. **Energy prices have risen markedly relative to incomes, and low-income households seem to be paying more over time as a percentage of their income.**

⇒ **Energy hardship appears to be getting worse**

On average, energy costs in Australia rose over a 10-year period, though a tempering of this rise is observed in 2018–19 (see Figure 5). This can be attributed to a sharp increase in electricity and gas prices over the same time period. Figure 5 also illustrates the relatively lower growth rate of wages during the same period; that is, the WPI is relatively flat compared with the Electricity and Gas CPI.

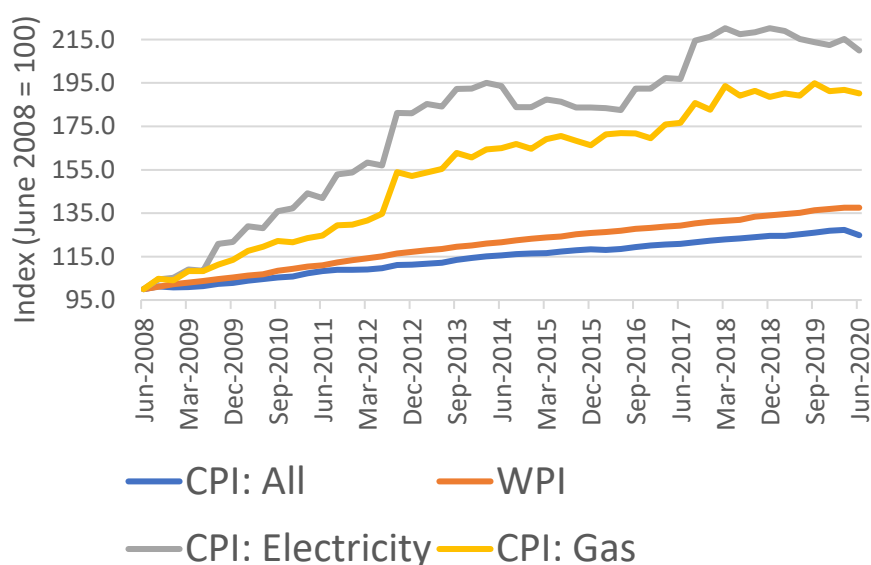


Figure 5: Consumer Price Indices (CPI) versus Wage Price Index (WPI)

Data source: ABS [65]

Figure 6 depicts an ‘indicator’ metric of *energy bills relative to income* for households who are classified as low income compared with those who are not. From the graph, it is clear that **low-income households endure a much higher energy burden than other households**. Additionally, it reveals that rising energy prices have negatively impacted low-income households much more than other households. A low-income household in 2006 paid on average around \$960 per year, and their energy costs rose by close to 60% over time, reaching an average of more than \$1500 in 2018 (figures are corrected for inflation).

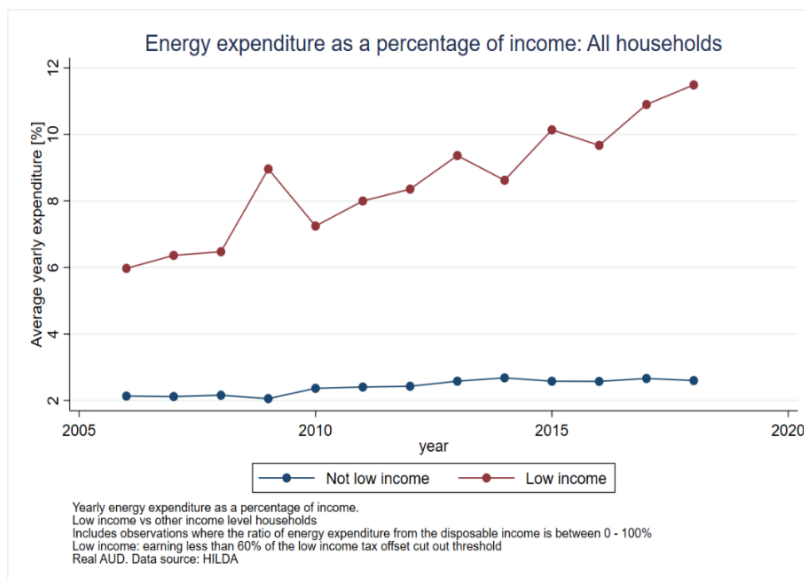


Figure 6: Expenditure as a Percentage of Income (source: HILDA)

## 2. Some energy hardship drivers are strongly associated with low-income households; for example, smaller households, low thermal performance of older dwellings and households with limited access to solar.

Based on previous analysis, it appears that a strong relationship between housing quality and tenure exists: people who own their own home were more likely to live in higher-quality dwellings, while private renters and people in public housing were more likely to live in lower-quality dwellings [73]. Baker and colleagues conclude that 1 million Australians live in housing classified as poor quality or worse, with 100,000 individuals living in ‘very poor’ or ‘derelict’ housing. Sixty-two per cent of households living in poor-to-derelict housing were classified as low-income households [73].

The AHC dataset shows that lower-income ( $\leq \$20,000$ ), working-age households are less likely to have access to solar photovoltaic systems (PVs). Few respondents in that income bracket (and no renters) had solar PVs in this dataset from 2016 (whether in older or newer households). Given these numbers only covered New South Wales, Victoria and South Australia, and that they are from five years ago (at the time of data collection), we cannot draw strong conclusions about disparities in access to solar PV across Australia. However, the data we do have suggest that low-income households and renters have less access to solar PV than do higher-income households and homeowners.

## 3. There are **very limited data** on households who are on hardship programs, including when they exit the program. This means we cannot track the outcomes of hardship programs or easily assess their effectiveness. We conclude that **reporting requirements of retailers yields insufficient information**.

More people may be facing difficulties in paying their electricity bills over the course of a year than the ones who are reported to have energy debt. From AER data (5 jurisdictions), more than 291,000 payment plans were reportedly cancelled in 2018–19, and about 150,000 customers experienced multiple plan cancellations. Just under 81,500 payment plans were completed in the same year. The total number of customers on payment plans in a single year is hard to identify in the data as the numbers reported for payment plans are for the end of the financial year. Also, if we take into account the number of cancellations, completions and those still on a

payment plan at the end of the financial year, the number of customers on an electricity payment plan appears to vary quite significantly over time.

As noted earlier, AER retailer data on debt and hardship programs do not include data from Victoria, the Northern Territory or Western Australia. Preliminary observations of publicly available information for these three jurisdictions show these datasets have similar gaps in describing when and how individual households move through the hardship program process. The data are also not necessarily comparable across jurisdictions [74–78].

## Jurisdictions Outside the AER

### Victoria

For example, in Victoria, the 2019–20 data report listed customers of retailers who receive ‘tailored assistance’ but did not specifically name these customers as ‘hardship’ customers. There were 49,764 ‘tailored assistance’ residential electricity customers as at 30 June 2020 – 1.87% of all electricity customers in Victoria. These fall under one of two categories: those who can pay ongoing usage (18,706 or 0.70% of electricity customers) and those who cannot pay (31,050 or 1.17% of electricity customers). In the previous year, 2018–19, the data reported a total of 75,691 customers in retailer hardship programs in Victoria at one point during the year (2.95% of customers). By comparison, AER data for five jurisdictions shows 1.12% of customers were ‘hardship’ customers for the 2019–20 year (see Q4 2019–20 data). It also provides the breakdown for exiting: 32% exited successfully (40,338 customers), 58% were excluded from the program for noncompliance (74,291 customers) and 10% transferred to another retailer (12,609 customers).<sup>1</sup>

In terms of successfully exiting the ‘tailored assistance’ program for electricity retail customers in Victoria, it appears 47% completed their program successfully in 2019–20 (exit by agreement), with 46% exiting by exclusion and 7% by transfer. **For those exiting by exclusion in Victoria, the data do not indicate the length of time that these customers held debt or how much debt they held, and whether they went through a disconnection experience or not.** However, it is likely that a significant proportion of customers exiting by exclusion will suffer a disconnection, as 44% of Victorian customers who were disconnected in 2019–20 had received assistance. An aspect to note is that the disconnections data reveals 56% of residential electricity customers who get disconnected did not receive assistance in the previous 6 months. **More information on the progression of customers who move from energy debt to payment plans, to difficulty repaying and then through to disconnections would help reveal where additional interventions should occur and the form they should take.**

### Western Australia

The Western Australian data for 2018–19 on residential electricity customers on a hardship program is reported for two retailers: Synergy (3.3% of its customers or 33,707 households) and Horizon (4.0% of its customers or 1,511 households).<sup>2</sup> The percentage of customers in hardship programs decreased in 2019–20 for Synergy to 2.85% of customers and increased slightly for Horizon to 4.11% of customers.

These data reports include the total number of residential electricity customers who exited the hardship program during the reporting year, either because they successfully completed the hardship program or exited

<sup>1</sup> The authors are not aware why the data for 2019–20 show a disparity as more customers are reported leaving the hardship program than the total number of customers reported to be in the hardship program.

<sup>2</sup> The total number of electricity customers for Synergy in the same year was 1,010,826 and for Horizon it was 37,925.

the program by agreement with the retailer. The two retailers reporting data in 2018–19 on their electricity hardship program noted that **70% (Horizon) and 8% (Synergy) of hardship customers were excluded or removed for non-compliance.**<sup>3</sup> For these customers, more information was not available to ascertain what happened up to that point in terms of **customers' debt repayments, length of time in the program, major reason for non-compliance (e.g., non-payment or not contactable) and whether they were disconnected and/or referred to debt collection.**<sup>4</sup>

For disconnections for non-payment, in terms of understanding the pathway that led to disconnection, data does not provide background information on the bills, debt levels or progression pathway to the point of disconnection for those who were disconnected for failure to pay a bill or those who were the subject of an instalment plan.<sup>5</sup>

### Northern Territory

In the case of the Northern Territory, the most recent report available to the authors (2018–19) shows customers' debt levels, customers on payment plans, customers on a hardship program and disconnections for non-payment [78]. Residential customers with debt represented 1.7% of customers in 2017–18 and 0.9% in 2018–19. Jacana Energy, which has most of the residential customers in the Northern Territory, had 2.1% of its customers on a payment plan in 2018–19 (this figure excludes hardship customers). While the actual figure is not mentioned in the report, it is noted that a large number of payment plans had been successfully completed. Customers in electricity hardship programs represented 0.3% of Jacana's residential customers in 2018–19, which was much lower than in other jurisdictions. However, 91.4% of customers who exited the hardship program during 2018–19 were exiting because they had been excluded or removed for non-compliance. Disconnections for non-payment from 2016 to 2019 were fairly constant, with a ratio of total customers at about 3.4% on average. However, **as with other jurisdictions, the background of the series of programs and hardship journeys that led to disconnection cannot be understood from the data available.** The report acknowledges gaps in reporting and the need to address gaps in hardship policies, but in a manner that is relevant and in line with the Territory's energy market.

The retailers' reporting data leave gaps in tracking customers' pathways through support mechanisms. In particular, from these data, we cannot answer the following questions:<sup>6</sup>

- What pathways are available to support customers with energy debt if they are not on a payment plan?
- How many of the customers with energy debt and on a payment plan complete the plan, have it cancelled or continue onwards?
- Do customers who are disconnected and were on a payment plan in the previous 12 months have energy debt? If so, what type of energy debt?

<sup>3</sup> Synergy reported 93% successful exits (or exits with agreement of the retailer), while Horizon reported 13% successful exits. Successful exits for Synergy comprised 22,315 out of a total of 24,040 exits. For Horizon, there were 193 successful exits out of a total of 1,446. Based on the 2019–20 report, the numbers appear similar.

<sup>4</sup> Western Australia's Economic Regulation Authority notes that it may not be possible to introduce similar hardship indicators in Western Australia compared with other states due to structural differences in the energy market. Also, in addition to the hardship customer numbers, Western Australia records the numbers of residential customers on instalment plans either for electricity or gas.

<sup>5</sup> The 2018–19 data report numbers of customers disconnected for failure to pay a bill, number of customers who were the subject of an instalment plan, those who were disconnected on at least one other occasion during the reporting year or the previous reporting year, and the number of consumers who were disconnected who were the subject of a concession.

<sup>6</sup> Potentially, these data are available to retailers and the AER but were not disclosed publicly in the dataset we consulted.

- What pathway do customers take to being disconnected when not on a payment plan or in a hardship program?

#### 4. Variables are **not consistently captured** in one dataset, which means we cannot assess the relationships between variables across datasets.

Given that AER retailer performance reporting is not an individual/household-level study, income data and many other socio-economic background variables are not available. For the AHC data, income is recorded only as a bracket of gross household income. The Household Energy Consumption Survey (HECS) was constructed by the ABS based on their Survey of Income and Housing. As such, it contains a detailed series of questions on regular income, disposable income, housing costs and the amount of debt households hold, as well as measures of wealth, such as ownership of property, mortgage offset accounts, shares, and so on.

The AER retailer performance data do not report electricity and gas bill costs. Rather, these data focus on reporting aggregate numbers of customers who have energy debt or who are in retailer hardship programs for electricity and gas. The AHC data from 2016 do not provide information related to energy costs *per se* but record whether participants have experienced financial strain in the past year, leading to an inability to pay their energy bills or an inability to heat their home (among other indicators of financial stress). The HECS dataset from 2012 records energy costs as a total expenditure on electricity, gas and other sources of energy. This survey also collected information on weekly electricity consumption separate from mains gas, as well as other items individually, such as service charges, feed-in-tariffs received and rebates based on billing information supplied by participants. The survey also included questions about spending on LPG (liquefied petroleum gas) and firewood.

None of these datasets allows for the study of daily or seasonal patterns of energy use, even though the HILDA survey captures annual energy costs and contains more detailed yearly questions around attitudes to finances, like savings, people's ability to pay for basics such as energy costs, and questions to identify who makes household-related financial decisions, such as the use of credit cards. Neither the HILDA, the AHC nor the HECS surveys contain energy literacy-related questions. General financial literacy was addressed in one wave of the HILDA survey through a short set of questions testing respondents' capacity to make basic financial calculations and choices.

#### 5. There is no measure of '**non-discretionary energy** requirements' for different types of households

A measure of 'non-discretionary energy use' may be an important metric to help assess energy hardship by providing a benchmark of the minimum energy required to maintain an acceptable baseline standard of living; households using less energy than this may be deliberately under-consuming energy to reduce their expenses. No measure of under-consumption is currently available. To develop such a measure would require a large-scale and systematic assessment of the typical energy consumption of different house types and sizes, in different climate zones and with different numbers of residents, along with a range of other under-consumption measures (see the variety of under-consumption behaviours in Chapter 3). Among existing data, the AER energy benchmarking survey is closest to providing this level of detail, but it currently does not include sufficient information on the type and size of the dwelling.

6. There are **no agreed standards** or benchmarks, which means that energy hardship can be measured in many, various ways and that the cut-off points for those measures are arbitrary.

The current *de facto* energy hardship definition used in Australia is based on retailer debt and does not consider how energy costs or debt are related to income (or the household's ability to pay). Based on international examples and the scientific literature, criteria related to household income can be relevant, but the relevant thresholds need to be identified in the Australian context. We provide a proposal for achieving this in our recommendations for Phase 2 of Finkel 6.6.

Given that the median energy costs across cohorts in HILDA hovers at just under 2% of annual income, the 10% threshold for energy costs (which has been used in other countries) would, in Australia, equate to households being categorised as being in 'energy hardship' if they paid five times more than the typical household for energy. Clearly, local context should be considered: the 10% cut-off for 'high energy costs' used in the United Kingdom appears to be influenced by local relative costs of energy, where the median energy cost is 5% of income (see [42]). In Australia, a 6% threshold for 'high energy costs' would amount to about three times the median yearly energy costs in the HILDA survey. As such, when estimating energy hardship using existing data and the metric of income relative to energy bills, we determined energy hardship as household income below 60% of the median household income and energy costs more than 6% of available income. Using these thresholds, an estimated 2.5% of Australian households were in energy hardship in 2018. We note that many households may be in hardship (suffering) that fall outside this range. Future research should establish the correlation between the lived experience of hardship vis-à-vis these metrics.

Leaving the notion of energy hardship as it currently stands in practice as a *de facto* retailer-defined and mostly debt-based category of consumers, it appears that many households vulnerable to or in energy hardship would be omitted from potential measures, and, therefore, may be omitted when it comes to support. In line with the ABATE framework, considering income, length of time spent in debt and the transition between the types of energy hardship states will help to comprehensively reduce unnecessary energy-related deprivation.

7. Available energy hardship-relevant **data are limited and cross-sectional**, which means we cannot track households (or variables) over time. However, it is crucial to understand the duration and extent of hardship and to see how households move into and out of the ABATE hardship states.

To identify forms of individual (household) hardship, the dynamics of energy hardship over time, its drivers and outcomes, and how to act on determinants of, or mitigate the effects of, energy hardship, consumer-level longitudinal data are needed. Data on regional averages are not relevant. It is important to obtain micro-scale data in order to follow consumers' journeys in and out of energy hardship states. For full details regarding all of the DIOs, see Appendix B.

8. **Disconnections are increasing and are even applied to households with low debt.**

The total number of electricity customer households being disconnected in five jurisdictions appears to have grown in the last 2 years for which complete data exist (before the COVID-19 crisis). The yearly average fluctuates markedly, but for 2017–18 there were 72,100 customers disconnected and for 2018–19 there were 70,795 customers disconnected. The number of disconnections increased from 2016–17 to 2017–18 by about 8,000 households. The number of electricity customers disconnected represents about 1.1% of residential customers over time.

In examining the distribution of households who are disconnected by level of debt, it is evident that **77% of households who are disconnected have a debt of \$1500 or less**. Indeed, 27% of disconnections are imposed on households with less than \$500 of debt. On average, just under half (49%) of the households who are disconnected have debt from \$500–\$1500, 13% have a debt of \$1500–\$2500 and 11% have a debt more than \$2,500 debt (data: AER [67]).<sup>7</sup>

#### 9. Payment plans do not seem to prevent households from being disconnected due to accruing debt

The retailer data reported to the AER leave gaps in understanding how many of the customers with a debt go onto a payment plan and subsequently complete it, or end up having the plan cancelled (once or several times), potentially being disconnected later. For example, around 50% of the people who were disconnected in 2018–19 reached this outcome without being on a payment plan in the previous 12 months. The data provide figures on how many customers who were on a payment plan were disconnected in a financial year (e.g. 35,838 in 2018–19). However, the total number of people disconnected in that year was about double, at 70,795. For previous years, the equivalent percentage was between 61% and 67%. Overall, it appears around 50% to 67% of the customers who were disconnected were not on a payment plan in the previous 12 months.

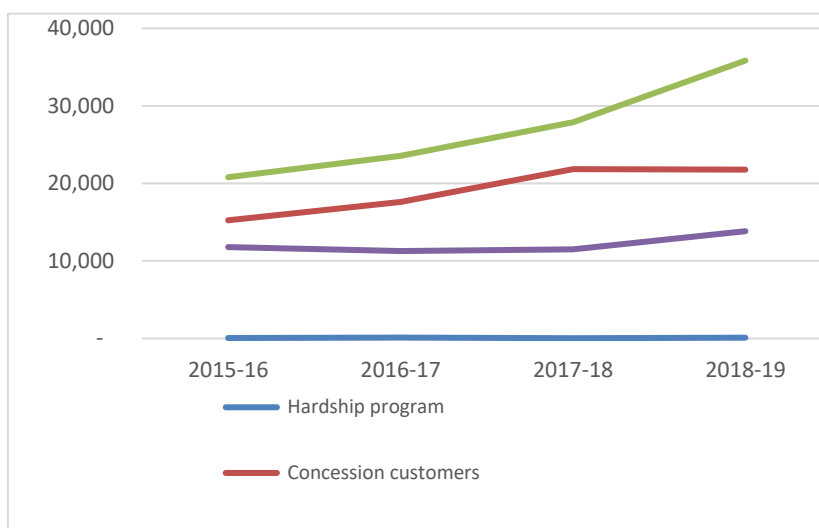


Figure 7: Number of Residential Electricity Customers being Disconnected

Notable increases in customers who are disconnected have been observed (see Figure 7). The number of customers on a payment plan in the past 12 months who have been disconnected has increased by 72% from 2015–16 to 2018–19 (see Figure 7). Disconnections for concession customers also increased by about 43% during the same period. There was a jump from 2017–18 to 2018–19 in customers who were disconnected more than once. A small number of customers in official retailer hardship programs were still disconnected – between 59 and 123. It should be noted that some customers could fall into more than one category. For example, the data do not clarify whether concession customers could also be households who have been disconnected more than once in the previous 24 months.

## Summary

Our review of existing energy-related data in Australia has generated the following conclusions:

- **Energy costs have been rising** on average from 2008 to 2019, but they appeared to flatten or decrease in 2018–19.
- Over this period, **electricity and gas prices increased more rapidly than wages** and more rapidly than other costs.

<sup>7</sup> On average, based on the five quarters for which the AER data is available, Q3 2018–19 to Q3 2019–20.

- **Increasing energy costs are disproportionately impacting low-income households:** the share of household income spent on energy nearly doubled for low-income households between 2006 and 2018, while the same measure for higher-income households remained relatively stable.
- Households with **low incomes: spend more proportionally on energy;** tend to have higher energy costs per person; tend to live in older, less energy-efficient homes that cost more to heat/cool; and tend to be unable to access solar panels or modern energy-efficient appliances that would reduce energy costs.
- **Disconnections are increasing** and are often applied to households with low debt.
- Payment plans do not necessarily prevent households from being disconnected due to accruing debt.
- On the basis of the method that we developed to estimate energy hardship using only the metric of 'income' relative to 'energy bills', we estimated 2.5% of Australian households were in energy hardship in 2018. We know this figure is likely to underestimate the true extent of energy hardship in Australia.

The following **limitations** are present in the available data:

- There is **very limited data on households in retailer hardship programs**, including when they exit the program. This means the effectiveness of these programs cannot be measured or established.
- Variables are not consistently captured in one dataset, which means it was often not possible to assess the relationships between variables across datasets.
- There are **no agreed standards for measures**, which means household income cut-offs and energy hardship cut-offs are arbitrary. We generated a definition for 'low-income households' based on ATO cut-offs and international practices.
- Available **energy hardship-relevant data is limited and cross-sectional**, which means it is not possible to track households (or variables) over time.
- **Existing data cannot be used or reconfigured to accurately measure the level and extent of energy hardship in Australia.**

## CHAPTER 3

# Understanding the Lived Experience of Households

## Micro-Level Analysis

### Introduction

To extend our understanding of the lived experience of households facing energy vulnerability and hardship and, in so doing, determine the efficacy and impact of efforts that are designed to support them, we conducted primary data collection. This provided a ground-up perspective of the effectiveness of current and recent energy policy and program initiatives. We emphasise that ‘hardship programs’ extend beyond our current notion of ‘retailer hardship programs’. Instead, we refer to all and any initiative that is provided to households, particularly those that assist households and reduce energy hardship. These include community or government-based support initiatives as well as retailer hardship programs. A poignant reminder of why this investigation is important was echoed by a research participant (see quote bubble).

“I think the system means well but it’s just, case-by-case, everyone is in such a different situation that it just doesn’t supply what everyone needs given their circumstances.  
**The system’s definitely broken!**”

(Research participant quote)

### Method and Data Sources

We obtained data from two sources to gain insights into the experiences of households facing energy hardship in order to obtain a ground-up (micro) perspective [79], which would reveal the strengths and weaknesses of current policies/programs and the coping strategies undertaken by households. We conducted thematic analysis (following the guidelines set out by Saldana [56]) on interview transcripts and case study data:

**Data source 1: 20 case studies** written by front-line workers describing household experiences of energy hardship (sourced from COSS (Council of Social Service) organisations). These case studies captured the lived experiences of households in energy hardship across Australia and were de-identified before we received them.

**Data source 2: 24 interviews** with members of CBOs from all jurisdictions in Australia (including one national-level CBO) were conducted via zoom (which easily facilitated recording and screen sharing, as needed). These experts had either direct or secondary contact with households experiencing hardship. Selected direct quotes from interviewees are provided in the coloured boxes as an example of the suite of comments that were coded to each theme identified.

**National-level qualitative enquiry:** it is worth noting that we adopted a national-level perspective for this investigation, which extended to our qualitative enquiries. Accordingly, themes that emerged and which are presented in Chapters 3 and 4 are drawn from collective responses that reflect the views of many participants. It is not rigorous to then reduce the national level to specific regions or jurisdictions. For this to be possible, 15-20 people from every jurisdiction would need to have been interviewed, which was beyond the scope of this project. It is therefore inappropriate to break down qualitative findings according to quantitative parameters.

Instead, we can say that participants were drawn from a broad perspective, and at least one person from every region was included. For jurisdiction-specific findings, Phase 2 of Finkel 6.6 could conduct further interviews.

## Key Findings

### DIOs

The analysis of household struggles identified in the case studies and revealed by interviewees uncovered numerous drivers, indicators and outcomes of energy hardship in Australia. All 25 DIOs identified in the international literature review were identified as being invariably experienced by Australian households. However, we identified two additional drivers – *poor retailer behaviour* and *low cognitive bandwidth* – and four additional outcomes – *suicide ideation*, *shame*, *avoiding contact with retailers* and *non-energy debt* (highlighted in red italics below). This means we have now identified 31 DIOs of energy hardship across the country (see Table 4). This was not anticipated, as the full collection of DIOs reported in the international literature was not expected to be evident in Australian homes. We also did not expect to identify additional drivers and outcomes. **The presence of so many DIOs reflects the depth and diversity of struggles faced by thousands of Australian households.**

**Table 4: Final Set of Drivers, Indicators and Outcomes of Energy Hardship in Australia**

| Drivers                         | Indicators   | Outcomes                               |
|---------------------------------|--|--|
| Household income                | Thermal comfort                                      | Forgoing other essential needs         |
| Energy cost                     | Mould/damp/rot/leaks                                 | Payment default/debt/arrears           |
| Energy efficiency of dwelling   | Indoor temperature                                   | Worsened health status                 |
| Health status                   | Expenditure on bills compared with dwelling features | Disconnection                          |
| Unique energy needs             | Heating/cooling expenditure                          | Social constriction                    |
| Financial/energy literacy       | Bill compared with income (e.g., 10%+)               | Poor living conditions                 |
| Access, size of household       | Under-consumption                                    | Stress/anxiety/depression              |
| Type of dwelling                | Difficulty paying bill                               | <i>Suicide ideation</i>                |
| <i>Poor retailer behaviours</i> |  | <i>Avoiding contact with retailers</i> |
| <i>Low cognitive bandwidth</i>  |  | <i>Non-energy debt</i>                 |
|                                 |  | <i>Shame</i>                           |

It is important to note that **many DIOs are interconnected and are not just the result of energy hardship but broader hardship** (discussed in more detail in Chapters 4 and 7). The presence of so many factors suggests that **Australian households are struggling in multiple ways due to being unable to use energy in their homes without suffering. The consequences of this are extensive** and have impacts beyond energy use and debt to include worsening health or not eating. Further, it highlights that energy hardship is complex.

### Strengths of Energy Hardship Initiatives

Analysis of interview transcripts revealed that when assistance is received by the household (which could be from retailers, CBOs and/or government agencies), there are **four key strengths** that should inform the design of future energy assistance initiatives (see Figure 8). Significantly, the interviewees noted that **many of the strengths they highlighted are often the exception to the rule** when considering the broad spectrum of hardship programs and initiatives that are available.

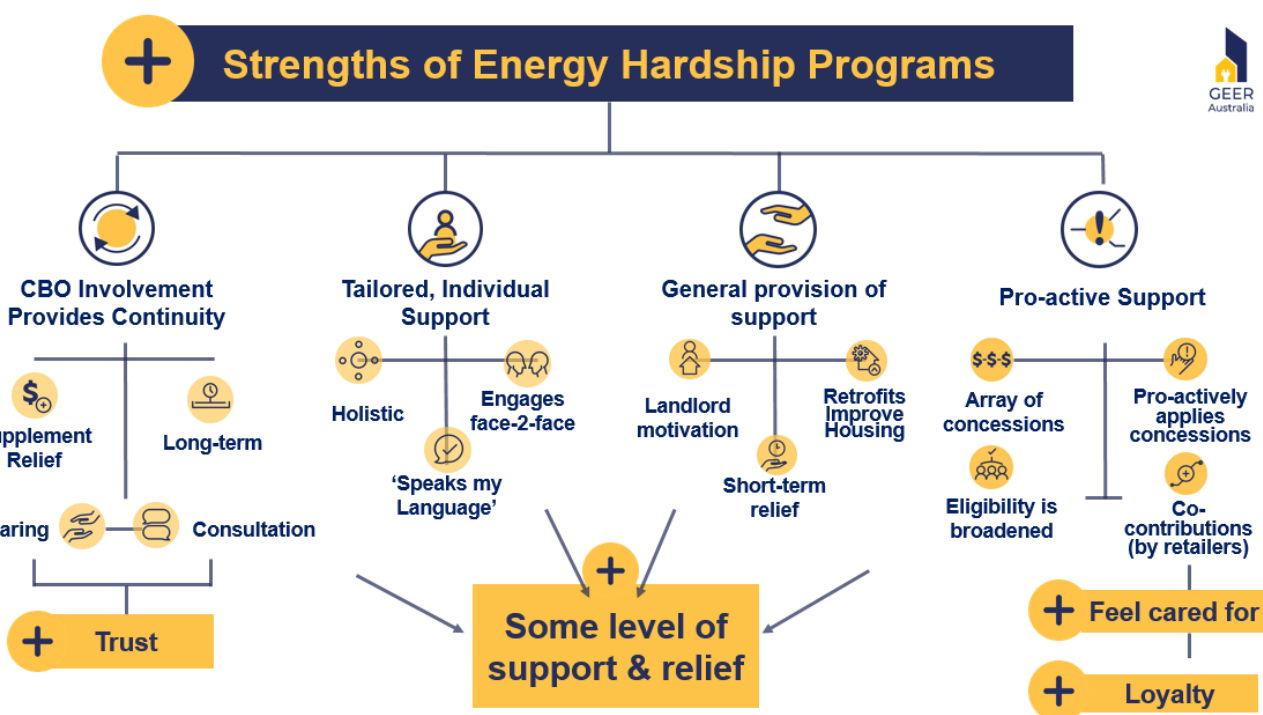


Figure 8: Strengths and Outcomes of Energy Hardship Assistance Programs

**1. CBO involvement:** The first strength identified from the analysis involved the benefits of distributing energy support via CBOs. CBOs can provide supplemental and ongoing support, filling gaps in between when programs are offered or helping programs work more effectively. This builds community trust in the initiative as households access support through a trusted source. Therefore, **offering support through trusted sources in future is likely to increase the number of households accessing support.** CBOs also provide a type of care in their service delivery that households often do not feel from other organisations, particularly in-depth consultations, which allow CBOs to gain a better understanding of and therefore can attend to each household's specific needs. Further, CBOs are often in a position to offer support, even when an energy initiative has ceased.

With CBOs "there is no timeframe for assistance, there is no end date ... it's continuing."

"[CBOs] build a relationship rather than just [saying]... here's the payment, goodbye."

**2. Individualised support:** The next strength that emerged was individualised, nuanced support. When programs provide tailored support, they often have features that mean the support provider will effectively engage with participants face-to-face, speak their language and develop support plans that are appropriate for the household's specific circumstances. Respondents explained that most programs provide generic, one-size-fits-all approaches that deliver minor benefits without addressing the most significant problems households face. Face-to-face interactions give households the sense that they are receiving a personal form of support and being treated with dignity and care for their unique circumstances. This is particularly important in cases where people are confused by their bills and financial circumstances. In these cases, they may need both help and reassurance. Households benefited from

"I do a budget ... [to ensure] that they don't commit to a [unrealistic] payment ... and then ... can't pay their rent..."

"Someone can come in and ... consult someone about their bill ... and get 'in person' support."

the holistic approach commonly taken by CBOs, which recognises that **many households in energy hardship are often struggling with other issues and require assistance beyond energy support.**

**3. General support:** The next strength identified from the analysis was around the general provision of support. Participants revealed that any support is appreciated and welcomed, especially if it is tailored and provided through a trusted source (see points 1 and 2 above). However, it was noted that many initiatives fail to directly address the most pressing energy needs these households face (*e.g.*, an updated heater is greatly appreciated by the household, but they may be in debt by \$3000 and so need different assistance as well). Despite their limitations, initiatives that implement general support on a large scale, such as energy-efficiency retrofits or appliances, are quite successful. Also, there are programs that provide good incentives for landlords and home owners to adopt solar energy or undertake energy-efficient retrofits (though the weaknesses identified below mitigate the positive impact these can have on most households in hardship).

“The landlord has to have an income less than \$180,000, a house less than \$3 million [for solar rebates] which is pretty generous.”

**4. Proactive support:** The last strength from the analysis was proactive support. This refers to instances where concessions were applied or when retailers offered to match debt payments (to reduce the debt by 50%). When this occurred, a household’s hardship state was relieved, and they began to see a way out of their situation. CBOs often had non-energy concessions that they could use to supplement the household and they were proactive in delivering them. Such actions could be well targeted to households in the Extreme and Acute hardship states to provide relief while also working to support households in any state to move out of hardship. These programs had two benefits: the household could access immediate assistance, and the household did not have to pursue the retailer. Respondents recalled encounters with some households who received this extra support, revealing the household felt cared for and became more loyal to the retailer as a result.

“... we [CBOs] have no eligibility [criteria] ... most help is provided to ... concession card [holders] ... [but we also include] people who might be out of that group...”

### Weaknesses of Energy Hardship Initiatives

While the above strengths illustrate some provision of support and relief for households in energy hardship, numerous weaknesses emerged in the thematic analysis that limit the capacity for many initiatives to provide the type and level of assistance that is needed. The **seven key weaknesses** identified in this analysis varied according to whether they were related to aspects of the design or implementation of programs/initiatives (see Figure 9).

**1. Inadequacy of programs:** the first two weaknesses identified concern program design, where programs were deemed inadequate if they were **insufficient** in size and/or scope, or **not fit for purpose**, in that assistance provided did not match the household needs. In addition, generic quick fixes (*e.g.*, plugs/switches/lighting, small appliances, minor retrofits) were considered favourably, except they rarely provided the household with what they needed to alleviate hardship. Numerous programs placed too much emphasis on householders’ behaviours as the cause of their hardship, while many

“... even the most generous program of a few hundred dollars a quarter ... is not going to help [enough].”

## Weaknesses of Energy Hardship Programs

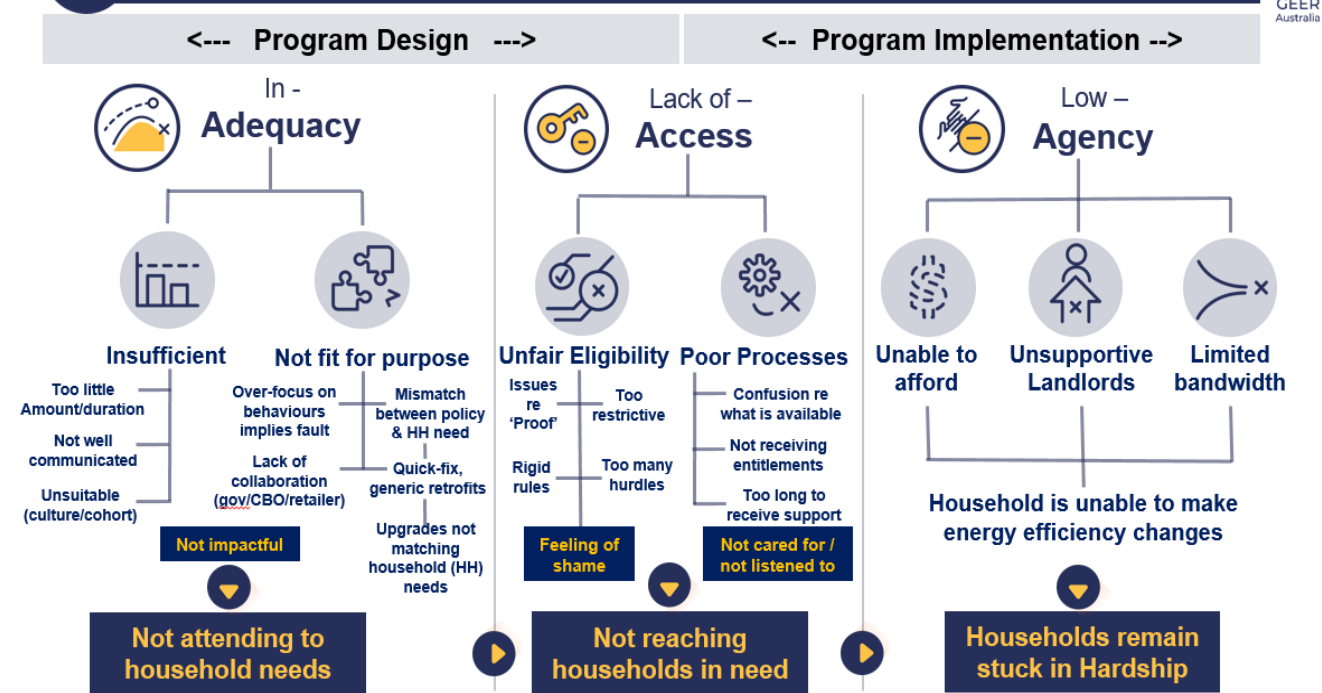


Figure 9: Weaknesses and Outcomes of Energy Hardship Assistance Programs

programs were inaccessible and unsuitable for certain cultures or cohorts. Some initiatives were targeted at the landlord, which meant tenanted households could not access such assistance themselves or, where they could, they did not have the capital to participate in the program. Overall, assistance that was provided in dollars or in-person gave households limited, fleeting help that was insufficient to alleviate the extent of hardship.

**2. Lack of access to assistance:** the next two weakness that emerged spanned both design and implementation issues and caused a lack of access to assistance. This was due to assistance programs' **unfair eligibility criteria** and **poorly considered implementation processes**. Respondents revealed that, typically, the criteria for receiving support is too restrictive, causing many people who are in legitimate energy hardship to be deemed 'unworthy' of help. Rigid eligibility rules and issues around proof and registration hurdles meant that even households that would be 'deserving' of concessions were often too overwhelmed to seek help. There are so many hurdles for households to jump through that even if they are eligible, they can still find it too difficult to get on to the system and access help. For example, unwieldy online billing and application forms make it harder for households to access support.

"... what's 'eligible' ... isn't fair ... [households] need that support and then they're not eligible for it."

Just knowing what assistance (whether from government, CBOs or retailers) is available is problematic. **Administrative issues** and **poor processes** have resulted in limited awareness and uptake of assistance programs by households, despite their hardship. Furthermore, it has meant that it can take a long time for households to receive the support they need. For example, evident in some case studies and from the recollections of interview participants, some households are forced to wait for up to 8–10 weeks just to be considered for an energy hardship concession, which is a long time to go

"Just to know that the program exists – that's a really big issue ... that's why a lot of people don't ever access them."

without or have minimum levels of energy or food (both were reported outcomes for some households in dire circumstances – hence the coping strategy of self-disconnection was an option some households felt forced to take, as discussed in the next section).

**3. Low agency:** the last three weaknesses that were identified from our analysis were grouped as they individually or collectively reduce or impact household ‘agency’. For example, some programs that offer assistance are simply not actionable for many households in energy hardship as they do not have the ‘agency’ (**motivation, ability, opportunity**) to change their circumstances and/or take advantage of the programs that are available. This can be due to the financial struggles facing many households in hardship and being **unable to afford** to buy solar PVs or buy updated appliances (even when there are rebates or no-interest loans). Another weakness was for tenanted households with **unsupportive landlords**, whose inaction also reduced household agency. For example, where landlords do not attend to the energy efficiency or quality of their properties, tenants are left mostly powerless to affect change. Together these factors reduce the household’s agency, who may feel helpless and unable to find a way out of their situation as they cannot take advantage of the assistance that is available. This increases a sense of helplessness as the household remains stuck in hardship. Respondents also reported that many households in hardship have **limited cognitive bandwidth** to engage with energy efficiency or hardship assistance. Due to their circumstances (likely placing the households in either an *Extreme* or *Acute* hardship state) they may be under considerable stress and have many challenges to deal with, and therefore lack the resources and headspace necessary to make energy-efficiency changes or chase up assistance. These households often had more pressing issues, and understandably, energy efficiency was not a priority.

“People who need assistance, it’s a crisis time in their life. The last thing they’re thinking about is how they can make their home more energy efficient, even if they’re in control of those decisions.”

In summary, the findings suggest that **current assistance programs are not sufficiently attending to household needs and do not reach enough households, meaning that many households remain stuck in hardship.**

## Household Coping Strategies

As a result of experiencing numerous challenges related to home energy use and bills, households may resort to various – and sometimes extreme – coping strategies as thermal comforts were not affordable at home. These include going without other essentials (such as food and clothing), pawning items to obtain funds to pay an energy bill, sleeping in the park on hot nights to avoid stifling conditions in poor-quality housing, going to bed really early to stay warm during cold nights or going elsewhere for basics (e.g., showering elsewhere or staying in heated/cooled places). These strategies illustrate the extent of their struggles and suffering while also demonstrating the incredible resourcefulness of households to manage in untenable situations. The strategies uncovered were grouped according to one of two main themes: under-consumption and debt-management.

### Under-Consumption Coping Strategies

Under-consumption by households in hardship refers to methods that result in under-using energy in the home or under-using other essentials. As such, households can employ a range of ‘sacrificing’ strategies to reduce their energy consumption and bills and/or their outlays to manage or avoid debt. Under-consumption (also known as ‘rationing’) involves depriving themselves of one essential thing so that another can be gained. For example, depriving oneself of food (essential) saves

“It’s a really important thing... for policymakers to understand that there’s people out there who [have to] do [these things].”

money to pay for something else (e.g., an energy bill, rent, petrol); therefore, households may choose to make strategic sacrifices in order to cope. We note that when households resort to such coping mechanisms, they may be experiencing hardship from multiple sources – that is, sources beyond energy. These strategies generally involve forgoing their health and comfort by reducing home energy use, forgoing some essentials or resorting to (typically unwanted) strategies in an effort to manage their energy debt (see Table 5, first three columns).

**Table 5: Sacrificing (Coping) Strategies to Reduce Energy or Manage Bills and Debt**

| <b>Under-consumption Coping Strategies:<br/>Forgoing Energy and/or Sacrificing Comfort</b> |   | <b>Under-consumption Coping Strategies:<br/>Forgoing Essentials</b> | <b>Debt-management Coping Strategies</b>  |
|--|---|---|---|
| Turning off lights   | Sleeping in parks because house was too hot | Going without food  | Pawning items   |
| Turning off fridge   | Going without showers                       | Not buying clothes  | Taking out payday loans – creates new debts   |
| Having cold showers  | Bathing elsewhere                           | Not buying petrol for car   | Hyper-budgeting   |
| Not using heating/cooling  | Staying away from home                      | Eating cold dinners   | Moving to a new house and using fictitious names in an attempt to escape existing debts |
| Only watching TV in bedroom (to keep warm)   | Self-disconnecting hot water                | Eating only leftovers from kids' meals                              |   |
| Staying in bed/going to bed early (to keep warm)   | Self-disconnecting energy altogether        | Forgoing medical needs  |   |
| Wearing extra clothes  |   |   |   |

### **Debt-Management Coping Strategies**

Respondents revealed that once a household in hardship falls into debt in one area, they often fall into debt in numerous other areas too, which invariably results in them facing multiple debts and being placed on multiple payment plans. Respondents shared several debt-management coping strategies adopted by households (see Table 5, last column), many of which risk further entrenching households in financial insecurity.

The array of coping strategies adopted demonstrates that **households are doing their best to overcome the weaknesses of current policies and programs, often by risking their health and wellbeing**. The diversity of coping strategies also attests to the extensiveness of the energy hardship problem. This is of grave concern as **currently, there are no mechanisms to measure and therefore address under-consumption** – which means households are highly invisible to support mechanisms. Ways of addressing this shortfall are presented in Chapter 7 (Policy Solutions) and Chapter 8 (see Recommendation 6: phase 2 research).

This has further implications. If coping strategies are a way for households to avoid accumulating energy debt, then **current measures of energy hardship based on debt will grossly underestimate the size of the problem and therefore underestimate the funds and services required to mitigate harm**. In addition, **payment plans** are well suited to provide 'prevention' to households and help them avoid debt but **are not well suited as a support or relief initiative to those already in hardship**, as our findings indicate that debt for such households is likely to spiral. This is in contrast to current practice.

### **Validation of the ABATE Hardship Framework**

We took the opportunity to share the newly developed ABATE Hardship Framework with CBO participants during interviews to garner their views as a 'first step' towards validating it (establishing face or content validity, see [56]). We developed the ABATE Hardship Framework in response to a paucity in the literature in conceptualising the variation of hardship experiences. We invited respondents to comment on the accuracy of the framework

in capturing household differences and in its efficacy as a useful tool to guide future thinking. Specifically, we wanted to know whether they thought the four hardship states identified suitably reflect the various states experienced by households.

Positive responses were received by all respondents, and this dominated their feedback. The framework seemed to resonate well, with feedback indicating it was clear, simple and reflects household experiences. Negative responses were constructive (and rare) and have been actioned since (e.g., our original acronym was 'BEAT', which became 'ABATE' after feedback). Four key strengths emerged from our analysis of this feedback.

### Strengths of the ABATE Framework

- **Captures the diversity of household experiences of hardship**

From their experience and insights, participants revealed that household energy hardship is not homogenous and indeed varies in the severity of the suffering and the extent of time that households are in hardship. This validates the axes used.

"From my experience ...[for] people ... in community and social housing, there ...[are] very different levels of hardship."

- **Reflects the 'state' of energy hardship**

When we described the sort of experience the household might face for each state (*Battle-on, Acute, Transient, Extreme*), respondents revealed they felt the description accurately reflects the experience of households they had worked with who faced energy hardship. They felt the framework was simple while also capturing the complexity of households' lived experience. This validates conceptualising hardship as a 'state' of being and validates the four states of energy hardship in the framework.

"I think it's excellent. It makes sense, it's clear to see.... to just classify someone at a specific time, I think that's an excellent way of doing it. You've really nailed it."

- **All four quadrants observed in practice**

Numerous respondents confirmed that they had observed all four 'states' in practice. They also revealed that they immediately saw gaps in current assistance programs and energy policies for households, noting that most assistance effectively helps those in transient hardship and that there is little to nothing that would support households in the three other quadrants. Their responses further validate the presence of all four states of energy hardship.

"What you've just explained for each of those [states] is exactly what we see with our clients."

- **Useful guide for designing future policy and program initiatives**

Respondents felt that the framework would help guide the development of more targeted initiatives that could better address the specific needs of households in each hardship state. **It validates that the ABATE Hardship Framework opens a new canvas for designing impactful programs and policies.**

"I think that's a really useful frame... because then you can target different interventions [to] the different sort of cohorts."

In summary, our findings reveal the ABATE Hardship Framework should be well received and will be a useful tool to guide future efforts.

## Structural Barriers

Findings from the micro-level investigation with research participants also revealed six structural barriers impacting households – these reflect system-level barriers which can lead to inequities and ultimately disadvantage many households. The presence of six structural barriers creates (sometimes insurmountable) obstacles that prevent households from reducing their hardship or building their resilience to adversity; for some, the barriers cause them to become vulnerable or enter hardship.

### Poor Retailer Behaviour

Participants gave many accounts of how some **retailer actions negatively impact household energy hardship and that such actions can be either passive or active**. For example, a retailer may **not actively support** a household by failing to offer assistance or failing to offer to put households on a ‘better deal’ or hardship program even if the household is eligible. In addition, retailers may be **explicitly unhelpful**; for example, they may refuse assistance even though the household asked for help, they may enforce entrapment by not releasing a customer until their debt is paid, or threaten disconnection in unreasonable circumstances.

“When he tried to talk to his retailer, he was not offered any assistance beyond the payment plan and he was not allowed to negotiate a more sustainable amount.”

### Needless Sector Complexity Interfacing with the Consumer

A compelling aspect drawn from our analysis of the experience of households, as shared by those we interviewed, pointed to the sector’s complexity. The sector contains so many elements to contend with that it causes confusion for households who seek simple solutions. The two components of this burden related to the sector’s structures and practices and the constantly changing variety of energy assistance programs/initiatives. Both are creating an unnecessarily heavy burden for households.

First, the way the sector is structured means that consumers need to engage with many complex aspects; if structured differently, however, they might only have to deal with a few (solutions for this are provided in Chapter 7). This is more consistent with them seeking ‘simple solutions’. Currently, energy consumers must be aware of tariffs and peak times/loads and try to understand lagging and confusing bills. They find it difficult to understand the energy services that are available and how they work and, to some extent, have to deal with issues about logistics, supply, the grid and the National Energy Market (NEM). We note that complexity was an issue creating confusion for consumers across jurisdictions, although it was evident particularly in regions with multiple retailers. Even so, the analysis suggests that accessing support or information needed to make informed decisions (including contacting retailers) was not easy and created a barrier for some households. It is interesting to observe that other once-complex sectors (*e.g.*, banking) have simplified what consumers ‘see’ and must contend with, which seems to be a necessary next step in the energy sector.

Second, when it comes to assistance programs, households’ knowledge about the myriad initiatives and processes to access them is low. Even those who work to support households find the information and options to be complex and constantly changing and *“difficult to stay on top of – so I don’t know how a household is supposed to do it”* (participant quote). CBO workers revealed they found it challenging to understand the breadth of programs, concessions and rebates available to households. What is available to whom, when and under what

“It’s so hard to navigate really, it’s so confusing. If the people who are assisting the clients are finding it difficult to navigate and understand, then there’s no way we can alleviate [hardship].”

circumstances seems to be highly variable. Having to contend with all of the above can extend the critical period in which households do not receive the assistance they need. Participants shared that, for some households, working out the steps required to apply for support, who they should contact and how to prove their eligibility created too many hurdles, and many households in need just ‘gave up’.

### Poor-quality Housing

When the home has mould or damp, gaps in windows or floors, or old or broken appliances, for example, energy consumption will be higher than it would otherwise be. Many households facing energy vulnerability or hardship are renting older housing that is not necessarily well maintained. The pervasiveness of poor-quality housing is evident in Australia’s Social Progress Indicator [80], where adequate housing rates across Australia are lower than scores for medical care/sanitation/personal safety. A comparison with other countries shows Australian scores for ‘basic housing’ are lower than most European countries, and that our housing quality scores equate to scores in Italy (similar score to the Australian Capital Territory), Poland (similar score to the Eastern states) or Sudan (higher score than housing in the Northern Territory) [80]. Overall, **the quality of many existing homes in Australia is sub-standard and disadvantages many households**. This finding further supports the design and implementation of the Trajectory for Low Energy Buildings.

“In Australia, we have very poorly built houses that are poorly insulated and [addressing this]... will go a long way [to] ... saving on people’s bills.”

### Not Enough Affordable Housing

Participants described the extraordinarily long waiting times for households who need affordable rental homes and who are seeking social housing. In some extreme cases, waiting times were reported to last between 10 and 20 years or longer. This implies that people may rent homes that are poor in quality and which produce very high energy bills because they have little choice since affordable, viable options are not readily available to them. It suggests that a large investment in affordable and energy-efficient housing and connecting as many homes as possible to renewable sources of power would greatly alleviate the dire living conditions that many households face.

“... We’ve got to solve the problem of not having enough housing for ... vulnerable people before we can even think about them being energy efficient.”

### Very Low Social Benefits

A consistent message with participants was that Australia’s social benefits are currently insufficient for people to live on and be able to still maintain dignity and meet their basic needs. Considering that rental rates have increased [63], energy prices have soared over the last decade (despite a recent decline) [72, 81], real wage growth is low [66, 72] and social benefits have remained static [67] to the point that **Australia now offers the lowest unemployment benefits among all OECD countries [82, 83], it is understandable that energy hardship is a growing problem**. Over the past 25 years, inflation and the cost of living have far exceeded any increase in pre-COVID social benefit payments [84]. It is therefore understandable that many households are struggling financially, with more falling into hardship or more extreme hardship (see findings in Chapter 2). Even after factoring in rental assistance, Australian unemployment benefits are reported

“... when you have a pandemic and suddenly everybody has lost their job [people realise] ... Jobseeker is not enough anymore, they need more ... because \$3 a day isn’t enough to live on ...”

to be the lowest (e.g., [84]). This is one side of the ‘affordability gap’ that needs addressing even though doing so is beyond the usual remit of ‘energy’.

### Very High Energy Prices

The other side of the ‘affordability gap’ is high bills. Energy prices have increased significantly over the past decade [67], and respondents revealed that this has caused a strong, negative impact on households. We are now at the point where many **households must under-consume energy or sacrifice other essentials** just to get by, and some resort to **questionable ‘debt-management’ strategies** to cope (see Table 5). Energy prices in Australia are considerably high in comparison with other OECD countries, although where they sit depends on the metric used. As reported elsewhere, some comparisons indicate that Australian energy prices are among the top prices among OECD countries, and, when broken down by region, **energy prices in the Eastern states are the highest** [85, 86]. For example, the International Energy Agency [86] ranked Australia the third most expensive country in the world in terms of US dollars per Megawatt-hour. Carbon and Energy Markets [87] ranked Victoria, New South Wales, South Australia and Queensland as the most expensive jurisdictions in the world for electricity prices when compared with OECD countries. This suggests that to alleviate energy hardship in the short- and long-term, pricing needs substantial attention – including a reconsideration of how much those in hardship are expected to pay (options to address this are provided in Chapters 7 and 8).

“They’re in **constant crisis**, their incomes are too low, and their expenses are too high.”

### Summary

The insights gained from our analysis of interviews with those experienced in working with households in hardship, together with analysis of recent case studies, paints a dim picture of household suffering in Australia due to energy-related issues. The data from interviews and case studies describe the impact of energy assistance programs. From our analysis, we conclude that **the combined negative impacts of energy assistance programs and policies on households vulnerable to or experiencing hardship far outweigh the benefits that ensue from these efforts.**

With some current initiatives and programs having a positive impact (although less than desired), households facing hardship are resorting to varied and sometimes extreme ways of coping and live with many negative consequences (outcomes) of energy hardship. Our analysis points to substantive gaps in current policies and programs, which spurred the next series of analysis: first, to speak with policy experts and program leads to gain insights at a broader meso-level; and second, to analyse current energy policies drawn from all jurisdictions. The objective was to determine ‘why’ greater benefits are not reaching households in need. These meso-level findings were then used to inform key policy solutions and a final set of recommendations.

## CHAPTER 4

# Insights into the Impacts of Energy Policies and Programs Meso-Level Analysis

### Introduction

The aim of this part of our investigation was to develop an understanding of the impacts of existing policies and energy initiatives from the perspective of government and sector experts who are involved in their design or implementation. We therefore adopted a meso-level approach to understanding the situation, which illuminated additional strengths and weaknesses of current efforts and prompted recommendations around best practice. Semi-structured online interviews were conducted with 31 policy/initiative leads across government, ombudsmen, think tanks and energy retailers. Participants were drawn from all jurisdictions. We then conducted a thematic analysis of interview transcripts and found five interconnected themes which reveal the gaps in the current landscape.

### Key Findings

#### *Strengths of Current Programs*

From our analysis which synthesised the key points made by the interviewees, we found three areas that show where current efforts seem to be working:

- There is a good breadth and mix of initiatives that could be classified as falling into either prevention, support or relief. We therefore found evidence that the P-S-R framework is useful and that some components are being applied.
- Generally, there is a high level of commitment among program delivery teams towards alleviating energy hardship.
- Individual teams are making bottom-up innovations and incremental improvements to their programs, some of which are very insightful and seem to be having a positive impact.

The strengths of existing efforts provide a platform that can be emulated and extended in future policy. Bottom-up initiatives provide valuable lessons for best practice.

#### *Weaknesses of Current Programs*

Participants also shared other insights about programs and policies. Analysis revealed three weaknesses that need to be addressed to reduce energy hardship:

- Energy hardship for many households is about much more than just 'energy'. This means that issues faced go beyond the scope of many siloed, individual programs. This finding echoes an earlier finding (see Chapter 3).
- No single program or group has the responsibility, tools or funding to address more than a small part of the energy hardship problem.

- There is no overarching goal to coordinate actions and measure progress (at either the state or national level) towards a meaningful contribution to the energy hardship issue as a whole.

Analysis revealed that the current mix of energy hardship-related policy initiatives is dominated by a mix of ‘best endeavours’ or short-term pilots. For example, for many long-standing initiatives, program leaders viewed the program contribution itself as positive (makes a positive impact on the households it reaches/targets), but they also admit that program design constrained their ability to provide material assistance (assistance to the level needed) or to target it to those households in the greatest need. Interviewees also revealed that the policy mix has included numerous examples of carefully targeted initiatives providing assistance but that they had limited, short-term funding and that, unfortunately, there was no plan to bring the program to scale or to build on those successes.

## Key Insights

We conducted an analysis of the ‘best practice’ of these past programs, as described by participants. A series of high-level, interconnected policy issues emerged (see Table 6). We believe these must be addressed by designing more ‘effective’ hardship policy (see Chapter 5).

*Table 6: Key Insights from Interviews with Program and Policy Managers and Advisors*

| Key Insight  | Explanation   |
|--|---|
| <b>Hardship is broader</b>   | Energy hardship is closely connected with broader economic and social hardship, while energy hardship-related initiatives are narrowly focused.   |
| <b>High energy prices</b>  | Energy prices have grown faster than low-income wages for 15 years, dramatically increasing the severity and extent of energy hardship due to an energy affordability gap.  |
| <b>Energy efficiency not to scale of need</b>                          | Poor housing and poor appliance quality mean that households must waste expensive energy just to meet their basic needs. This further increases bills and can cause or worsen hardship. Current initiatives to attend to this issue are either not targeted or not proportional to the collective household need. |
| <b>Billing practices and industry culture contributing to hardship</b> | Energy is typically billed in a way that is lumpy, lagging and opaque, which makes bills avoidably higher, difficult to budget for and difficult to reduce.   |
| <b>Lack of policy cohesion</b>   | Good initiatives are stranded in a fragmented, piecemeal and un-coordinated policy framework, which means current efforts produce ‘less than the sum of its parts’.   |

Each of these key insights is discussed in more detail below.

### Hardship is Broader than Energy

Without addressing broader hardship issues, energy hardship programs struggle to address the core of the issue. While they may offer some relief, they are not currently reducing the issue and moving households out of hardship. Energy-only policies have a limited tool kit, which means they lack

“Hardship is broader than energy... Hardship is everywhere. You see it in energy because it is reported, but there is a broader issue... Often mental health is involved, disability is often involved.”

“I think there’s a diversity and recruitment issue ... there’s not much evidence that there’s that diversity of recruitment [occurring] to bring in that different firsthand experience of what living a difficult life is like.”

links with social policy and result in cost-shifting between departments. Impactful and efficient policy addressing energy hardship requires collaboration with policy areas outside of energy and the consideration of broader hardship policies and support for households, who at present find themselves having to prioritise more urgent costs, like food and rent, ahead of energy.

## High Energy Prices

High energy prices appear to have the greatest negative impact on households experiencing vulnerability and hardship. Since energy costs are a key driver of escalating energy hardship, likely underpinning the steep rise in the scale of energy debt (see Chapter 2), pricing provisions need to be re-considered in the suite of initiatives proposed to address hardship. For example, concessions need to be easier to access, better

known and applied more consistently across states and territories in order to provide adequate prevention and support. Concessions are also generally insufficient to meet the needs of the most vulnerable households and are generally poorly targeted to that group. Considering ways to change network charges for those vulnerable to or experiencing hardship could also help to address the affordability gap and contribute to the prevention of households moving into a more extreme hardship state and accumulating unserviceable debt.

“It all revolves around cost. There’s the peripheral things like energy efficiency, but the main thing is just price. If price was manageable, I think that you’d see a lot less activity in the space.”

“This goes back to 2003 – when electricity started increasing faster than the cost of living. It has got worse ... In 2003 large debt was around \$4000 to \$5000 now debts of \$14,000 are common.”

## Energy Efficiency not to Scale of Need

The key gaps found in energy efficiency are that: effective retrofit and property upgrade programs do not have adequately scaled funding to make a broad and meaningful impact; program eligibility is often mismatched with hardship; there is a lack of deep retrofits occurring and rental, public and social housing households are being inadequately targeted for relief (as at the time of data analysis – August 2020).

“[Pilot programs] can spend a long time solving a particular program conundrum, but it’s only for 500 houses... They need to be far bigger to make the difference.”

## Billing Practices and Industry Culture Contributing to Hardship

There is a range of billing practices that may contribute to hardship, such as usage feedback lags, lumpy bills that are difficult to budget for, unpredictable costs, unintelligible billing information and high legacy debt. Underpinning billing issues is an industry culture that does not emphasise customer service and is financially incentivised not to assist customers in reducing energy through billing improvements and information, nor does it usually encourage households to access energy support schemes. While there are examples of *ad hoc*

“Retailers aren’t incentivised to help people use less. They don’t see themselves as energy services providers. Retailers are entities to manage financial risk.”

“When they ring [retailers] and say, ‘I need help’, sometimes the response is ‘No you don’t, you’ve always paid your bill. Prove to me you need help.’”

improvements, these are rare. For example, bill-smoothing practices can help, but the way they are usually implemented puts the financial risk on the customer by asking for higher bill costs upfront to cover future costs. Similarly, predictive billing products have

been developed by some retailers but are rarely used. ‘Debt repayment

“The structure of energy bills is inaccessible – customers cannot tell if they’re on a good contract because bills are hard to understand and there are not accessible energy information options like smart metering.”

matching' and 'forgiveness' for some households on retailer hardship programs are other initiatives that are seen as being effective. However, since these are typically offered in only an *ad hoc* and discretionary way, they are not available to, nor reaching, many households in need. Cultural issues can be compounded with staff from many retailer 'hardship' programs recruited from and/or located in debt-collection teams. Some retailers have sought to improve hardship program culture through training for hardship support schemes by recruiting staff from social services rather than from debt-collection backgrounds. These practices could be scaled.

There is also a role for government here, such as setting new and improved regulatory requirements for retailers and in providing consumer protections.

### Lack of Policy Cohesion

Many of the concessions and energy-efficiency programs discussed in this chapter rely on government concession cards. However, the jurisdictions running these programs do not have access to federal data identifying concession card holders. Siloing of information and funding leads to inefficient and ineffective policy, where programs are not operating in a way that contributes to a broader hardship goal and does not make use of the resources available. Few of the interviewees could speak to a policy goal for energy hardship. In the jurisdictions where there were policy goals for energy hardship, participants suggested they were extremely vague. Across the energy hardship environment, it seems there is little coordination occurring to share lessons and collaborate between the different aspects of the problem: outputs are being monitored rather than outcomes (*i.e.*, number of houses retrofitted, not the reduction of hardship), and funding is not typically proportional to the problem.

"There has been a bit of a siloed approach. The costs of hardship are very diffuse – the costs to energy retailers in terms of dealing with people in hardship, the cost to the government in terms of the subsidies and the various other programs that are out there, and the people themselves. There's definitely opportunities to have all of these working together, all of the different players who are experiencing the costs to create a model that works."

### Summary

These five issues are interconnected and compound each other, as depicted in Figure 10. Issues around broader hardship and declining real wages have occurred in the face of rising energy prices. When this is combined with poor-quality housing stock, energy bills become higher while the ability to pay for them declines. Together with poor billing practices, high quarterly bills become even harder to budget for and predict. A lack of policy cohesion means that current initiatives are fundamentally less than the sum of their parts. As a result, these issues are compounding energy hardship and undermining the effectiveness of existing initiatives.

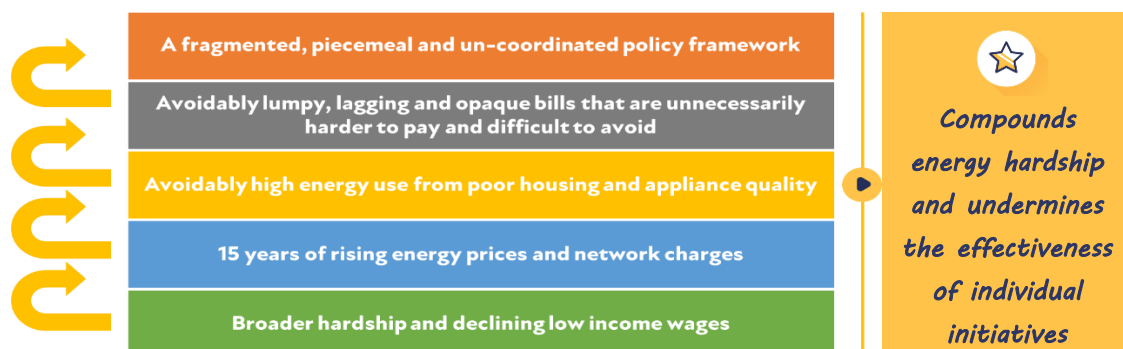


Figure 10: Key Implications from the Findings of a Meso-Level Analysis



## CHAPTER 5

### Gaps in Current Energy Policies Macro-Level Analysis

#### Introduction

To complete our understanding of the current situation and, specifically, to verify and identify any further gaps in policies beyond those identified by interviewees, we conducted a thorough analysis of **energy policies relevant to hardship or which may impact hardship**. Policies refer to laws, regulations, procedures, administrative actions, incentives or voluntary practices of governments and other institutions. Policy decisions are frequently reflected in resource allocations and tend to have specific timelines. They are represented in policy documents that define the policy and the implications of that policy. In this research, we analysed policy documents relevant to energy hardship. For the purpose of clarity, we did not review individual energy programs or initiatives that deal with energy hardship. This macro part of our investigation is broken into three sections. First, we present the findings from a detailed gap analysis of current policy documents from across all jurisdictions in Australia (this chapter). We then present the findings from an analysis of the policies in the Trajectory to see whether it contains gaps when it comes to addressing energy hardship (Chapter 6). Last, we present a suite of ‘best practice’ principles that have been drawn from our analysis (Chapter 7).

#### Method and Data Sources

We analysed 51 distinct energy policy documents from the Commonwealth, states and territories that were related to, or could impact, energy hardship in some way, even if they were not necessarily focused on energy hardship. This was achieved by searching the websites of each jurisdiction, as well as conducting Google Advanced Searches, for **relevant current policy documents published prior to August 2020**. In our searches, we used combinations of relevant search terms, such as energy, electricity, gas, policy, policies, hardship, disadvantage, inequity and inequality, to locate these policy documents.

All policy documents were downloaded, and data were extracted and transferred to an Excel spreadsheet which was then formatted in two ways. First, basic descriptive information was collated, including jurisdiction, category, time frame, scope and key features. Second, policies were analysed and evaluated using the 5E framework [88]. The 5E approach evaluates a policy in terms of its effectiveness, efficiency, ethical considerations, evaluation of alternatives and establishment of recommendations. The 5E framework for policy analysis has been successfully applied to various areas of public policy, such as social welfare [89, 90]. Each component is briefly explained below:

- **Efficiency:** refers to the cost of implementation and whether the policy outcomes are worth the cost.
- **Ethical:** determines whether a policy is ethically sound and unintended consequences have been considered.
- **Evaluation of alternatives:** establishes whether comparisons between the policy and other approaches have been made.
- **Establishment of recommendations:** refers to amending, replacing, removing or adding policies and whether feasible implementation of recommendations have been made.
- **Effectiveness:** focuses on whether the policy effectively targets the problem and considers outcomes for different groups in the population.

To further interrogate the effectiveness of policies, these were then analysed using the new ABATE Hardship and P-S-R (prevention-structural, prevention-personal, support and relief) frameworks developed during the first stage of this project.

We note that our primary task was to identify ‘gaps’, which means the findings presented here highlight policy shortfalls rather than strengths.

## Key Findings

### *Efficiency of Policies*

Four key areas were revealed from this analysis:

- In terms of efficiency, **policies contained minimal details on costs or were high-cost.**
- Many policies were linked to **high cost**, although only for **small-scale implementation activities** (e.g., energy-efficiency retrofits to limited numbers of homes), meaning that returns on investments in terms of significantly addressing energy hardship were lacking.
- There is a predominance of **expenditure on immediate but only partial relief** of energy hardship rather than making **structural changes** for long-term improvements or providing relief that is adequate to the need.
- Limited data were found on expected and actual return on investment from a policy; while this information could have been evident in policy evaluation reports, we found very few which contained this information.

### *Ethical Considerations*

We found that policies considered ethical implications, but generally only from one or two perspectives – usually concerning the vulnerability of consumers or the environment. We also found that policies aim to regulate potentially immoral retailer behaviour. Examples of immoral retailer behaviour include keeping customers on standard contracts despite better deals being available or not offering help even when a customer requests it (see Chapter 3). We identified policies that mandate retailers to offer customers alternative options when unable to pay a bill rather than being automatically disconnected. Also, some policies require retailers to report debt levels and the number of customers on hardship programs to improve transparency. However, there was minimal evidence of policies that considered unintended consequences, and policies often have ‘tunnel vision’ rather than a broad and holistic focus on ethical concerns (e.g., tunnel vision includes things like having a limited focus on unintended consequences or not sufficiently curtailing poor retailer behaviour).

### *Evaluation of Alternatives*

In general, there was minimal evidence of alternative policies being assessed and evaluated. We were consistently unable to find examples where different policy options were evaluated and compared before arriving at policy decisions and implementation.

### *Establishment of Recommendations*

In relation to the establishment of recommendations, our analysis found that policies were typically **high-level** and **vague**, with **minimal focus on tangible implementation**. Policies with recommendations did **not have**

**SMARTA goals** (specific, measurable, attainable, relevant, time-based and agreed to) to guide them. SMARTA goals are a well-established approach used to plan, achieve and evaluate goals and objectives [91].

### Effectiveness (Overall)

In terms of overall effectiveness, based on our analysis, we found that generally, policies are **poorly targeted**. Policies often support middle-income rather than low-income households, **with many people remaining in hardship** and being ‘left behind’ during the energy transition in Australia. For example, the ACT Solar Subsidy and Interest-Free Loan and Energy-Efficient Appliances Rebate both seem to be ‘preventative’ strategies, which on the surface seems good. However, such policies do not reach those who need them most. Households who can consider solar and are able to pay their energy bill on top of loan repayments (even if the loan is ‘no-interest’) or pay upfront for new energy-efficient appliances and then apply for a rebate are the least likely to be in an energy hardship state. Therefore, this policy does not actually mandate the prevention of hardship for those who are on the precipice of – that is, highly vulnerable to – hardship. Further, those already in hardship are even more distant from accessing such initiatives.

We also found that policies invariably provide ways to support households but often at the wrong times, with many **‘prevention’ measures being implemented too late** (when customers have already fallen into hardship). In addition, we identified a lack of policy cohesion in that **the current suite of policies do not work cohesively** to address all household needs or all states of hardship.

### Effectiveness in Addressing Energy Hardship Based on Different Household Needs

As shown in Figure 11, most energy policies are focused on ‘prevention (structural) barriers’ or ‘relief’, with major gaps in ‘prevention (personal) factors’ and ‘support’. From the gap analysis conducted, it is evident that there is a major emphasis in existing policies on addressing general energy-related structural issues (such as energy retailer laws and rules). However, such policies are usually **high-level** and offer **general consumer protections**, and therefore often **fail to address causes of hardship** – they mostly focus on regulating retailer behaviour and prices to protect all consumers in more general terms. Since retailer behaviour can be questionable, and energy prices are among the highest in the world (see previous chapters), it begs the question as to whether these policies are impactful. In short, prevention (structural) policies are present but insufficient to address energy hardship.

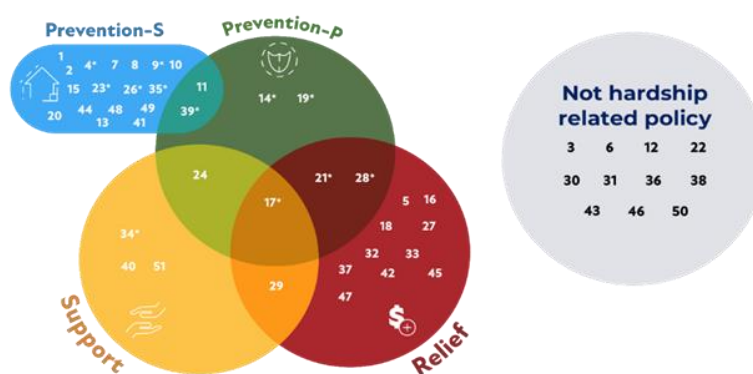


Figure 11: Distribution of Energy Policies by Type – Prevention, Support or Relief

to address causes of hardship – they mostly focus on regulating retailer behaviour and prices to protect all consumers in more general terms. Since retailer behaviour can be questionable, and energy prices are among the highest in the world (see previous chapters), it begs the question as to whether these policies are impactful. In short, prevention (structural) policies are present but insufficient to address energy hardship.

In addition, there is a **lack of policy focus on prevention measures**, which are needed to provide a buffer to households and prevent them from falling into hardship. There is also a **lack of meaningful support** (beyond just financial relief) for customers once they fall into energy hardship. This means that current policies are able to provide only **partial support to people in transient hardship** and largely **fail to people in acute or extreme hardship states**. There is also a concern that there are significant numbers of **people without policy support who are experiencing battle-on hardship** and barely getting by.

Details of how each policy was assigned using the P-S-R Framework are provided in Figure 12.

## Commonwealth, State and Territory Policies Relevant to Energy Hardship

| Commonwealth Policy |  |     |
|---------------------|--|-----|
| Ref. #              |  |     |
| 1                   | National Energy Retail Law Act 2011  |     |
| 2                   | National Energy Retail Rules   |     |
| 3                   | National Electricity Act 1996  | N/A |
| 4                   | The Australian Energy Market Agreement*  |     |
| 5                   | Social Services Legislation (Energy Assistance Payment and Pensioner Concession Card) Act 2017 |     |
| 6                   | Fuel Quality Standards Act 2000  | N/A |
| 7                   | Default Market Offer Prices 2020-21  |     |
| 8                   | AER Compliance and Enforcement Policy  |     |
| 9                   | The National Construction Code (NCC)*  |     |
| 10                  | National Energy Productivity Plan  |     |
| 11                  | Power of Choice Program  |     |
| 12                  | Energy Policy Blueprint  | N/A |
| 13                  | National Energy Customer Framework   |     |
| 14                  | Trajectory for Low Energy Buildings*   |     |
| 15                  | Competition and Consumer (Industry Code - Electricity Retail) Regulations 2019                 |     |
| SA Policy           |  |     |
| Ref. #              |  |     |
| 31                  | Housing Improvement Regulations 2017 (under the Housing Improvement Act 2016)                  | N/A |
| 32                  | Electricity Concessions  |     |
| TAS Policy          |  |     |
| Ref. #              |  |     |
| 33                  | Electricity concessions  |     |
| 34                  | Tasmanian Energy Strategy*   |     |
| 35                  | Renewable Energy Action Plan 2020*   |     |
| 36                  | Residential Tenancy Act 1997   | N/A |
| VIC Policy          |  |     |
| Ref. #              |  |     |
| 37                  | Energy Concessions   |     |
| 38                  | Victoria - Renewable Energy Action Plan  | N/A |
| 39                  | Payment Difficulty Framework*  |     |
| 40                  | Vic Gov Response to the Review of the Electricity & Gas Retail Markets in Victoria             |     |
| 41                  | Residential Tenancies Amendment Act 2018   |     |
| ACT Policy          |  |     |
| Ref. #              |  |     |
| 16                  | ACT Sustainable Energy Policy 2011-2020  |     |
| 17                  | Climate Change Strategy 2019-2025*   |     |
| 18                  | Energy concessions   |     |
| 19                  | Solar subsidy & IFL; EE appliance rebates*   |     |
| NSW Policy          |  |     |
| Ref. #              |  |     |
| 20                  | The Building Sustainability Index (BASIX)  |     |
| 21                  | NSW Electricity Strategy*  |     |
| 22                  | Renewable Energy Action Plan 2013  | N/A |
| 23                  | Net Zero Plan*   |     |
| 24                  | Energy and Utilities Administration Act 1987 (Part 6A - Climate Change Fund)                   |     |
| 25                  | Electricity concessions & rebates  |     |
| QLD Policy          |  |     |
| Ref. #              |  |     |
| 26                  | Powering Queensland Plan*  |     |
| 27                  | Electricity Rebates  |     |
| 28                  | Affordable Energy Plan*  |     |
| 29                  | QLD Govt response to Pricing Inquiry   |     |
| 30                  | Residential Tenancies and Rooming Accommodation Act 2008                                       | N/A |
| NT Policy           |  |     |
| Ref. #              |  |     |
| 42                  | Electricity concessions  |     |
| 43                  | Renewable Energy and Electricity Market Reform – Implementation Plan 2018-20                   | N/A |
| 44                  | Sessional Committee on the NT's Energy Future: Electricity Pricing Options                     |     |
| WA Policy           |  |     |
| Ref. #              |  |     |
| 45                  | Energy Assistance Payments (EAP)   |     |
| 46                  | WA Energy Transformation Strategy  | N/A |
| 47                  | Hardship Utility Grant Scheme (HUGS)   |     |
| 48                  | Consumer advocacy feedback and grants  |     |
| 49                  | Energy Operators (Electricity Generation and Retail Corporation) By-laws 2006                  |     |
| 50                  | Strategic Energy Initiative – Energy2031   | N/A |
| 51                  | Household support – financial counselling  |     |



Prevention-S



Prevention-P



Support



Relief

Policies in red with asterisks\* indicate vague policies with poor/ no implementation, and/or poorly targeted policies.

Figure 12: Classification of National and Jurisdictional Energy Policies

## Key Insights

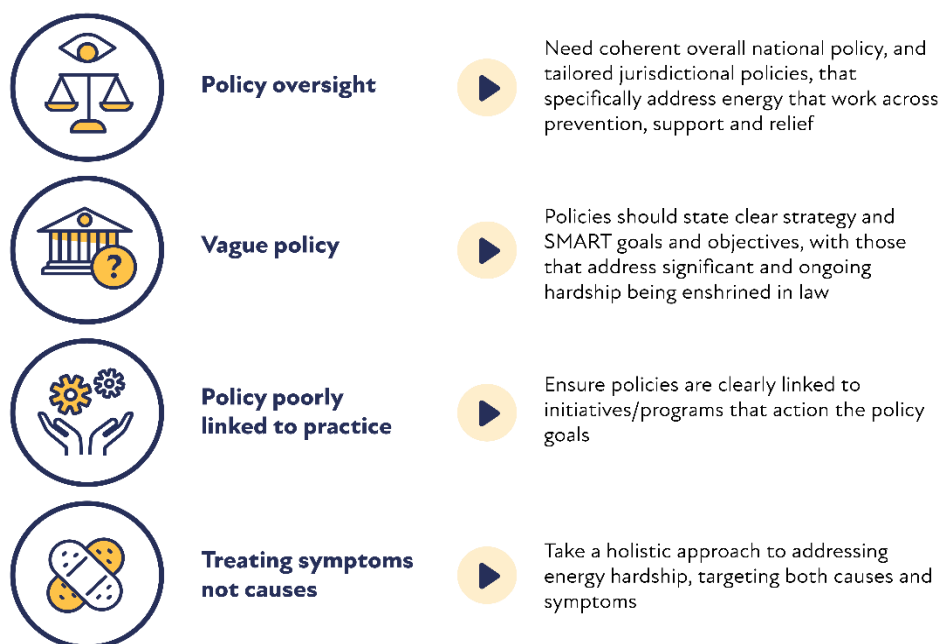
Overall, our policy analysis identified that **the suite of existing energy policies included in this analysis is largely ineffective at addressing energy hardship** – both on an individual scale and collectively. Current policies fail to adequately target or reach many of the households who are vulnerable to or in hardship, and very few provide adequate support. There is a significant gap in prevention and support policies and inadequate levels of relief. Further, there is a lack of legislative mandates to hold policymakers accountable.

Based on our analysis, we highlight four key issues that require attention:

- **Policy oversight:** There is a lack of policy directly relating to addressing energy hardship for those who need it.
- **Vague policy:** Policies are high-level, ambiguous and lack clear strategy, goals and objectives.
- **Policy poorly linked to practice:** Policies are not well linked to initiatives, programs or laws, leading to poor implementation.
- **Treating symptoms, not causes:** The current focus on general structural issues and relief does not treat the root causes through prevention and support – meaning people in energy hardship are being left behind.

## From Insights to Recommendations

The key insights, implications and recommendations made later in this report directly address the four critical issues highlighted in this policy analysis (summarised in Figure 13) and are discussed briefly below.



*Figure 13: Key Policy Issues Emerging from the Energy Policy Gap Analysis*

## Policy Oversight

The lack of direction and cohesion which characterises the current suite of energy policies could be remedied by developing a clear and coordinated national strategy with timely targets to eliminate and prevent energy hardship. Each jurisdiction should tailor energy hardship policies to their jurisdictional context and ensure such policies adequately target each of the ABATE hardship states. Policymakers should utilise the ABATE hardship states to revise, retarget or create a comprehensive mix of policies for all energy hardship states. These policies should clearly state the strategy and SMARTA objectives, which must relate to preventing or reducing energy hardship and require a level of ambition relevant to the scale of energy hardship. When developing a national strategy to address energy hardship, policymakers should emulate the strengths of the Trajectory, which offers a strong framework for comprehensive, long-term goals and national cross-portfolio commitment.

## Vague Policy

Policymakers should be informed by best practice design principles to improve the effectiveness of existing policies (best practice principles are provided in Chapter 7). Policies should include a clear statement of strategy and objectives to guide policy implementation. As noted above, to ensure policies are specific in their mandates and can be evaluated to ensure they are achieving relevant outcomes, they should incorporate SMARTA goals. These goals should be clearly and explicitly stated in policy to provide a foundation for evaluation. Further, very few energy policies are enshrined in law, reducing government accountability and commitment and leading to inconsistent implementation. Policies that aim to address significant and ongoing energy hardship should be legislated so that governments are held accountable for their implementation and evaluation.

## Policy Poorly Linked to Practice

To strengthen the link between policies and outcomes, policies should include evidence-based recommendations for implementing initiatives that action the policy goals, ensure goals are feasible, and that the goals and outcomes can be evaluated against a business-as-usual baseline, similar to the modelling of recommendations made in the Trajectory.

Once implementation strategies are established, the level of ambition and funding to enact them must be proportional to the extent of energy hardship experienced by Australian households. When developing these implementation strategies, policymakers should ensure that the initiative's scale is in proportion to the scale of the need. Policy implementation initiatives often lack the ambition and the funding proportional to the number of households and the severity of the challenges the policies aim to address. There are three key steps to remedy this:

1. **Policy goals** and programs must be appropriate so that they correspond with the nature of energy hardship they are designed to reduce.
2. **Funds allocated to policies** and programs must be sufficient to match the scale of energy hardship they are designed to reduce.
3. **The scale and duration of policies** and programs must be sufficient to match the scale of energy hardship they are designed to prevent or reduce (large-scale and long-term).

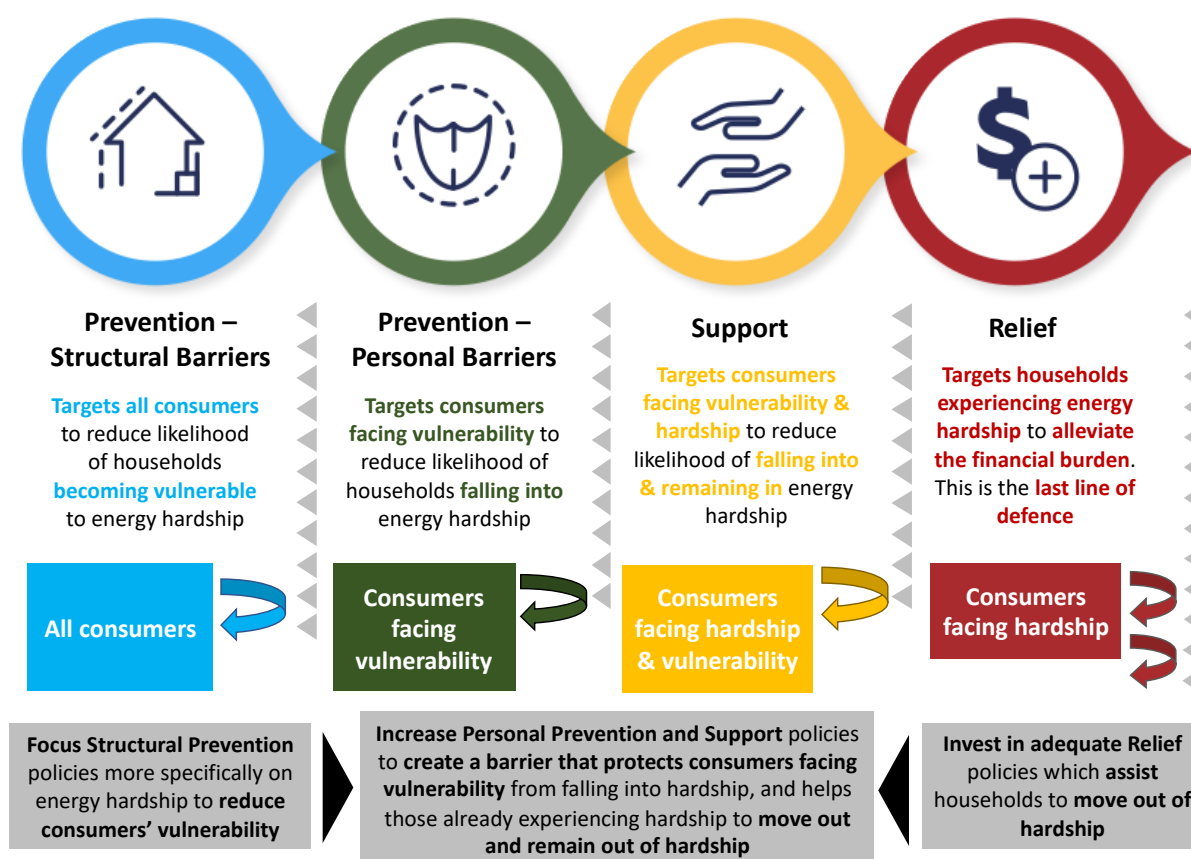
## Treating Symptoms Not Causes

To effectively implement an application of the P-S-R Framework, policymakers must redress the currently fragmented policy suite. Currently, the implementation of policies and their initiatives is fragmented across silos,

jurisdictions and portfolios, and even within departments. This policy ‘tunnel vision’ restricts the delivery of energy policy and creates policy gaps, through which energy customers fall into hardship and get left behind. When addressing energy hardship, policymakers must plan, monitor and coordinate the delivery of policies and programs across jurisdictions and portfolios. For example, there should be cross-portfolio coordination and commitment between energy, housing and social policies to identify and provide more strategic and comprehensive assistance to vulnerable households at a structural policy level. This must be complemented by the clear delegation of accountability so that, if households do ‘fall through the gaps’, they are ‘not left behind’.

To remedy this crucial policy failing, policymakers should apply the P-S-R Framework to design a cohesive suite of policies that prevent households from falling into energy hardship and which may also facilitate households moving out of energy hardship.

A possible application of P-S-R is provided in Figure 14.



**Figure 14: Applying the P-S-R Framework to Facilitate Households Moving Out of Energy Hardship**

Note: Curved arrows relate the Concept to a specific group, e.g., in the blue section, this arrow relates ‘Prevention – Structural Barriers’ to ‘All consumers’. Straight arrows illustrate the interrelationships between P-S-R initiatives.

## Guidelines for Writing Good Energy Policy for Australia

As well as drawing on the recommendations made in this report, there are some general recommendations about writing good policy (see, for example, [92]) that can help Australia develop effective policies to ameliorate energy hardship:

1. **Timely:** Good public policy is prepared when the policy problem requires intervention and when ministers and other decision-makers need it and are likely to act on it.
2. **Relevant:** Good policy is always relevant to the current situation faced by decision-makers and will take into account current realities, including the political environment and policy cycle, and seek to anticipate related social and economic developments.
3. **Consultative:** Policy should be based on consultation with stakeholders inside and outside government [93]. It should be acknowledged that this takes time and effort and can generate a diversity of perspectives and lead to critical and reflexive discussions before reaching a consensus [94]. Furthermore, policy should be logical and evidence-based, drawing on data that are as accurate and complete as possible [95].
4. **Clear:** High-quality policies set out a clear purpose and concrete description of policy issues and the facts and assumptions on which the policy options are based. There should be a clear articulation of the associated links between facts and assumptions on the one hand and conclusions and recommendations on the other. Policy should be well-written, concise and well-organised [94].
5. **Provide Options:** Policy should consider multiple viable options. Additionally, the likely intended and possible unintended consequences of different policy options should be considered.
6. **Accountable:** Policy recommendations should set out a coherent strategy and SMARTA goals and objectives that are clearly linked to practice, alongside an appropriately resourced evaluation plan [92, 96].
7. **Informed:** Two further aids of good policy include reviewing good examples of existing or past public policy in cognate areas of social policy, such as health, welfare, transport and communications (see, for example, *Successful Public Policy: Lessons from Australia and New Zealand* [97]), and investing in training for policy writing and policymaking (e.g., courses offered by the Australia and New Zealand School of Government (ANZSOG), among others).

## Summary

This energy policy gap analysis revealed that policies are spread across all types, focused on prevention, support and relief strategies to alleviate energy hardship. However, in light of the shortfalls evident in most elements of the 5E framework used to evaluate policies, they also leave much room for improvement. Analysis revealed that **Australian energy policies commonly provide relief, but when they do it is not to a material level. Some policies address *prevention-structural barriers*, but few pay sufficient attention to providing *support* and *prevention-personal factors*.** Attending to these gaps would ensure that policies better match household needs.

Key insights from this analysis reveal that many policies reviewed were found to be typically very high level, vague in their objective and scope, not clearly linked to the programs and initiatives that will help deliver on policy and appear to treat the symptoms rather than underlying causes of energy hardship. These findings suggest that **a more cohesive approach that sets clear targets and SMARTA objectives, specifies links to initiatives and addresses the structural barriers of energy hardship** will substantially progress efforts to alleviate the pressures households currently face and help them move towards a state of energy wellbeing, rather than energy hardship. Setting an effective policy agenda with clear, coherent and agreed objectives, which is enshrined in well-written policy documents, can help create a cohesive mandate for addressing energy hardship in Australia. Policies can then be linked to specific programs and initiatives, such as providing blocks of

funding and appropriate support, and through robust monitoring and evaluation to assess whether policy objectives are being met. In conclusion, developing effective energy hardship policy for Australia is imperative.

## CHAPTER 6

# The Trajectory Policy Gap Analysis

### Introduction

We reviewed and analysed the Trajectory, drawing on frameworks developed in Chapter One: the P-S-R Framework to clarify the strategy-type policies the Trajectory seemed to be adopting; and the ABATE Hardship Framework to assess how the actions in the Trajectory might prevent, support or relieve households in each hardship state. As part of this review, we compared the gap analysis findings from Chapter 5 with this analysis of policies in the Trajectory to identify residual gaps between committed and planned Trajectory targets. Specifically, we considered the Trajectory's ability to prevent energy hardship through broad efficiency gains that minimise structural drivers of high energy costs.

### Summary of Key Findings

The Trajectory has the potential to address some key gaps in preventative initiatives for energy efficiency and distributed energy resource (DER) policy. However, the efficiency, effectiveness and equity of these proposed Trajectory initiatives will depend on their detailed design (noting that Ministers have not yet committed to the proposed actions). Moreover, the Trajectory does not address the issues of poor access, targeting and materiality of policies in the areas of energy tariffs, billing and broader hardship.

The Trajectory is focused on improving the efficiency and DER readiness of new and existing buildings. **Efficiency and DER readiness are important but limited subsets of the suite of policy initiatives required to address the drivers, indicators and outcomes of energy hardship.** Hence, **the Trajectory alone leaves significant policy gaps in addressing energy hardship.** It does not have a goal to specifically address *energy hardship* but rather to “inform the future ....activities” relating to building standards and building policy [71].

Beyond the commitment to the Trajectory itself, the proposed initiatives have good potential for energy hardship prevention through efficiency improvements, but only if they are implemented in ways that specifically address the shortcomings of previous policy commitments relevant to energy hardship. Further, the Trajectory offers elements that could be emulated for an effective national energy hardship strategy, with long-term planning and cross-portfolio commitments, planning and goals.

### Overview of the Trajectory

The Trajectory is an overarching document that was jointly agreed to in late 2018 by the former COAG Energy Council and the Building Ministers' Forum. It is intended to inform the development of future updates to the National Construction Code (NCC), which sets minimum standards for new and existing buildings, and to also inform new national building policy initiatives that may be considered [1].

#### ***Its stated goal is as follows:***

“Zero energy (and carbon) ready buildings have an energy-efficient thermal shell and appliances, have sufficiently low energy use and have the relevant set-up so they are ‘ready’ to achieve net zero energy (and carbon) usage, if they are combined with renewable or decarbonised energy systems on-site or off-site” [1].

The Trajectory also includes supporting addenda that provide further analysis and options for future consideration. It specifies high-level aspirational goals, includes timelines for specific committed actions, and commits to the investigation of new actions.

Given the stated purpose and goal, the Trajectory is to be understood within the narrow remit of updating and improving the NCC in relation to energy efficiency. As such, its potential impact on energy hardship is, at best, complementary.

The Trajectory's initiatives primarily focus on preventing hardship through reducing vulnerability, more so than providing relief or support for those already experiencing hardship. However, it has some potential to improve outcomes and relieve financial pressure, particularly for households in the *Battle-on* state, who struggle to afford energy but who have not fallen into debt. It may also help to prevent those households from falling into a worse state (*i.e.*, extreme hardship). As such, **the Trajectory**, in both its committed and proposed actions, **has the greatest potential for preventing rather than supporting or relieving energy hardship**. Broader policy tools relating to support and relief are beyond the scope of the Trajectory.

### Committed Actions

The key 'committed actions' (ministers have committed to implementing these actions) in the Trajectory relate to actions involving enhancing the NCC for new residential and commercial buildings. There are also commitments for existing buildings.

#### New Buildings

The commitments for new buildings are significant from the perspective of building policy (illustrated in Figure 15). They aim to broadly improve the efficiency of Australia's future building stock over time. In terms of the model for energy hardship, these commitments are considered preventative and would help reduce structural barriers for future households that are vulnerable to or in energy hardship if they live in these new homes. However, this will only assist the few households who move into those new homes – of which only a small portion would be experiencing energy hardship.

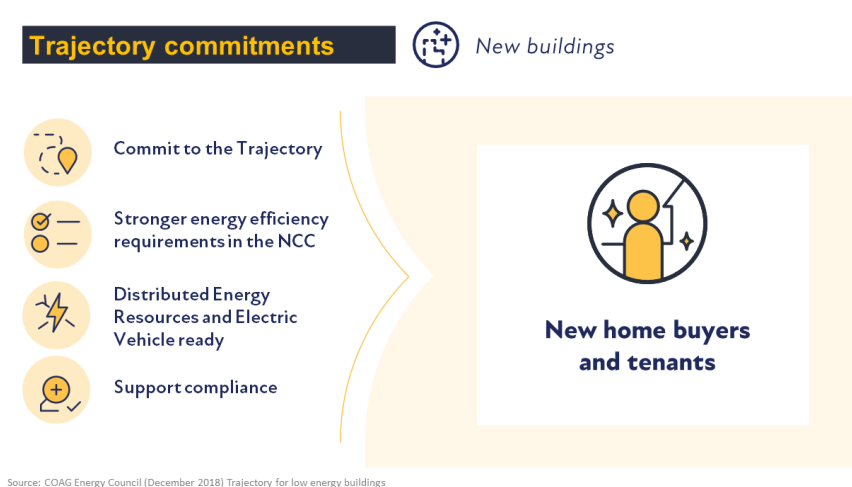


Figure 15: Trajectory Commitments - New Buildings

#### Existing Buildings

Improvements to the energy efficiency of existing buildings are far more important for policies that aim to prevent energy hardship. The majority of these committed actions for existing buildings reaffirm earlier commitments. Those actions relevant to energy hardship address energy-efficiency building standards, appliance minimum efficiency standards and ratings, home energy-efficiency ratings and disclosure, customer information tools, provisions to harmonise state-based energy-efficiency schemes, and this report. The actions

align with several Commonwealth Government *National Energy Productivity Plan* (NEPP) objectives (see Figure 16). Through a whole-of-system approach, coordinated across the federal, state and territory governments, the NEPP will deliver a range of measures to increase Australia's energy productivity by 40% from 2015 to 2030.



**Figure 16: Trajectory Commitments - Existing Buildings**

Note: EE = energy efficiency, EEOs = energy efficiency objectives, GEMS = greenhouse and energy minimum standards

This pool of policies, aside from the provision of this report, is broad-based and not explicitly targeted towards outcomes for households who are vulnerable to or experiencing hardship. However, they do lay the groundwork for efficiency gains that would alleviate financial pressure, particularly for households in the *battle-on* state, and prevent households vulnerable to hardship from moving into a hardship state. These policies will not provide relief for households in the *acute* or *extreme* hardship states, and several of the policies regarding efficiency standards are likely to only have a material impact over the medium term.

### Proposed Actions

The Trajectory's 2019 Addendum [98] proposed actions for residential buildings that outline several relevant actions for energy hardship and go well beyond the committed actions of the Trajectory discussed above.

The more ambitious initiatives present the opportunity for better targeting of policies and programs to support households vulnerable to or experiencing energy hardship. The specific settings of programs will determine the scale of the impact and whether they are well-targeted. However, a good foundation has been laid, and a range of good regulatory standards, incentives and information programs have been proposed. We note that these proposals, as with the committed actions of the Trajectory, primarily target the prevention of energy hardship and do so in a broad-based way by improving efficiency standards and awareness and incentivising upgrades, as shown in Figure 17.



**Figure 17: Proposed Actions in the Trajectory**

Note: EE = energy efficiency

## Analysis of the Trajectory

The Trajectory is focused on improving the efficiency and DER readiness of new and existing buildings. Efficiency and DER readiness are an important but very limited subset of the suite of policy initiatives required to address the drivers, indicators and outcomes of energy hardship. It does not have a goal to specifically address energy hardship but to “inform the future [Building Minister’s Forum and Energy Council] activities” relating to building standards and building policy.

### Key Strengths

Within these constraints, the Trajectory shows strong early potential to address the subset of energy efficiency-related policy requirements to reduce energy hardship. The long-term goals and national cross-portfolio commitment and coordination provide a strong framework to build on. Moreover, the Trajectory includes a much broader suite of proposed initiatives for new and existing homes that are under consideration. These include:

- a series of financial incentives to increase energy efficiency upgrades, and ensuring these commitments are designed in a way that helps renters and households experiencing hardship
- commitments to phase in, over time, minimum energy efficiency standards for rented homes
- broader energy-efficiency ratings and disclosure frameworks for all homes at the point of sale or lease
- a broad base of information and resources for all households
- additional initiatives to reduce the barriers to energy efficiency for strata buildings.

These proposed actions include commitments to ensure, where relevant, that they specifically target a broad set of households experiencing vulnerability or hardship. If effectively designed and implemented, these proposed initiatives for new and existing homes provide a comprehensive set of policy options to support the

energy efficiency requirements of a broader energy hardship strategy. However, **they are insufficient on their own to reduce energy hardship without attending to other areas recommended in this report**. Moreover, if some of these initiatives are implemented without careful attention to their direct and indirect impact on households in hardship, they could have unintended, negative effects and compound existing challenges.

### *Key Weaknesses*

The committed actions in the Trajectory are likely to have limited additional impact on energy hardship. This is because they are either targeted at new homes, which will only impact a small proportion of households in hardship, or are a legacy and reaffirmation of the 2016 NEPP commitments and the 2018 progress Finkle 6.6 commitment. Committed actions provide no new material action. The most substantive new initiatives in the Trajectory with the potential to address energy hardship are those **proposed** actions for existing homes. The key weaknesses of these initiatives are:

- they are still only **policy ideas** under consideration (not yet accepted)
- they are only **defined at a very high level**, with their potential efficiency, effectiveness and ethics greatly dependent on detailed design choices
- they only include an ‘in principle’ commitment to developing support for households in energy hardship, without details of the specific initiatives that will be required to **ensure that Trajectory actions do not have unintended and regressive consequences**.

### *Elements to be Emulated for a National Strategy to Alleviate Energy Hardship*

A key finding of this report is that there is a need for a cohesive, strategic and long-term national plan for alleviating energy hardship that contains outcome-based goals (see Chapters 4 and 5). The Trajectory’s structure offers an example that could be emulated to achieve this outcome. It contains a national, cross-portfolio set of commitments with long-term targets and a roadmap of interim goals. As it tracks over the next decade, it acknowledges the size of the issue, while cross-ministerial council commitments recognise its complexity as ministers share power and responsibility across portfolio areas and levels of government. While these targets could be more outcome-based, the apparatus of the Trajectory offers a useful model to follow when developing a national strategy to alleviate energy hardship.

### *Recommendations from this Analysis*

We recommend achieving commitment by jurisdictions to the full suite of proposed actions for new and existing residential buildings. We also recommend ensuring that in developing these new initiatives, care is taken to verify that detailed design will:

- provide eligibility criteria and is targeted to serve customers who are in or are vulnerable to being in each of the four ABATE energy hardship states
- provide minimum standards and upgrade funding at levels sufficient to make a difference
- draw on the best practice lessons from existing initiatives identified in this review
- undertake further policy actions to bridge the significant gaps that remain to address energy hardship, beyond what is possible within the energy-efficiency-focused scope of the Trajectory
- emulate the strengths of the Trajectory in developing a national strategy to alleviate energy hardship.

Proposed policy solutions 2.1–2.4 provide more detail (see Chapter 7).

## Summary

Although the Trajectory contains good elements, it is the more ambitious suite of *proposed* actions that present the opportunity for better targeting of policies and programs to support households facing energy hardship. It provides a roadmap that features strong elements, such as its reference to energy vulnerability, its inclusiveness and its reach. It should be funded to a material level sufficient to meet the need for better housing in Australia and ensure all proposed actions that would ameliorate hardship are confirmed. There are solid components worth emulating when developing a national, cohesive energy hardship strategy.

However, while the Trajectory addresses a fundamental key to alleviating hardship by ensuring dwelling energy efficiency is improved, we note that, even after ensuring homes are energy-efficient, energy hardship will remain a condition for many Australian households unless other structural barriers and sector structures and practices are addressed. We conclude that the Trajectory contains much-needed policy that, when fully implemented, will go a long way towards addressing energy hardship, but significant additional policy is needed that will remove the other structural barriers (see Chapters 3 and 4) that impose hardship on households.

## CHAPTER 7

# Policy Solutions to Reduce Energy Hardship

## Introduction

This chapter sets out a strategic package of policy solutions that, if implemented, would support households vulnerable to or experiencing energy hardship, with a view to addressing negative impacts both now and into the energy transition future. This builds on the gap analysis of existing policies (Chapter 5) and the gap analysis of policies in the Trajectory (Chapter 6) to consider what is required to address residual gaps. In doing so, it brings together the findings from earlier chapters considering the differing requirements and opportunities across each of the ABATE hardship states and the P-S-R policy types (Chapter 1). It also considers the need to address the policy governance and coordination challenges and best practice opportunities identified in Chapter 4. Based on our analysis of these initiatives, **we recommend that this integrated package of initiatives form the basis for a national strategy to alleviate energy hardship**. Each initiative has been mapped to the recommendations presented in Chapter 8.

From a policy perspective, this is challenging because many of the drivers of energy hardship and potential solutions sit outside the direct control of energy ministers. Furthermore, there is significant diversity between jurisdictions regarding progress on hardship relief programs and electricity market and energy retailer structures. This means moving forward in unity will require different actions and ministerial decisions. These drivers cover a range of demand-side issues which sit within the remit of housing, planning and social services. Hence, **addressing the drivers of energy hardship will require coordination with all these portfolios and access to data in other portfolios**. Moreover, the gaps and shortcomings of the current policy patchwork result in inadvertent cross-subsidies between portfolios. These include higher health costs from people in homes with insufficient heating or cooling due to high energy prices and inefficient buildings and appliances. They also include poorly targeted cross-subsidies of social security support through state energy concessions budgets.

## Issues that Policy Needs to Address

The key challenge for addressing energy hardship is the need to develop and implement better policy, rather than just more policy. Chapter 5 highlighted both strengths and gaps in current state and national policies in terms of the suite of prevention, support and relief types required. However, **the challenges discussed in Chapters 1–4 show that the collective impact of the initiatives that emanate from these policies is much less than the sum of their parts – in both funding and impact**. This is largely due to existing policy initiatives not being collectively designed, funded and coordinated. The key challenges identified (Chapters 4 and 5) include:

- At the policy and program level, the policy gap analysis indicates there is **a lack of clear long-term, measurable objectives** around reducing or eliminating hardship (Chapters 4 and 5).
- **Funding is generally not proportional to the problem** and not well targeted to those in hardship. Participants revealed that, typically, initiatives involve either a large expenditure, spread across many homes (e.g., many concession card holders), or are concentrated on a very small number of homes (e.g., a few thousand fortunate recipients) (Chapter 4).
- Policy and program leads revealed there is **no plan to scale** many of the deeper, targeted pilot initiatives to reach the remainder of those in hardship (Chapter 4).

- **Siloed program delivery** was commonly reported by participants (Chapter 4), both across jurisdictions and portfolios and between programs within the same department. For example, many successful programs are not repeated or extended, and programs that are available at the same time are not always complementary.
- **Monitoring and evaluating program outcomes** (e.g., bill reductions, reduced hardship) **rather than outputs** (e.g., dollars spent, number of lights installed) **is rare** (Chapters 3, 4 and 5).

Addressing these issues requires developing an effective strategy and applying best practice principles, which were forged from our investigation with policy and program leads.

## Elements of an Effective Strategy

A coherent, comprehensive and effective national strategy and governance framework are required to help ensure existing and future energy hardship policy initiatives are impactful. There are six key elements to be included in the proposed strategy (see Figure 18) to address the shortcomings of the current policy environment (as described in Chapters 4 and 5).

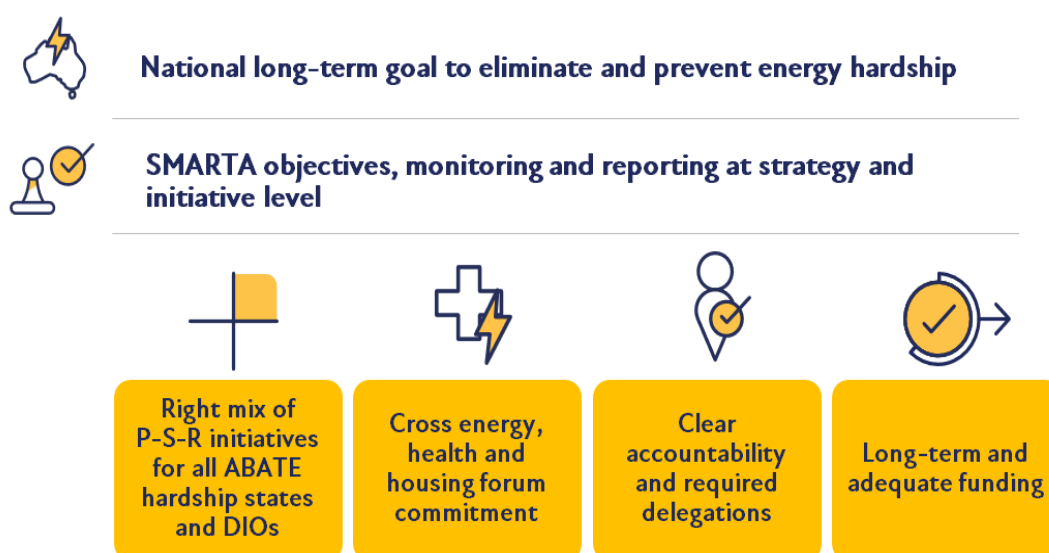


Figure 18: Elements of an Effective Strategy

## Best Practice Design Principles

We have synthesised the lessons learned and best practice advice from stakeholders interviewed as to their experience of energy hardship strategies into six ‘best practice principles’ for initiative design and delivery. These principles can be applied to improve the effectiveness of redesigned existing initiatives and in the design of new initiatives (see Figure 19).

## Tell Government Once – No Wrong Door

This principle seeks to address the issues of fragmented delivery and the difficulty for households in hardship in accessing support (findings from Chapter 3). It is based on the concept that citizens should only need to “tell government once”. That is, when a citizen engages with a government agency on an issue, **the government agency takes responsibility for connecting them with all other related services they are likely to need**. In the case of energy hardship, this would relate to key touch points relating to known triggers of the problem (see DIOs).



Figure 19: Best Practice Design Principles for Effective Strategies to Alleviate Energy Hardship

## Needs-Based Eligibility

This principle seeks to address the major issue identified with most existing initiatives – that of setting the eligibility criteria (see Chapters 3 and 4). The vast majority of initiatives providing support for households vulnerable to or experiencing hardship use the Australian **concession card system as a proxy for ‘need’, even though most program leads identified this as a poor proxy**. The best practices we observed involved a more nuanced approach to eligibility, more aligned with need. These initiatives **prioritised delivery of support to those in need over ensuring that no one who was not eligible gamed the system**. We repeat an earlier recommendation that self-reporting of hardship may be sufficient (see Chapter 3).

## Inclusive Framing

This principle seeks to address issues identified in Chapters 3 and 4 relating to access to assistance by households vulnerable to or experiencing hardship. A number of stakeholders observed that it is common for well-intentioned – and often helpful – policy initiatives to have names or titles that inadvertently exclude or stigmatise households, which **can deter participation by those they are designed to assist**. Examples of positive or neutral framing are ‘Know your Bills/Bring in your Bills’ days and ‘Home Power Saver Program’, or positive terms such as ‘Building Energy Wellbeing’ policy rather than ‘Energy disadvantage/hardship/inequity’ policy.

## Transformative Goals

A **common challenge** faced by initiative leads is that they either had **the resources to provide a small amount of assistance to many or provide a lot of assistance to a few**. Another challenge is that **the funding assigned is not proportional to the size of the problem**. The principle of ‘transformative goals’ refers to setting goals that seek to deliver lasting change, for example, by eliminating the aspect of hardship the goals are targeting. Applying this principle will overcome common challenges in alleviating hardship rather than only making things ‘a little less bad’.

### *Holistic View of Costs and Benefits*

This principle seeks to address the **twin challenges of underfunding and the need for cross-portfolio input**, as identified in the meso-level interviews (see Chapter 4). As noted, most initiatives lack the funding to deliver material or scalable assistance to households in hardship. Some interviewees also raised the issue that **the costs and benefits of energy hardship initiatives have fiscal implications for other portfolios**. Several government, retailer and ombudsman stakeholders noted that the **state/territory-based energy concession framework was picking up funding shortfalls in national income support payment levels**. For example, some stakeholders also observed the likely increased health system costs from poor housing stock and exposure to chronic heat and cold from underuse of essential energy services. This principle involves taking a broader cross-portfolio view when setting budgets and calculating initiative costs and benefits.

### *Real-time Monitoring of Outcomes*

This principle seeks to address the **issue of low levels of policy program evaluation** identified in Chapter 5. The lack of robust evaluation is compounded by the absence of strategic, outcome-focused policy objectives discussed above and in Chapters 4 and 5. The principle of real-time monitoring of outcomes for initiatives involves ensuring initiatives incorporate frameworks to monitor program logic outcomes into program design and implementation from day one (and which contain SMARTA objectives).

### *New and Reformed Policies to Address Gaps*

The following suite of policy and program initiatives demonstrate an application of ‘best practice’ as determined in this project. Further, they collectively target households across all ABATE hardship states by applying the P-S-R framework. These initiatives address the residual gaps for households in and vulnerable to energy hardship. Consideration is also given to how solutions might contribute to household ability, motivation and/or opportunity in line with the notion of ‘agency’ in the ABATE Hardship Framework.

These initiatives are grouped under the policy areas that need addressing, as identified in Chapters 5 and 6:

- 1. Equity in energy pricing (4 initiatives).**
- 2. Access to energy efficiency and distributed energy resources (6 initiatives).**
- 3. Energy billing practices and consumer protection (3 initiatives).**
- 4. Linkages to broader social and economic hardship support (4 initiatives).**

The following solutions have been designed to help **address regressive aspects of the current energy tariff, efficiency and DER framework**, as well as providing progressive approaches to future energy hardship policy.

| Initiative   | Description  | Rationale   | Conclusion  |
|--|--|---|---|
| <b>1. Equity in Energy Pricing</b>   |  |   |   |
| <b>1.1 Reform regressive tariff elements</b><br><b>Addressing:</b> Equity in energy pricing<br><b>Policy Initiative Type :</b> Prevention (structural)<br><b>ABATE Energy Hardship State Addressed:</b> Battle-on, Acute, Transient, Extreme | <p>Jurisdictions (a) reform network and retail tariff regulations to remove regressive elements of energy tariffs for households vulnerable to or experiencing hardship, and (b) develop funding mechanisms to ensure that such reforms are viable for retailers to implement.</p> <p><b>Options:</b> Removing regressive elements of tariffs for households vulnerable to or experiencing hardship could include:</p> <ul style="list-style-type: none"> <li>• reducing or eliminating fixed supply charges</li> <li>• discouraging or preventing declining block tariffs (tariffs where the cost of the first block of usage is higher than subsequent blocks)</li> <li>• preventing the cost-recovery of government-regulated schemes (known as pass-throughs) from this customer group.</li> </ul> | <p>Energy data analysis showed energy costs are disproportionately impacting low-income households (see Chapter 2), while stakeholder interviews in the micro and meso analysis (Chapters 3 and 4) identified high fixed network charges as a key contributor to regressive outcomes. High bills are a key driver to many households finding themselves in <b>growing debt</b> and/or <b>under-consumption</b> of the essential service that energy provides. This is 'regressive' because it accurately describes the disproportionate pass-through of energy price components to lower-income households.</p> | <p>This initiative has the potential to deliver significant financial relief to households vulnerable to or experiencing hardship, though it will require retailers to reallocate the recovery of costs across their customer base. Moving from the current arrangement of equality in energy pricing (equal access) to equity pricing (equal effect) will improve the <b>ability</b> and <b>opportunity</b> for low-income households to access affordable energy.</p> |
| <b>1.2 Better targeted support and relief</b><br><b>Addressing:</b> Equity in energy pricing<br><b>Policy Initiative Type (P-S-R):</b> Support, Relief<br><b>ABATE Energy Hardship State Addressed:</b> Battle-on, Acute, Transient, Extreme | <p>The Commonwealth, state and territory concession agencies review and reform existing concessions to better target available funds to sufficiently address the level of hardship need. This should include drawing on cross-agency and cross-jurisdictional data (see initiative 4.3).</p>   | <p>Some stakeholders noted that energy concessions were 'generous', while others noted that even with such concessions, many customers still have insufficient <b>income</b> to meet their energy costs, resulting in <b>under-consumption</b> and/or <b>payment default, arrears and debt</b> (see Chapters 3 and 4).</p>  | <p>Reforming the current concession framework will improve its impact. To be effective, this initiative needs to be linked with better data, eligibility criteria, accessibility and tariff reform.</p>   |

| Initiative   | Description  | Rationale   | Conclusion  |
|--|--|---|---|
| <b>1.3 Co-design and tender energy hardship targeted tariffs</b><br><b>Addressing:</b> Equity in energy pricing<br><b>Policy Initiative Type:</b> Prevention (structural)<br><b>ABATE Energy Hardship State Addressed:</b> Battle-on, Acute, Transient | State and territory governments to: <ul style="list-style-type: none"> <li>• undertake an experienced-based, co-design approach to developing specifications for innovative tariff offerings that meet the needs of households vulnerable to or experiencing hardship</li> <li>• partner with energy retailers to facilitate the introduction of such tariffs (using approaches similar to those used in South Australia, where the government tendered for an innovative tariff that it promoted to its energy concession recipients).</li> </ul> | While Australian households can compare tariffs via government websites (e.g., the Australian Energy Regulator's <i>Energy Made Easy</i> ), many stakeholders noted that few low-income households have the <b>motivation</b> to use this and when they do, they lack the <b>ability</b> to compare the complex tariff structures on offer. Even where there are sole retailers operating, billing practices are often still confusing for households. This unnecessary <b>energy literacy barrier</b> can lead to households being on tariffs that are not in their best interest, increasing the likelihood of <b>payment defaults, arrears and debts</b> . | Progressive structures and lower tariffs can help prevent energy hardship for those with access. However, this initiative needs to be combined with tariff and concession reform, enabled by better data to be effective, as lower tariffs alone will not address the regressive nature of current tariff structures.   |
| <b>1.4 Reassess which parties shoulder the burden of debt</b><br><b>Addressing:</b> Equity in energy pricing<br><b>Policy Initiative Type:</b> Support, Relief<br><b>ABATE Energy Hardship State Addressed:</b> Acute, Transient, Extreme              | Introduce obligations for energy network providers to share the burden of debt from households experiencing energy hardship.   | Under current billing arrangements, energy retailers shoulder the full burden of customers' unpaid debt. <b>This approach was challenged by some stakeholders we interviewed</b> – noting that other energy market participants, notably network businesses, should also share in this risk. This would also create <b>financial drivers for networks to be more engaged</b> in providing network services and tariffs that <b>support the needs of households</b> vulnerable to or experiencing hardship.  | Broader sharing of the customer-debt risk between retailers and network providers would incentivise both to provide preventative initiatives and support to help keep households out of energy hardship. Regulators would need to ensure that sharing the customer-debt burden would not involve network providers passing on those costs to all consumers in a jurisdiction – especially as doing so could increase the bills of households in hardship. |

| Initiative   | Description  | Rationale  | Conclusion   |
|--|--|--|--|
| <b>2. Access to Energy Efficiency and Distributed Energy Resources</b>   |  |  |  |
| <b>2.1 Fund access to renewables and storage for households in or vulnerable to hardship</b><br><b>Trajectory:</b> Refinement of Trajectory Proposal<br><b>Addressing:</b> Access to Energy Efficiency and Distributed Energy Resources<br><b>Policy Initiative Type:</b> Prevention (personal), Prevention (structural)<br><b>ABATE Energy Hardship State Addressed:</b> Battle-on, Acute, Transient, Extreme | Federal and/or state and territory governments implement a large-scale program to allow all households vulnerable to or experiencing hardship to lower energy costs through <b>access to renewable energy</b> . This represents a <b>refinement of the current Trajectory proposal</b> to provide financial incentives for energy efficiency. In line with the commitment to Finkel 6.6 and the findings of this study, access to rooftop solar PVs and energy storage is vital to assist households vulnerable to or experiencing energy hardship. This must be funded in a way that avoids regressive pass-throughs of cost via energy tariffs (see Option 1.1). | According to the Australian PV Institute, there have been over 2.56 million PV installations in Australia. <sup>8</sup> Payback periods for domestic PVs range from 2.6 years to 5.6 years, after which time the householders receive significantly reduced net energy costs. <sup>9</sup><br>Many households vulnerable to or experiencing energy hardship <b>live in rental properties or lack upfront capital</b> , and so lack the <b>ability</b> and <b>opportunity</b> to capture these benefits (estimated in a NSW trial to be around \$600 per year). <sup>10</sup> | A large-scale program allowing households vulnerable to or experiencing hardship to access renewable energy will address the regressive nature of recent renewable support programs and provide an efficient way of significantly reducing energy costs. |
| <b>2.2 Fund access to material energy-saving upgrades for households vulnerable to or experiencing hardship</b><br><b>Trajectory:</b> Refinement of Trajectory Proposal<br><b>Addressing:</b> Access to Energy Efficiency and Distributed Energy Resources   | The federal, state and territory governments establish large-scale programs to improve the energy efficiency of the thermal shell, fixed appliances and other key energy-using equipment in dwellings occupied by households vulnerable to or experiencing energy hardship. This initiative represents a <b>scope clarification of the current Trajectory proposal</b> for financial incentives to focus on delivering material energy savings and avoiding and rectifying the   | Many stakeholders identified <b>energy-inefficient dwellings and appliances</b> as key drivers of <b>high energy costs</b> or <b>under-consumption</b> . For the many low-income households living in rental properties, split incentives mean landlords lack the <b>motivation</b> to make changes, while tenants lack the <b>opportunity</b> . However, this proposed policy solution is possible, given that  | The delivery of large-scale energy-efficiency upgrades to the dwellings of households vulnerable to or experiencing hardship will be a significant preventative initiative to reduce energy-cost pressures and the under-consumption of energy.          |

<sup>8</sup> <https://pv-map.apvi.org.au/analyses>

<sup>9</sup> <https://www.solarquotes.com.au/blog/solar-power-payback-2019/>

<sup>10</sup> <https://energysaver.nsw.gov.au/households/solar-and-battery-power/solar-low-income-households>

| Initiative   | Description   | Rationale  | Conclusion  |
|--|---|--|---|
| <b>Policy Initiative Type:</b><br>Prevention (structural)<br><b>ABATE Energy Hardship</b><br><b>State Addressed:</b> Battle-on, Acute, Transient, Extreme  | <p>regressive elements of current energy efficiency obligation schemes that pass costs through to households vulnerable to or experiencing energy hardship (see 1.1).</p> <p>The focus for such energy-efficiency improvements should be on deeper energy-saving retrofits, such as thermal shell improvements, upgrading fixed appliances, upgrading high-energy non-fixed appliances, assisting with transitions to all-electric, constraints on 'cost recovery' from tenants, <i>etc.</i></p> <p><b>This initiative would complement minimum rental standards</b> (see 2.3), either by supporting landlords to meet the standard or incentivise improvements above the standard.</p> | governments across Australia have identified the need for investment as part of the post-COVID-19 economic recovery.   |   |
| <b>2.3 Minimum rental requirements for energy affordability</b><br><b>Trajectory:</b> Confirm Trajectory Proposal<br><b>Addressing:</b> Access to Energy-Efficiency and Distributed Energy Resources<br><b>Policy Initiative Type:</b> Prevention (structural) | <p>Energy ministers develop a national framework for minimum rental standards (National Rental Framework), which they would then implement within their jurisdictions. With the availability of rating systems (see initiative 2.4), there is an opportunity to <b>take a comprehensive approach to setting minimum energy performance standards for rental properties</b> that include the thermal performance of the building shell, fixed appliances and equipment, as well as details about on-site renewables and storage.</p>   | <p>Those who were interviewed as part of this investigation revealed that low-income households who live in rental properties have the <b>fewest opportunities</b> to improve energy efficiency (see Chapters 3 and 4). They often lack the <b>ability</b> to ask landlords for such improvements as they are fearful that their lease may not be renewed or their rent may be increased. Furthermore, landlords often lack the <b>motivation</b> to make such changes. Jurisdictions have laws requiring residential properties to be a minimum standard.<sup>11</sup> Typically, these</p> | <p>Minimum rental standards directly target key obstacles to renters accessing energy-efficient dwellings, though careful implementation is needed to ensure that the policy does not reduce the availability of affordable housing to households on low incomes.</p> |

<sup>11</sup> For example, see: <https://www.sa.gov.au/topics/housing/substandard-properties/substandard-properties> and [https://www.fairtrading.nsw.gov.au/housing-and-property/renting/new-residential-tenancy-laws?SQ\\_VARIATION\\_417317=0#habitation](https://www.fairtrading.nsw.gov.au/housing-and-property/renting/new-residential-tenancy-laws?SQ_VARIATION_417317=0#habitation)

| Initiative   | Description   | Rationale   | Conclusion   |
|--|---|---|--|
| <b>ABATE Energy Hardship</b><br><b>State Addressed:</b> Battle-on, Acute, Transient, Extreme   |   | do not set minimum standards for energy efficiency (though, at the time of this report, the Victorian Government has proposed, in draft regulations, some energy-efficiency considerations). <sup>12</sup>  |  |
| <b>2.4 National energy affordability ratings and disclosure framework</b><br><b>Trajectory:</b> Confirm Trajectory Proposal<br><b>Addressing:</b> Access to Energy Efficiency and Distributed Energy Resources<br><b>Policy Initiative Type:</b> Prevention (structural)<br><b>ABATE Energy Hardship</b><br><b>State Addressed:</b> Battle-on, Acute, Transient, Extreme | <p>Implement the initiative proposed in the Trajectory Addendum on energy efficiency disclosure. To address the needs of households vulnerable to or experiencing hardship (including enabling initiative 2.3), the rating system that the disclosure uses (also proposed in the Trajectory) must:</p> <ul style="list-style-type: none"> <li>be comprehensive, covering all building fixtures that drive energy bills and including water heating, fixed heating and cooling, and on-site electricity generation and storage</li> <li>be low cost, replicable and easy to use to maximise adoption and minimise pass-through costs.</li> </ul> <p>Note, however, that <b>these factors may represent a challenge to the tool proposed in the Trajectory's</b> Nationwide House Energy Rating Scheme (NatHERS), as it is a high-cost tool designed for compliance assessment of new buildings with NCC requirements for building fabric efficiency only. <b>A new streamlined, user-centric-designed assessment tool may be more fit-for-purpose.</b></p> | <p>The former COAG Energy Council, in its Buildings Trajectory, has identified the <b>need for a comprehensive ('whole-of-house') ratings framework</b> [99]. More accessible information on the 'whole-of-house' energy performance of a dwelling would increase the <b>ability</b> for households vulnerable to or experiencing hardship to make choices to better manage energy use and costs.</p> | <p>A residential rating system would significantly support many other initiatives identified in this report. Such a system will need to balance the quality of the ratings with the cost impacts on households vulnerable to or experiencing hardship.</p> |

<sup>12</sup> <https://engage.vic.gov.au/rentingregulations>

| Initiative  | Description  | Rationale  | Conclusion   |
|---|--|--|--|
| <b>2.5 Fund the transition to all-electric homes</b><br><b>Trajectory:</b> Refinement of Trajectory Proposal<br><b>Addressing:</b> Access to Energy Efficiency and Distributed Energy Resources<br><b>Policy Initiative Type:</b> Prevention (structural)<br><b>ABATE Energy Hardship State Addressed:</b> Battle-on, Acute, Transient, Extreme | <p>State and territory governments to develop:</p> <ul style="list-style-type: none"> <li>information tools to assist households to better understand the benefits they may gain from transitioning to an all-electric house</li> <li>incentives to support households' transition to all-electric homes, where such benefits exist – these incentives could be incorporated into energy efficiency programs (see initiative 2.2).</li> </ul> <p>This initiative builds on the proposal to <b>reduce or remove supply charges</b> (see initiative 1.1) as it also supports the installation of efficient electric equipment. It represents a <b>qualification scope of the current Trajectory proposal</b> to provide financial incentives for energy efficiency and initiative 2.1 above, to reduce fixed network costs and <b>reduce energy bills for households</b> vulnerable to or experiencing hardship.</p> | <p>Households that use both grid electricity and reticulated gas to power appliances and equipment currently pay two sets of supply charges. For smaller households, these supply charges can be a significant proportion of total energy costs. <i>Renew</i> has undertaken modelling that demonstrates benefits to most homes in transitioning from electric/gas to all-electric energy supply.<sup>13</sup></p> | <p>This initiative would provide the dual benefits of improving the efficiency of equipment and eliminating a supply charge.</p>   |
| <b>2.6 Landlords share in costs of energy for essential services</b><br><b>Addressing:</b> Access to Energy Efficiency and Distributed Energy Resources<br><b>Policy Initiative Type:</b> Prevention (structural)   | <p>State and territory governments, through residential tenancy and/or energy retailer regulations, require landlords of energy-<u>inefficient</u> housing to contribute to the energy costs of their tenants who are vulnerable to or experiencing energy hardship. Options for landlord cost-contributions could be to contribute to energy bills: relative to the energy efficiency of the property (using an approved energy rating tool) or by paying the supply</p>  | <p>Many stakeholders identified <b>energy-inefficient dwellings and appliances</b> as drivers of high energy consumption (and associated payment default, arrears and debt) or under-consumption of essential services (see Chapters 2, 3 and 4). <b>Households</b> vulnerable to or experiencing hardship <b>who live in rental properties have limited ability and opportunity to</b></p>                        | <p>This initiative addresses the landlord/tenant split incentive problem by providing a financial signal for landlords to improve the energy efficiency of rental properties and a mechanism for co-contribution to renters' energy bills.</p> |

<sup>13</sup> <https://renew.org.au/renew-magazine/efficient-homes/gas-versus-electricity/>

| Initiative   | Description   | Rationale   | Conclusion  |
|--|---|---|---|
| <b>ABATE Energy Hardship State Addressed:</b> Battle-on, Acute, Transient, Extreme   | charge component (aligns with initiative 1.1). Once again, care would need to be taken to ensure such costs are not passed on to tenants.   | <b>improve the condition of the dwelling.</b>   |   |
| <b>3. Energy Billing Practices and Consumer Protection</b>   |   |   |   |
| <b>3.1 Targeted rollout of advanced metering and related technology</b><br><b>Addressing:</b> Billing Practices<br><b>Policy Initiative Type :</b> Prevention (structural)<br><b>ABATE Energy Hardship State Addressed:</b> Battle-on, Transient   | State and territory governments either require or incentivise energy retailers to provide advanced metering and related technology to households vulnerable to or experiencing energy hardship so that such households can gain access to tariffs, tools and billing systems that allow them to better manage energy use and costs. In addition, other technologies such as load management and virtual power plant integration could be delivered, providing benefits to the household.        | The delayed and aggregated nature of current energy billing deprives households of the <b>ability</b> and <b>opportunity</b> to manage energy usage. Many stakeholders noted that this <b>lack of energy literacy</b> is a key driver of households finding themselves with <b>unexpected high energy usage</b> and <b>unmanageable energy debts</b> .  | Advanced metering is an important, if not essential, component of improving billing systems for households vulnerable to or experiencing hardship.    |
| <b>3.2 Customer-centric billing products</b><br><b>Addressing:</b> Billing Practices<br><b>Policy Initiative Type:</b> Prevention (personal), Prevention (structural)<br><b>ABATE Energy Hardship State Addressed:</b> Battle-on, Acute, Transient | Require energy retailers to provide the following information to customers vulnerable to or experiencing energy hardship: <ul style="list-style-type: none"> <li>• real-time information on energy usage within a billing period</li> <li>• forecasts of upcoming bills</li> <li>• unusual usage alerts</li> <li>• estimated breakdown of consumption by major energy use</li> <li>• options for customers to set energy use quotas and receive alerts</li> <li>• bill benchmarking.</li> </ul> | Currently, energy bills are mostly industry-centric as they are structured around the energy sector's cost structures. The <b>information provided on usage patterns is of limited value, given the delayed and aggregated nature of the billing</b> . In contrast, regulation in the telecommunication sector has led to innovative customer-centred billing, in which customers have access to real-time usage information and predictive tools and are able to set caps to manage usage. | Improved billing systems can provide households vulnerable to or experiencing hardship with the <b>ability</b> to better manage energy use and costs. |

| Initiative   | Description   | Rationale  | Conclusion  |
|--|---|--|---|
| <b>3.3 Customer-centric hardship programs</b><br><b>Addressing:</b> Billing Practices<br><b>Policy Initiative Type:</b> Support, Relief<br><b>ABATE Energy Hardship State Addressed:</b> Acute, Transient, Extreme | <p>Review and reform existing hardship obligations so that they focus on preventing and alleviating hardship rather than the current focus on debt-management and compliance. Opportunities to improve hardship support include:</p> <ul style="list-style-type: none"> <li>• improved early identification of households vulnerable to hardship</li> <li>• bill smoothing and payment plans that focus on customers' capacity to pay, but which are targeted to prevention (<i>e.g.</i>, households' state pre-hardship) rather than 'support', noting that being on payment plans often triggers debt spirals (see findings from Chapter 3)</li> <li>• matching credit and debt relief complemented with initiatives to prevent future debt accumulation – those interviewed revealed some innovations already taking place in this area (Chapter 4)</li> <li>• utilisation of data analytics to flag customers at risk of experiencing hardship so that preventative initiatives can be put in place.</li> </ul> | <p>From our stakeholder interviews, some noted that current regulated programs can become heavily focused on compliance rather than genuinely supporting customers. Further, existing retailer hardship programs target those already in hardship and therefore miss an opportunity to offer them to households to prevent hardship. Increasing the customer-focus in hardship programs would provide customers with greater <b>ability</b> and <b>opportunities</b> to manage debt.</p> | <p>Customer-centric hardship provisions offer the potential to provide better support to households while reducing retailers' excessive compliance burdens.</p>                         |
| <b>4. Linkages to Broader Social and Economic Hardship</b>   |   |  |   |
| <b>4.1 Strengthen the social safety net</b><br><b>Addressing:</b> Linking with Broader Social and Economic Hardship Support  | <p>The Commonwealth Government to use the learnings of reduced hardship resulting from the increased level of income support (from Jobseeker compared with Newstart) to set post-COVID-19 income support payments to levels that allow households to meet essential needs</p>   | <p>A common theme noted by stakeholders is that energy hardship is a component of broader hardship experienced by many Australian households (see Chapter 4). <b>Low-income levels</b> of those who rely on this safety net are a key driver, which</p>  | <p><b>Increasing income support</b> is widely considered as the primary means of lessening broader hardship; as such, it needs to be a <b>key pillar of energy hardship policy</b>.</p> |

| Initiative   | Description   | Rationale  | Conclusion  |
|--|---|--|---|
| <b>Policy Initiative Type:</b><br>Prevention (structural)<br><br><b>ABATE Energy Hardship</b><br><b>State Addressed:</b> Battle-on,<br>Acute, Extreme  | (including essential energy services) and maintain dignity.   | translates to indicators such as <b>energy under-consumption, high energy bills relative to income and difficulty paying bills</b> . This leads to outcomes of <b>payment default, arrears, debt, under-consumption</b> of essentials, and flow-on <b>health and social consequences</b> .   |   |
| <b>4.2 Integrate energy hardship programs into broader hardship frameworks</b><br><br><b>Addressing:</b> Linking with Broader Social and Economic Hardship Support<br><b>Policy Initiative Type:</b><br>Prevention (personal),<br>Prevention (structural),<br>Support, Relief<br><b>ABATE Energy Hardship</b><br><b>State Addressed:</b> Battle-on,<br>Acute, Transient, Extreme | Administrators of jurisdictional hardship support programs to establish formal links with other hardship support programs (both within and across jurisdictions where possible) to allow households vulnerable to or experiencing hardship to access (via a service-focused culture) the full suite of support available, irrespective of their initial point of contact. | A key finding of our research is that energy hardship policy and programs operate in isolation from other social safety nets, such as income support, public health care, public education and transport support. This fragmentation and unnecessary complexity make it more difficult for households to access the support they need and for which they are eligible. This <b>difficulty in accessing support</b> increases the potential for households to experience <b>payment default, arrears and debt</b> . This fragmentation also means that households vulnerable to or experiencing hardship may be identified in one sector but not in others. | Better cross-agency coordination will improve efficiencies and provide more customer-centric services.                        |
| <b>4.3 Improved data sharing</b><br><br><b>Addressing:</b> Linking with Broader Social and Economic Hardship Support   | The former COAG Energy Council Energy Security Board's Data Strategy <sup>14</sup> includes an initiative for energy retailers and the federal, state and territory governments to <b>establish</b>   | An important finding from our interviews with stakeholders (see Chapter 4) is that there is little data-sharing across agencies and service  | Better data interconnection will allow for improved targeting of support, improving the capacity of jurisdictions to identify |

<sup>14</sup> <http://www.coagenergycouncil.gov.au/publications/energy-security-board-data-strategy-consultation-paper>

| Initiative  | Description  | Rationale  | Conclusion  |
|---|--|--|---|
| <b>Policy Initiative Type:</b><br>Prevention (personal),<br>Prevention (structural),<br>Support, Relief<br><b>ABATE Energy Hardship</b><br><b>State Addressed:</b> Battle-on,<br>Acute, Transient, Extreme  | <b>formal data-sharing arrangements.</b> This strategy, if implemented, will help remove some key barriers to data-sharing in NEM jurisdictions that currently hinder retailers' and governments' ability to effectively target energy hardship programs to those in the greatest need. They also provide a framework for all jurisdictions to build upon and integrate with energy hardship programs to improve targeting and coordination. | <p>providers concerning households vulnerable to and experiencing hardship. This creates difficulty for households in accessing support (see Chapter 3). This <b>difficulty in accessing support</b> increases the potential for households to experience <b>payment default, arrears and debt</b>.</p> <p>These <b>households could be better supported if information were shared across agencies and service providers</b>. This would allow for early identification of households vulnerable to or experiencing hardship and improve households' <b>ability</b> and <b>opportunity</b> to access support.</p> | households most in need of that support.  |
| <b>4.4 Experience-based co-design framework</b><br><b>Addressing:</b> Linking with<br>Broader Social and Economic<br>Hardship Support<br><b>Policy Initiative Type:</b><br>Prevention (personal),<br>Prevention (structural),<br>Support, Relief<br><b>ABATE Energy Hardship</b><br><b>State Addressed:</b> Battle-on,<br>Acute, Transient, Extreme | Energy ministers to develop an experience-based, co-design framework to ensure that the lived experience of households vulnerable to or experiencing energy hardship is at the centre of government and retailer-based support programs.   | This investigation engaged with a wide range of policy, program and advocacy stakeholders. While such stakeholders have strong insights, they are often unable to contribute their collective wisdom to the design of new and reformed policies and programs. Overcoming this shortfall by co-design would mean a better array of solutions to alleviate energy hardship.  | Experience-based, co-design approaches will provide a significant opportunity to improve the effectiveness and efficiency of support programs, which was identified as a current weakness of energy policies (see Chapter 5). |

## Summary

This chapter presented 17 possible initiatives aimed to help prevent and better manage energy hardship. The key strategies of reducing energy costs to households vulnerable to or experiencing hardship, reducing energy use by improved energy efficiency and DER access, improving billing practices and addressing broader hardship drivers will provide much-needed reform and **remove regressive elements of current energy pricing and support programs**. These initiatives also provide a strong focus on preventing energy hardship in the future. To capitalise on the full potential of this suite of initiatives, it is recommended that **energy ministers oversee their coordination and implementation**, noting that some actions (such as those focused on broader hardship) will require cross-sectoral collaboration. Future efforts are encouraged to use the elements of effective strategy and best practice design principles when developing policies and initiatives.

## CHAPTER 8

# Recommendations

### Introduction

This investigation revealed that many Australian households are suffering in more ways than previously realised, and that current efforts to measure the extent and nature of energy hardship in Australia underestimate its prevalence and severity. Further, findings show that current efforts are falling short of alleviating energy hardship. Given this situation, it seems highly likely that, unless things change, many households will be left behind in the energy transition. This can be addressed, but only with substantive investment in terms of design, approach, funding and coordinated efforts to ameliorate the impact of the numerous obstacles negatively affecting households.

Research findings culminated in a series of key insights and a corresponding suite of policy solutions and recommendations for implementation. If these are actioned, we believe they will substantially reduce energy vulnerability and hardship. We first present the high-level insights and then the recommendations that will address current shortfalls in policies and programs.

### Overall Key Insights from Research Findings

1. The current policy patchwork is not designed to reduce total energy hardship.
2. Programs and policies have addressed energy hardship as though it was largely homogenous and static.
3. Structural barriers worsen the shape and scale of vulnerability and hardship.
4. The extent of energy hardship is unclear due to limitations of current measures, though it is higher than previously estimated.
5. Many impactful initiatives are not sufficiently funded to address the problem or are not repeated to scale.
6. Energy hardship is growing, and programs and policies need to change if this trend is to be abated.

For further details of the key insights uncovered by our research and how each was drawn from the research streams and then matched with the recommendations, see Appendix C.

### Recommendation to Adopt Frameworks in the Energy Sector

We first recommend that the following frameworks be endorsed so they can be widely disseminated and adopted. We believe they will be highly useful in framing, understanding and guiding future efforts to address and mitigate energy hardship. The three frameworks include:

- **The DIO Framework**, which is a measurement framework to fully capture and understand energy hardship, including its causes and consequences.
- **The ABATE Hardship Framework**, which reflects the various levels and differences in experiences by households in the 'state' of energy hardship. The four states being Battle-on, Acute, Transient and Extreme.
- **P-S-R Framework**, which is a strategies framework for designing different types of initiatives to assist households experiencing energy vulnerability or hardship.

## Main Recommendations

We provide six main recommendations, each with sub-components, to guide implementation. Additionally, we have mapped the policy solutions provided in Chapter 7 with each of the recommendations.

### 1. Create a Coordinated, Cohesive and Strategic Bi-Partisan Approach to Reducing Energy Hardship

A **coordinated, targeted approach** is needed to set a vision, reduce complexity and provide clear pathways forward. This should be informed by a working group who represent jurisdictional and sector interests and who can collectively consider policies and programs through a non-political and non-biased lens. Areas to consider in designing the coordinated approach include:

- re-think the design of the sector using an experience-based and co-design approach involving end users
- reconsider the narrative around ‘energy hardship’ and adopt a strengths-based lens ensuring that communications and engagement efforts reflect this lens
- generate a coherent, overall national policy and tailored jurisdictional policies that specifically address energy hardship and link each of these with specific programs
- monitor progress of the plan with regular evaluations of policy and program effectiveness
- allocate sufficient (much higher than current) and better-targeted funding to policies and programs to properly address need
- coordinate policies and programs that prevent, support and relieve energy hardship across different ABATE hardship states
- provide incentives for new funding arrangements to provide access to distributed energy resources (DER) for households who cannot afford infrastructure costs
- automate assistance where possible (*e.g.*, concessions, subsidies)
- consider adopting alternative business models so retailers can better attend to households facing vulnerability or hardship, or use models that prioritise those households (*e.g.*, social enterprises)
- increase and better target financial relief available to households in energy hardship
- accept the practice of households self-identifying as needing assistance as an eligibility criterion.

⇒ *Maps with ‘Elements of an Effective Strategy’ and ‘Best Practice Design Principles’ (Chapter 7)*

### 2. Reform Social Housing

- a. **Undertake rapid, large-scale increases in retrofitting social housing homes** to improve energy efficiency and provide easy access to DER, using SMARTA objectives to create clear targets for each year over the next five years.
- b. **Undertake rapid, large-scale increases in building new, energy-efficient and zero-carbon (ready) social housing** to address the affordable housing shortfall, using SMARTA objectives to create clear targets for each year over the next five years. This would involve ensuring targets reflect the proportion of people in need within each jurisdiction.

⇒ *Maps with Policy Solutions (Chapter 7):*

2.1 *Fund access to renewables and storage for households vulnerable to and experiencing hardship (Refinement of Trajectory Proposal)*

2.2 *Fund access to material energy-saving upgrades for households vulnerable to and experiencing hardship (Trajectory Proposal)*

### 3. Upgrade Existing Poor-Quality Housing

- a. **Continue to rollout the Trajectory** in setting minimum energy efficiency (and liveability) standards for existing homes, with a specific focus on rental properties and attending to households who will not be well supported via current Trajectory policies (noting that addressing energy efficiency is necessary but insufficient alone to address energy hardship).
- b. As part of a coordinated, cohesive strategy with SMARTA objectives, **rollout** a coordinated and targeted **energy efficiency upgrade program** with clear targets for each year over the next five years for both **rental properties and low-quality, privately owned housing** across jurisdictions.

⇒ *Maps with Policy Solutions (Chapter 7):*

- 2.1 Fund access to renewables and storage for households vulnerable to or experiencing hardship (Refinement of Trajectory Proposal)*
- 2.2 Fund access to material energy-saving upgrades for households vulnerable to or experiencing hardship (Trajectory Proposal)*
- 2.3 Minimum rental requirements for energy affordability (Trajectory Proposal)*
- 2.4 National energy affordability ratings and disclosure (Trajectory Proposal)*
- 2.5 Fund the transition to all-electric homes (Refinement of Trajectory Proposal)*
- 2.6 Landlords share in costs of energy for essential services*

### 4. Explore Ways of Ensuring Energy is Affordable to Low-Income Households

There are two sides to the affordability issue: the price of energy and the income of the household. We propose the following, noting that 'b' will require cross-portfolio input and decision-making:

- a. **Address high prices:** Form a sector-wide work-stream to explore how to ensure energy is affordable to low-income households as the current structure is not working. This may involve re-imagining pricing and pricing structures in a way that places the consumer as central to the decision-making. The group should also consider cross-subsidies, network operations and alternative business models in developing a portfolio of options to create fair and sustainable distributional costs and appropriate consumer-facing pricing models to close the energy affordability gap.
  - ⇒ Ensure work-stream member skillsets and experiences are fit for purpose and represent householder, industry (sector), CBO (community organisations) and regulatory perspectives by adopting an experience-based, co-design approach.
- b. **Address low income:** Establish bi-partisan support for raising Jobseeker by a minimum of \$75 p/w [99] (**urgent prevention**). Since the other side of affordability is income, and the findings reported here (Chapters 3 and 4) reveal that low social support payments can form a structural barrier for households, we recommend that social benefits are increased to levels that allow households to meet essential needs (including essential energy services) and to maintain their dignity.

⇒ *Maps with Policy Solutions (Chapter 7):*

- 1.1 Reform regressive tariff elements*
- 1.3 Co-design and tender energy hardship targeted tariffs*
- 3.1 Targeted rollout of advanced metering and related technology*
- 3.2 Customer-centric billing products*
- 4.1 Strengthen the social safety net*

#### 4.2 Integrate energy hardship programs into broader hardship frame

#### 4.3 Improved data-sharing works

#### 4.4 Experience-based co-design frameworks

### 5. Reconsider and Update Retailer Obligations

Form a sector-wide work-stream to reconsider regulations to progress towards improved practices:

- a. **Retailer reporting requirements** to be re-forged to ensure retailers provide more illuminating and sophisticated information that allows for early identification of households vulnerable to hardship and tracking of households who experience payment difficulties (including, for example, durations and changes in the uptake of concessions/utility relief grants).
- b. **Retailer interface with households to form new regulation** so that response options to those who are facing energy vulnerability or hardship are clear, consistent and applied generously. Consider options for how the findings should apply to emerging consumer-facing energy business models.
  - ⇒ Ensure work-stream member skillsets and experiences are fit-for-purpose and represent householder, industry (sector) and regulatory perspectives, and adopt an experience-based, co-design approach.
- c. **Retailer assistance to reduce hardship to be directed:** expectations of retailers regarding explicit and concrete ways of preventing and alleviating energy hardship to be formed and regulated where necessary, so that mechanisms that are prone to worsen debt are not used (*e.g.*, payment plans) for households already facing energy hardship, and financial relief is provided to a proportion of households.
  - ⇒ *Maps with Policy Solutions (Chapter 7):*
    - 1.2 Better targeted support and relief
    - 1.4 Reassessing which parties shoulder the burden of debt

### 6. Fund and Conduct Phase 2 of Finkel 6.6

Phase 2 of Finkel 6.6 is necessary due to the key gaps identified in this report.

#### a. Develop a New Data Regime

Insufficient detail in existing data means that the extent of energy hardship cannot be accurately known. This means we cannot know whether future efforts to address it are effective or not. The data that are collected to obtain this information, as well as the data needed to gain an understanding of the broader impacts on hardship (beyond energy use, debt and bills), need to be improved. We recommend implementing a method and measure for obtaining comprehensive data on energy hardship. During phase 2, we recommend a **detailed, repeatable measurement framework is designed, with data collected and a roadmap for future, sustained measurements and data collection forged**. This can then be used to:

- inform the scale of the current problem and therefore the resources necessary to address it
- inform the development of appropriate prevention, support and relief measures
- provide a basis for evaluating future policies and programs.

Developing a new data regime will involve national, primary data collection, being sure to represent all jurisdictions and cohorts. Complementing quantitative data collection on households, qualitative data will be needed so that together, they can provide the following:

- **Identification of hardship state**: ways to identify households facing vulnerability and hardship (using the ABATE hardship states), the eligibility criteria and corresponding assistance that the household needs.
- **Understand how households enter and exit hardship**: uncover the various mechanisms and strategies associated with households entering and exiting energy hardship to improve the assistance provided, especially in terms of reducing the impact of personal barriers (prevention). This should include understanding the coping strategies used by households as indicators of being in a state of hardship.
- **Determine best measures and metrics of hardship**: identify the array of drivers, indicators and outcomes that would be the most pragmatic to measure; establish cut-off points for each metric; pilot test the measurement instrument to produce a measurement framework that can be used to repeatedly measure energy hardship in Australia.
- **Measure the extent of energy hardship using suitable measures**: use the refined measurement tool developed from the previous step to measure the extent of energy hardship in Australia. This can form the baseline for evaluating the impact and effectiveness of new policies and programs across all jurisdictions.
- **Benchmark consumption level for households vis-à-vis dwelling type**: One major indicator of energy hardship is under-consumption – a phenomenon not being captured by any data currently collected. It is therefore vital to develop an algorithm that can be used to estimate average energy use for a particular household in various dwelling types, factoring in the dwelling's energy efficiency.

#### b. Produce a Taxonomy for the Programs and Policies within the P-S-R Framework

The P-S-R framework identifies that a mix of different programs and policies are needed to address households in the various ABATE hardship states. This allows an improved and more nuanced approach to addressing energy hardship. We have allocated our best judgement to provide examples in this investigation, but validation is now needed to produce a robust taxonomy so that policy advisors and program designers have a useful list to draw on to inform their decisions. We recommend:

- **taking stock of all programs** that target energy hardship across all jurisdictions
- **empirically determining** which programs and policies would be best placed for each **P-S-R** in addressing the various ABATE hardship states
- **producing a validated taxonomy** of programs and policies that could be used to prevent, support or relieve hardship.

#### c. Explore Ways to Accelerate the Uptake of Energy Efficiency and DER

It is vital to ensure continued focus and rapid progress in the areas of energy efficiency and DER to enable all **targeted customers** (households facing vulnerability and hardship) timely access to the financial, environmental, social and health benefits of DER and energy efficiency in the energy transition. To achieve this, we recommend the following:

- ⇒ **Investigate how the current Australian environment enables or hinders** households facing vulnerability and hardship from effectively accessing the benefits of distributed energy resources (DER) and energy efficiency.

- ⇒ **Review a selection of the ‘best’ and ‘worst’ large-scale/scalable DER specific domestic and international jurisdictional policies and programs to inform a ‘best practice’ DER transitions process.**

The following actions should be taken:

- evaluate approaches aiming to solve distributional impacts
- evaluate approaches aiming to solve transitional impacts
- within a categorisation of policy instruments, document the specific instruments utilised in the policies and programs.

#### **d. Conduct a Cost–Benefit Analysis of Policy Options Provided in Phase 1**

As various options from phase 1 are refined (partly due to progress in phase 2), it is important to select the options that will have the greatest impact in reducing energy hardship. To this end, a cost–benefit analysis of this refined list of options is needed.

## **Conclusion**

Energy hardship is complex and involves more than bills and affordability; for many households, their struggles go beyond ‘energy’. This investigation has revealed that many Australian households are suffering in more ways than previously realised. In particular, current efforts to measure the extent and nature of energy hardship in Australia underestimate its prevalence and severity. Indicators suggest hardship is worsening overall, both in terms of the proportion of households struggling and the nature of their suffering – despite policies, programs, regulations and retailer practices that are meant to reduce it.

Findings from this investigation highlight the strengths and positive features of certain aspects of policies and initiatives that have worked or are well designed. Together, these findings formed an evidence base from which we developed new frameworks, a suite of best practice principles, policy solutions and recommendations that will fill the gaps in the current policy and practice patchwork. By applying the frameworks developed from this investigation and implementing the recommendations in this report, we believe that energy hardship will be substantially reduced and that the resilience of households who are facing vulnerability or hardship will be strengthened. This ‘blueprint’ will help to ensure that Australian households can move towards a future of shared benefits and energy wellbeing in the journey towards low-carbon living.

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## APPENDICES

### Appendix A: Comprehensive Summary of the Measures and Metrics of Energy Hardship

| Approach             | Metric name   | Definition  |
|----------------------|---|---|
| Expenditure approach | 10% method  | Using the 10% indicator, members of a household are fuel poor if 'they are required to spend more than 10% of their income to maintain an adequate standard of warmth' ([48], p8) (Fig. 1).   |
| Expenditure approach | After Fuel Cost Poverty (AFCP) [101]  | Fuel Poverty if [Equalised (Income - Housing costs - Domestic fuel costs)] < [60% Equalised (Median income - Housing costs - Domestic fuel costs)]  |
| Expenditure approach | Low income high cost (LIHC) (Also referred to as Hill's approach [43, 101]) | "The LIHC indicator that has subsequently been introduced is calculated using a combination of a national income threshold and fuel cost threshold. A household is fuel poor if it exceeds both thresholds (Fig. 2). The fuel cost threshold is a weighted median of the fuel costs of all households, equivalised according to the number of people in a property. This average fuel cost value for the different household size categories is the assumed cost of achieving an adequate level of comfort in each case. The threshold is the same for all households of equivalent size, with half exceeding the fuel cost threshold and therefore being considered 'high cost'. The income threshold is calculated as 60% of the weighted national median for income After Housing Costs (AHC) are accounted for; the government definition of relative poverty. The income figure for each household is also equivalised to account for the number of people in the household. This figure is combined with the equivalised fuel costs of the household. The income threshold is therefore higher for those that require a greater level of income to meet larger fuel bills." |
| Expenditure approach | FUEL POV1 [102]   | "Since the fifth wave of HILDA, respondents have been asked about their household expenditure on electricity, gas and other heating fuel (such as firewood and heating oil). Our first measure of fuel poverty (FUEL POV1) uses responses from this question as a measure of fuel expenditure and deflates reported expenditure using reported household disposable income, in order to calculate the share of household income spent on energy." [40, p. 2]  |
| Expenditure approach | Energie-Control Austria [49]  | Households below established poverty "risk" threshold AND with above-average energy costs ("Similar to LIHC but using actual instead of required expenditure" [49, p23])  |
| Expenditure approach | Budget standard approach or Minimum Income Standard (MIS) [49]              | "MIS refers to the minimum income a household needs to allow the household members to be actively integrated in society. This refers to the income after deducting housing costs and other minimum living costs (food, clothing, cultural participation, child-rearing, etc.) (Moore, 2012)." [49, p33]   |
| Expenditure approach | BREDEM-12 [4]   | The BRE Domestic Energy Model (BREDEM) is a methodology for calculating the energy use and fuel requirements of dwellings based on their characteristics. A 10% income threshold is then used [4].  |
| Objective measures   | Objective indicators: [103, 104]  | Presence of damp walls and/or floors, Lack of central heating, Presence of rotten window frames, Access to electricity distribution, Household appliance ownership.   |
| Objective measures   | The restriction behaviour indicator (ONPES cited in [105] and [45])         | The restriction behaviour indicator: Theoretical fuel consumption - Actual fuel consumption." [45, p1105]. "A household is thus said to be in fuel poverty when: Income - Constrained expenditure < Standard Minimum Income" [105, p27] [French translation]  |
| Objective measures   | Adequate warmth (Home temperature) [104]                                    | "The World Health Organization, for instance, takes 20°C as a benchmark temperature for those more vulnerable, such as the elderly and handicapped. Boardman generally advocates a temperature of 18°C. Most medical literature favours a minimum temperature of 16°C for able-bodied, healthy people, but recommends a minimum of 18°C for sedentary   |

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|                       |   | activities and 21°C for the more vulnerable. Using a definition based on temperature, fuel poverty may be calculated by quantifying those households which fail to achieve minimum 'adequate' levels of household warmth." [47, p8]  |
| Objective measures    | Outcomes-based [49]   | "This family of indicators provides a proxy for energy poverty based on outcomes. There are two possible approaches – using utility data or focus on health outcomes" [49, p24]  |
| Self-report questions | HILDA Survey Question [102]   | "The specific question used in HILDA is 'did any of the following happen to you because of a shortage of money?' Among several responses that the participant could record 'was unable to heat home.'" [102, p4]   |
| Self-report questions | 'Feeling fuel poor' question [102, 106]                                 | 'Do you feel that you are able to heat your home adequately?' If the participant answered 'no', he/she was asked if this was because they found it difficult to afford the fuel." [102, p4]  |
| Self-report questions | Healy [47], EPEE [107]  | Possibility of asking different questions: – Do you suffer from thermal discomfort? – Have you experienced difficulty in paying utility bills (in the past)? – Can you afford your energy bills? – Are you satisfied with your heating equipment?  |
| Self-report questions | HILDA Survey questions [50]   | 1) Unable to heat the home: Identifies households who state they are unable to heat their home. 2) Could not pay bills on time: Identifies households who state they cannot pay their electricity, gas or telephone bills on time  |
| Self-report questions | The European Union Statistics on Income and Living Conditions (EU-SILC) | Inability to keep the house adequately warm, arrears on utility bills and presence of a leaking roof, damp walls, floors or foundation, or rot in window frames or floor   |
| Composite measures    | Thermal discomfort indicators [108]                                     | "a household is fuel poor according to this subjective indicator if it satisfies two conditions: Condition 1: a household declares feeling cold because of at least one of the first five reasons which are considered to be the most representative of a fuel poverty situation, namely: (1) Insufficient heating system, (2) Breakdown of heating system, (3) Poor insulation, (4) Household heating restriction due to financial burden, (5) Energy supply cut-off due to unpaid bills, (6) Improper adjustment or late start-up of the heating system, (7) Other reasons. – Condition 2: a household has an income level less than or equal to the third decile." [45, 1108]   |
| Composite measures    | Deprivation-Based Assessment [109]                                      | "subjective and objective aspects of deprivation are used to derive an aggregated multidimensional measure of energy poverty. The proposed measure is based on deprivation with a direct relation to energy consumption, but it also accounts for excessive financial restrictions due to energy costs, it gives priority to low income households, and controls for economic energy use." [109, p1]   |
| Composite measures    | EU Energy Poverty Observatory (EPOV) [110]                              | "EPOV provides four different primary indicators for energy poverty, of which two are based on self-reported experiences of limited access to energy services (based on EU-SILC data) and the other two are calculated using household income and/or energy expenditure data (based on HBS data). Arrears on utility bills: Share of (sub)population having arrears on utility bills. Low absolute energy expenditure (M/2): Share of households whose absolute energy expenditure is below half the national median. High share of energy expenditure in income (2M): The 2M indicator presents the proportion of households whose share of energy expenditure in income is more than twice the national median share. Inability to keep home adequately warm: Share of (sub)population not able to keep their home adequately warm." <a href="https://www.energypoverty.eu/indicators-data">https://www.energypoverty.eu/indicators-data</a> |
| Composite measures    | Vulnerability Index [111]   | This index uses 24 different variables to assess vulnerability in a location. It measures attributes about weather (heating/cooling days), energy efficiency and system performance, the costs of energy, and the income levels of the household.  |
| Composite measures    | FUEL POV5 [102]   | "composite indicator of fuel poverty, consisting of measures two [10% approach], three [subjective HILDA question] and four [LIHC approach] weighted equally. It is based on an energy deprivation score, which is calculated by taking the weighted sum of the number of 'deprivations' (i.e., unable to heat home, share of income exceeds 10% or having low income  |

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|                    |  | and high costs). As such, the deprivation score for each household lies between zero and 1." [40, p5]   |
| Composite measures | Thomson and Snell [44]                                     | "Composite weighted index based on the combination of three proxy indicators, namely the presence of arrears on utility bills in last 12 months, the presence of a leaking roof, damp walls or rotten windows and the ability to pay to keep the home adequately warm." [45, p2019, p1106]  |
| Composite measures | Building Fuel Poverty Index (BFP) [112]                    | "Aims to assess the relationship between building energy performance, dwelling habits and fuel poverty." [45, p1107]  |
| Composite measures | Healy and Clinch [103]                                     | "Composite weighted index based on the combination of six consensual social indicators which: – Are split into two sub-groups: subjective self-reported and objective factual indicators, Pertains to household finances (fuel and utility bills), the state of the building structure (presence of damp or rot), and the dwelling's heating system." [45, p1106]<br>$\alpha$ = Unable to afford to heat home adequately,<br>$\beta$ = Unable to pay utility bills on time,<br>$\pi$ = Lack of adequate heating facilities,<br>$\delta$ = Damp walls and/or floors,<br>$\lambda$ = Rotten window frames,<br>$\mu$ = Lacking central heating |
| Composite measures | Multidimensional energy poverty index (MEPI) [113]         | "MEPI has three dimensions; "energy," "income," and "energy efficiency of housing." Moreover, the threshold for energy is set as $z_1 \frac{1}{4} 0:1$ ; the threshold for income, $z_2$ , is the boundary income between the third and the fourth deciles; the threshold for energy efficiency of housing, $z_3$ , is whether they live in their own houses built after 1980 or not. It identifies households as (multidimensional) energy poor only if they are poor or deprived in all three dimensions." [112, p1165]   |
| Composite measures | Structural energy poverty vulnerability (SEPV) index [114] | A structural issue due to broad political and socio-economic conditions, such as Long-term unemployment rate, income, Young people neither in employment nor education, Employment rate of recent graduates, Expenditure on social protection in PPS per inhabitant, Labour market, Tenants, rent at market price, Overcrowding rate (total population), Social rental stock as a % of total housing stock, Annual electricity switching rate, Final electricity consumption per capita.  |

## Appendix B: DIO Metrics and Data Availability

### DRIVERS of Energy Hardship

| Element Type             | Concept   | Rationale  | Data Source   |
|--------------------------|---|--|---|
| <i>Socio-demographic</i> | Household size  | Larger houses use more energy  | Generally available<br><i>e.g.</i> , HILDA, Australian Housing Conditions (AHC) Dataset   |
|                          | Household composition   | Households with children use more energy   | Generally available<br><i>e.g.</i> , HILDA, ABS, HES  |
|                          | Occupancy patterns  | Houses where people are home more often use more energy  | Rarely available<br><br>Usually estimated based on employment status, or presence of disability. Currently also influenced by COVID-19 restrictions.<br><br>Can be derived in HILDA or CSIRO Energise survey data |
|                          | Life events (relocation, pregnancy, birth, job loss, acute ill-health, death, retirement, accident) | All these can arguably affect earning capacity and in turn disposable household income levels          | Rarely available<br><i>e.g.</i> , HILDA   |
|                          | Financial literacy  | Impacts how people are able to manage income vs expenses   | Rarely available<br><br>Testing or self-reporting measures;<br><br><i>e.g.</i> , HILDA tests financial literacy skills of respondents in one year.  |
|                          | Energy literacy   | Impacts how effectively people use energy in the home  | Not available<br><br>Test and self-report measures available only in small-scale studies  |
|                          | Chronic health problems and disability  | Expected to affect income levels, mental and physical wellbeing, occupancy patterns etc.               | Somewhat available, but without consistency of variables measured<br><i>e.g.</i> HILDA  |
| <i>Physical</i>          | Climate region  | Determines levels and seasonal changes in heating and cooling requirements to maintain thermal comfort | Generally available<br><br>Proxy via postcode<br><i>e.g.</i> HILDA, AHC Dataset   |

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|------------------------------|--|--|--|
|                              | Dwelling quality / characteristics (size, materials, age)    | Contributes to household energy consumption and efficiency | Somewhat available, but without consistency of variables measured<br><i>e.g.</i> AHC Dataset, CSIRO Energise   |
|                              | Building energy performance                                  | Contributes to household energy consumption and efficiency | Rarely available for older dwellings<br>New buildings: NatHERS measures; <sup>15</sup>   |
|                              | Installed appliances in the dwelling (appliances' type, age) | Contributes to household energy consumption and efficiency | Rarely available<br>Some data available from CSIRO's NEAR program and CSIRO Energise data  |
| <i>Financial/behavioural</i> | Income   | Contributes to capacity to pay                             | Generally available<br><i>e.g.</i> , HILDA, ABS' Household Expenditure Survey (HES), Household Energy Consumption Survey (HECS).<br>Note: Availability of information varies between sources. Most recent and comprehensive income information is in the HILDA |
|                              | Savings  | Contributes to capacity to pay                             | Rarely available<br><i>e.g.</i> , HILDA , ABS, HES, HECS.<br>Note: Availability of information varies between sources. Most recent and comprehensive savings information is in the HILDA   |
|                              | Existing debt, other expenses                                | Contributes to capacity to pay                             | Rarely available<br><i>e.g.</i> Household/Individual level: HILDA, HES, HECS. <sup>16</sup><br>Note: Availability of information varies between sources. Most recent and comprehensive is in the HILDA   |

<sup>15</sup> Averages at the regional level exist, but they are not useful for consumer/household/individual level studies.

<sup>16</sup> Note the AER Retailer Performance Reporting publishes averages across regions or categories of consumers.

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|  | Energy bills   | Total cost to household for energy consumed | Rarely available.<br>Fragmented knowledge – self-declared through surveys.<br><i>e.g.</i> , HILDA, ABS HECS, ABS HES, CSIRO Energise, and estimated by St Vincent de Paul via Alvis Consulting who collect historical tariff offers |
|  | Energy tariffs | Cost to household per energy unit consumed  | Not available or rarely available. <sup>17</sup>  |

## INDICATORS of Energy Hardship

| Element Type             | Concepts                                   | Rationale   | Data Source   |
|--------------------------|--|---|---|
| <i>Socio-demographic</i> | Under-consumption of energy                | A household's strategic response to cope with hardship  | Not available   |
|                          | Under-consumption of other essentials      | A household's strategic response to cope with hardship  | Not available   |
|                          | Perceived thermal discomfort               | A subjective measure of whether householders are persistently too hot or too cold                                     | Rarely available<br>Available only in small-scale studies <i>e.g.</i> , CSIRO Energise  |
|                          | Reported difficulty in paying energy bills | An indirect measure of bill stress  | Rarely available<br><i>e.g.</i> , HILDA, HECS   |
|                          | Ownership                                  | Indicates the potential for agency over the home dwelling   | Generally available<br><i>e.g.</i> , HILDA, ABS' HES, ABS' HECS, CSIRO Energise, etc.<br><br>Note: whether ownership is an indicator of household energy hardship still needs to be validated through research. |
| <i>Physical</i>          | Building degradation                       | Presence of mould/damp/rot/leaks indicates a dwelling that is ineffectively thermally regulated, ventilated or sealed | Rarely available<br><i>e.g.</i> , AHC Dataset<br><br>Note: AHC covers only New South Wales, Victoria, South Australia   |

<sup>17</sup> Tariff data is collected by Alvis Consulting for the St Vincent de Paul organisation. It is possible to estimate energy costs for the consumer using this tariff data, if surveys collect information on which retailer the consumer uses. However, surveys rarely collect retailer or tariff information.

|                              |  |   |   |
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|                              |  |   | and was only carried out for the year 2016  |
|                              | Comparative indoor versus outdoor temperature                          | An objective measure of thermal regulation in the dwelling  | Not available<br>Potentially available only in sporadic studies   |
| <i>Financial/behavioural</i> | Energy consumption relative to income or to median energy consumption. | Indicates consumption is too low. Relative to dwelling and household size and features              | Not available<br>Potential to derive from other variables. For example, in HECS where questions on both bills and energy quantity used (in kWh or MJ) are asked, but only relevant when relative to size/type/climate zone of dwelling. |
|                              | Energy costs relative to income or to median energy costs.             | Indicates bill costs are too high   | Not available<br>Potentially derive from other variables.<br>e.g., HILDA, HECS  |
|                              | Expenditure to heat/cool the house                                     | Separates thermal regulation from other energy uses and can indicate whether consumption is too low | Not available   |

## OUTCOMES of Energy Hardship

| Element Type             | Concepts  | Rationale  | Available Variables |
|--------------------------|---|--|---------------------|
| <i>Socio-demographic</i> | Under-consumption of energy (over an extended period)   | Consequence of long-term energy hardship                                   | Not available       |
|                          | Stress/anxiety  | Likely to be raised by long-term hardship                                  | Not available       |
|                          | Mental wellbeing  | Likely to be lowered by hardship;<br>In turn damaging to general wellbeing | Not available       |
|                          | Physical health   | Likely to be lowered by hardship;  | Not available       |
| <i>Physical</i>          | (There are few, if any, physical outcomes of energy hardship; physical health impacts are addressed as a socio-demographic element) |  |                     |

|                                   |   |   |                             |
|-----------------------------------|---|---|-----------------------------|
| <i>Financial/<br/>behavioural</i> | Bill default, arrears                           | Consequences of inability to pay          | Not available <sup>18</sup> |
|                                   | Hardship programs, other social policy programs | Consequences of inability to pay          | Not available               |
|                                   | Debt collection agency involvement              | Consequences of retailer selling the debt | Not available               |
|                                   | Disconnection                                   | Consequences of chronic inability to pay  | Not available               |

<sup>18</sup> Note that AER regional aggregate data can give a sense of the magnitude of the issue, but it does not allow to identify specific consequences at consumer (household or individual) level over time. This point is valid for all the financial / behavioural outcomes identified here.

## Appendix C: Linking Research Findings to the Recommendations

Our investigation has revealed many important issues which have each prompted the generation of a suite of recommendations for implementation. To ensure that each recommendation is robust, in that it was formed from our empirical analysis, we present the recommendations alongside the key findings from our research.

These are presented according to key areas investigated as part of this project.

### Defining Energy Hardship: Recommendations from Our Review of Existing Literature

| Key Insights   | Details  | Recommendations   |
|--|--|---|
| The project developed a definition of energy hardship  | Captures 'situation' and reflects the importance of adequacy, access and agency, together with outcomes of dignity and minimum needs.          | Embed this inclusive definition into the design and application of programs and policies:<br><b><i>When a household is unable to use sufficient energy services in the home to live a comfortable, dignified and healthy life without restricting other essential needs</i></b> |
| The project developed a taxonomy of causes and symptoms of energy hardship                                   | Taxonomy to understand causes and symptoms of energy hardship: Drivers, Indicators, Outcomes and the best way to measure each factor.          | Apply multiple measures of energy hardship (Drivers, Indicators and Outcomes) to more effectively and accurately track and monitor Energy Hardship (which is more extensive than previously known)  |
| The project developed a framework that reflects differing levels of energy hardship                          | The ABATE Hardship Framework captures differences and dynamics in energy hardship based on severity and duration.                              | Use the ABATE hardship states to tailor the design of policies and programs so they are more effective at reducing hardship, and as a diagnostic tool of energy hardship.   |
| The project developed a classification of methods to reduce energy hardship                                  | Methods to reduce vulnerability (prevention) and hardship (support and relief) called P-S-R  | Adjust programs so that Support and Relief is provided to reduce hardship, and Prevention is provided to reduce vulnerability. Note that some prevention initiatives will be needed for households in hardship until their structural barriers are removed.                     |
| The project developed a framework to support an understanding of 'vulnerability' in relation to a 'hardship' | A 'big picture' framework which reflects the difference between vulnerability and hardship, and the different strategies needed to reduce both | Use the 'Reducing Energy Hardship' framework to identify, contextualise and support the maintenance of a cohesive suite of key assistance opportunities to move households out of vulnerability and hardship.   |

### Measuring Energy Hardship: Recommendations from Our Review of Existing Data

| Key Insights  | Details   | Recommendations   |
|---|---|---|
| Existing data are insufficient to properly assess energy hardship | Links between dwelling characteristics, spending and energy hardship outcomes cannot be made.<br>Data about when and why households move into and out of Energy Hardship are not available. | Gather more targeted data, assess relevant variables, and track households over time. |

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| There are no benchmarks for energy consumption or for 'low income' | Non-discretionary energy needs for different households (size/materials/climate) cannot be estimated. Thresholds for 'low income' need an agreed definition                           | Identify benchmarks for 'non-discretionary' energy consumption, and set a definition for 'low income' (under-consumption).   |
| Current retailer reporting is inadequate                           | Extent and duration of debt is reported at an aggregate level only. Also, how retailer support programs perform relevant to energy hardship for individual households is not captured | Require retailers to exercise their unique ability and have them capture and report on key data points to measure actual household energy hardship across multiple severity and duration data points. In particular, they should track their customers and find points of support prior to high debt accruing. |

### Recommendations from Analysis of Household Experiences – Micro-Level Perspective

| Key Insights   | Details   | Recommendations  |
|--|---|--|
| Household needs are not adequately addressed and households are forced to bridge the gap in often detrimental ways | Policies and programs are not effective at reducing <u>most</u> hardship states, largely due to issues around the design and implementation of programs. Households cannot afford energy and resort to extensive efforts to cope. | Use the P-S-R Framework to determine the assistance needed by households in each ABATE hardship state  |
| Many households in hardship are not accessing support  | Restrictive eligibility criteria means that those in need are not able to access the assistance available.  | Ensure that the eligibility criteria are carefully considered for all programs and policies so that the targeted households are able to access assistance. |
| Structural barriers can create and/or worsen hardship  | Six structural barriers were identified that affect households directly, or affect households in general.   | Reduce the scale of energy hardship by addressing <u>all six</u> structural barriers that create or exacerbate energy vulnerability or hardship.           |

### Recommendations from Policy Gap Analysis – Macro-Level Perspective

| Key Insights                   | Details  | Recommendations  |
|--------------------------------|--|--|
| No national end game/goal      | Initiatives are not reducing total hardship because there is no goal to do so. | <p>Develop a clear national strategy and timely targets to eliminate and prevent energy hardship.</p> <p>Each jurisdiction should tailor energy hardship policies to their jurisdictional context as relevant and ensure energy hardship policies adequately target each of the ABATE hardship states.</p> <p>Emulate the strengths of the Trajectory in developing an energy hardship specific national strategy.</p> |
| Policy gaps on energy hardship | Few policies directly address energy hardship                                  | Policies and programs must include specific goals to prevent and/or reduce energy hardship. These goals need to have a level of ambition that is relevant to the scale of energy hardship.   |

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|  |   | <p>Ensure policies clearly state the strategy and SMARTA objectives.</p> <p>Apply the identified 'best practices' to improve the way existing policies and programs work.</p> <p>Utilise the ABATE hardship states to revise, retarget or create a comprehensive mix of policies for all energy hardship states.</p> |
| Limited policies are enshrined in Law    | Policies not linked to laws or programs, leading to poor implementation.  | Ensure that policies that address significant and ongoing hardship are enshrined in law.   |
| Policies are not well linked to practice | Good initiatives are stranded in a fragmented, piecemeal and un-coordinated policy framework, leading the current framework to be less than the sum of its parts. | Ensure policies are clearly linked to initiatives/programs that action the policy goals.   |
| Fragmented program delivery              | Delivery of initiatives is fragmented across silos, between jurisdictions, portfolios and even within departments.  | <p>Plan, monitor and coordinate delivery of programs (and outcomes) across jurisdictions and portfolios.</p> <p>Cross-portfolio commitment (energy, housing, health, and social policy), clear accountability and required delegations at an initiative level.</p>   |

### Recommendations from Policy Gap Analysis – Macro-Level Perspective (a)

| Key Insights   | Details  | Recommendations  |
|--|--|--|
| Gaps in programs lead to overall ineffectiveness                     | Current programs mostly provide initiatives designed to prevent hardship for households already in hardship.           | Apply P-S-R to design programs that more appropriately address the need of the household depending on the hardship state.  |
| Insufficiencies in policy and program when compared to scale of need | Initiatives lack funding and ambition proportional to the number of households and the challenges they aim to address. | <p>Outcomes targeted by policies and programs must be sufficient to match the scale of energy hardship they are designed to reduce.</p> <p>Funds allocated to policies and programs must be sufficient to match the scale of energy hardship they are designed to reduce.</p> <p>The scale and duration of policies and programs must be sufficient to match the scale of energy hardship they are designed to prevent or reduce (<i>i.e.</i> they should be large-scale not pilot-scale and long-term).</p> |
| Best practices can inform design principles                          | Many current programs have good incremental innovations that can be combined to inform best practice principles.       | <p>Apply the identified 'best practice principles' to improve the way existing policies and programs work.</p> <p>Ensure all programs are evaluated to ensure they achieve the outcomes they are designed to do – reduce energy hardship.</p>  |

### Recommendations from the Trajectory Gap Analysis – Macro-Level Perspective (b)

| Key Insights   | Details   | Recommendations  |
|--|---|--|
| The Trajectory shows strong early <i>potential</i> to address the subset of <b>energy efficiency</b> -related policy requirements for energy hardship. | There are aspects to the Trajectory that should inform a national policy and direction on improving energy efficiency in homes.   | Achieve commitment by jurisdictions to the full suite of proposed actions in the Trajectory for new and existing residential buildings.  |
| The Trajectory provides one solution to five identified policy areas.  | The Trajectory is focused on improving the efficiency and distributed energy resource (DER) readiness of new and existing buildings. These are important, but will not address the drivers or other structural barriers of energy hardship. | Preventing, reducing and eliminating energy hardship requires both the actions currently proposed in the Trajectory to be committed to, and a suite of other policy and program actions beyond the Trajectory to be pursued. |

### Recommendations to Reduce Structural Barriers – Micro/Meso/Macro Perspective

| Key Insights   | Details  | Recommendations  |
|--|--|--|
| General Barrier:<br>Energy hardship is associated with other forms of hardship for many households | Energy hardship is closely connected with broader economic and social hardship, while energy hardship-related initiatives are narrowly focused.                              | Ensure an effective safety net to address the broader hardship and declining wages context.  |
| Structural Barrier:<br>Increasing energy prices has outpaced income rises and social benefit rises | Energy prices have grown faster than low-income wages, and Australia provides the lowest unemployment benefits among OECD countries – producing an energy affordability gap. | <p>Re-imagine consumer value in determining price and costs to close the energy affordability gap to ensure that households in hardship can afford to use a minimum amount of energy without having to compromise other essentials.</p> <p>Embed the role of specialist Community-Based Organisations as formal energy sector participants or long-term partners in energy sector household support.</p> <p>Establish bi-partisan support for raising Jobseeker by a minimum of \$75 p/w (<b>urgent prevention</b>).</p> |
| Structural Barrier:<br>Poor-quality housing  | Many homes have poor energy efficiency which exacerbates bills, stress, health and wellbeing.  | Mandate minimum standards and rollout of energy efficiency retrofits in line with proposed options under the Trajectory noting that other aspects to poor housing will also need addressing (e.g., mould, damp).   |
| Structural Barrier:<br>Lagging and unpredictable bills   | Energy is billed in a lumpy, lagging, unpredictable and unintelligible way that makes individual bills avoidably high and difficult to reduce.                               | Create requirements for customer-centric billing which may include decoupling billing from the mechanics of supply where these mechanics conflict with the needs of the customer.  |
| Structural barrier:<br>Retailer poor behaviours  | Some retailer behaviours, either passively or actively, worsen energy hardship   | Update regulations to ensure that... reporting requirements of retailers (see above)   |

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| Structural barrier:<br>Needless Sector Complexity    | Sector complexity is unnecessary at the consumer interface and confuses households              | Re-think current approaches and co-design the energy system so that households are confronted only with clarity and simplicity |
| Structural barrier:<br>Not enough affordable housing | Too few social housing homes has produced a shortfall in available homes and long waiting lists | Invest, large-scale, in social housing to address the 'affordable' housing crisis.   |