

Rising Household Energy and Water Bills: Case Studies of Health, Wellbeing and Financial Impacts



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April 2017

Prepared for
Victorian Council of Social Service

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1 Introduction

Australian households have faced sharp increases in energy prices over the past decade¹. Household water bills have also increased². Higher numbers of households are experiencing electricity and/or gas disconnections due to non-payment of bills and joining energy retailer hardship programs to remain connected^{3,4}. As a result, research and energy policy has focused on energy retailer hardship practices, household experiences of hardship programs and disconnection, and ways to keep households connected.

The impact of energy and water costs in households who manage to pay utility bills and remain connected is less visible. Financially constrained households may restrict energy and water use to detrimental levels and/or go without other household essentials. Based on the experience of member organisations, the Victorian Council of Social Service (VCOSS) is seeking to raise awareness of these less visible forms of energy and water hardship to facilitate energy and cross-sectorial policy which respond to the health and wellbeing impacts of high utility costs for households.

VCOSS engaged the Centre for Urban Research's Beyond Behaviour Change (BBC) team at RMIT University to interview households who may be experiencing detrimental impacts from energy and water bills despite remaining connected to supply. Ten case studies were developed from these interviews describing participants' experiences of energy and water bills, household health and comfort, and the relationship with other financial and social issues.

The case studies form the main content of this short report and are intended to be read as a collection. Key themes are included at the end of the report to supplement the depth of experiences provided by the case studies and summarise the main findings from this research.

2 Methodology

The research team conducted 12 interviews and prepared 10 case studies with households who experience difficulty paying their utility bills.

Recruitment

VCOSS contacted member organisations who could identify or seek expressions of interest from households experiencing difficulty affording utility bills and financial stress⁵, and who had not been involuntarily disconnected from electricity or gas supply in the past two years. Two of these organisations (Council of Single Mothers and their Children (CSMC), and Yarra Energy Foundation) provided names of potential participants to the RMIT research team, via VCOSS. In addition, the research team identified suitable participants via Council on the Ageing (COTA), and cohealth when recruiting for another research project. The sources of participants whose case studies are included in this report are listed in Table 1.

¹ Wood, T., Blowers, D., 2017. Price Shock: Is the retail electricity market failing consumers? Grattan Institute, Melbourne.

² Australian Water Commission, 2014. National performance report 2012–13: Urban water utilities, Australian Government, Canberra. Available at: <http://apo.org.au/node/39162>

³ Essential Services Commission (2015) *Inquiry into the financial hardship arrangements of energy retailers: Our approach*, Government of Victoria, Melbourne.

⁴ Water supply can only be restricted, not disconnected

⁵ Including low income and/or ongoing debt other than home mortgage

Table 1: Sources of case study participants

<i>Referral agency</i>	<i>Number of participants</i>
Council of Single Mothers and their Children (CSMC)	6
COTA (Council on the Ageing)	2
Yarra Energy Foundation	1
cohealth	1

A member of the research team phoned each potential participant to confirm their eligibility (over 18 years of age) and interest in participation. The researcher then organised a time and venue for interviews.

All participants were given a \$60 Coles/Myer voucher in appreciation of their time.

Most participants headed sole adult households. These households may be more likely to face financial difficulty due to running a household on a single income. Most were women which is likely due in part to a strong response to CSMC's call for research participants, but may also reflect the financial challenges faced by single parents with primary or sole responsibility for their children.

A summary of participant demographics is provided at Appendix A.

Data collection and analysis

Twelve in-depth, semi-structured, face-to-face interviews were conducted with Victorian households. All but one of the interviews were conducted in participants' homes. Some households showed copies of their utility (or other) bills to the interviewer. In-home interviews included observations of aspects of the home such as size, maintenance, window coverings, draughtiness, and age/efficiency of appliances

The research was conducted in accordance with the requirements of RMIT's Human Research Ethics Committee. Recognising the sensitive nature of the topic, the researchers took care to ensure participants understood the intent and conditions of the research before agreeing to be involved, and again before conducting interviews. Before each interview the participant was given an information statement, had the research explained to them in detail, and signed a consent form. Participants were also advised that they could stop the interview at any time, and were not obliged to answer any question or provide any details they were not comfortable with.

All interviews were recorded using a digital voice recorder, and lasted 45-90 minutes. The types of interview questions asked are listed in Appendix B. Interviews were professionally transcribed to develop case study narratives for each household (section 3). Interviews were also analysed to draw out key themes across the case studies (summarised in section 4).

Measures have been taken to ensure participants' anonymity in the reporting of this research, including changing names and identifying details, and referring to regions rather than suburbs or towns where participants live. The case studies do not include all relevant details for the household, including some aspects of cases with similarities to others. The names of energy companies mentioned by participants have been omitted.

Limitations

The households interviewed were identified through community organisations. There are likely to be households facing financial hardship without links to community organisations who were not reached via the recruitment method used. This report presents case studies of households with occupants who were willing and able to be interviewed. As such there are likely to be households which are more vulnerable than some of those reached in this research. Few men participated in the research.

Many of the households had health issues including ones which affected their tolerance to hot or cold conditions – these types of households were not specifically targeted and it is unknown how widespread these health conditions are in financially constrained households.

This research is not, and was not intended to be, representative of a wider sample; rather, it aims to illustrate individual lived experiences of the financial challenges households face, and the things they do to ensure their energy and water bills are paid.

There may be some inaccuracies in the data due to reliance on participant self-reporting of past events and current circumstances.

3 Case Studies

Odette

Odette is a sole parent caring for five young children and living in public housing. She is unable to work due to physical health issues and receives disability support and a single parenting payment from Centrelink. She does not receive child support payments or assistance from family.

Odette has a severe heart condition exacerbated by warm or hot conditions. Frequent hospitalisations have been stressful, disruptive and expensive due to babysitting and taxi costs. Last year the housing office⁶ installed two reverse cycle air conditioning units after *'the hospital put a really good letter for me because there was no air conditioning at all in here... I was spending a lot of time in the hospital'*. Staying home and using air conditioning most days and nights has reduced her hospitalisations. The air conditioning has also helped manage Odette's youngest child's eczema. There are times of the year when Odette uses cooling for herself and heating for the children.

Odette says a recent housing department renovation to the home did not include installation of ceiling insulation. The upstairs bedrooms of the home get hot *'because the roof is tin, so all the heat could get upstairs to about 40 degrees upstairs, it's literally fire'*. Her unit has no external shading and the interior window coverings are lightweight. Other than air conditioning, Odette says she hasn't asked for changes to the home which could assist with her health, comfort and energy bills because in her experience the *'housing [office] doesn't really care as long as they give you a place to live'*.

⁶ Department of Health & Human Services

After the air conditioning was installed, Odette's electricity bill doubled to about \$600 per quarter for the spring period. She used a Utilities Relief Grant to cover part of the bill but is unsure how she will pay the next one which is likely to be higher. Despite her reliance on air conditioning, Odette is not eligible for the Medical Cooling Concession. Doctors at the hospital are hoping to assist her in accessing this concession in the future.

Odette's complex health needs make it difficult to manage electricity use: *'I've got fibromyalgia in my hands, so sometimes it's really hard to hang the washing outside, so I have to use the dryer more... with five children it's really hard because there's lots of clothes to wash and dry'*. Odette says *'the bill comes and I'm like, "Oh my God, I'm going to do less of this, or put the lights less, or put the air conditioner less", but then in reality it's just too hard because I need it'*. She says she tries to **'stretch it for as long as I can' before switching the air conditioner on**. Her other financial management strategies include:

- Reducing cooking and food costs: *'I enjoy cooking... but it's just so expensive, so [I try to avoid] using the oven, gas... I don't really make things that I used to make, so just very simple things and quick things... pasta and rice' ... '[I would] like to be able to buy more fresh things, like fresh produce...[but] 'it's constantly just looking and thinking, "Do I really need it? Can I afford it?"'*
- Accessing charity assistance to buy food at Christmas time.
- Walking to the shops despite difficulty carrying shopping home.
- Asking for extensions on bill due dates but often finding that other costs arise in the meantime.
- Repaying a loan needed to buy her son a school-required iPad from Centrelink payments.
- Buying one school uniform for each child and washing and drying them overnight.
- Minimising television when home alone during the day and feeling isolated, *'even if it's just for a bit of company... at least you can hear people talking'*.
- Bathing children every 2-3 days instead of more often because *'it's just so expensive'*.

Without the Schoolkids Bonus, Odette has been unable to buy her children's school books this year.

Odette's energy services have never been disconnected but she has received *'tonnes of warnings though, and registered mails... [the retailer] said that they're going to cut it off unless I start making payments, it's just a lot of financial stress'*. She is determined to stay on top of her energy bills to reduce stress and the impact on her children. She was not aware of hardship programs or any protections for households with children. Odette no longer switches energy suppliers because *'someone came to my door and then I changed; it was about two years ago, but then I ended up getting billing from both companies, so I just thought never, ever again'*.

Odette feels anxious about paying her utility bills. She says that ***'after I pay the [utility] bill I feel happy, but then I'm thinking, "Oh no, it's already getting ready for the next bill," because they come so quick'***.

Don

Don worked as a mechanic for 40 years before giving up his job to provide full-time care for his elderly parents who have now passed away. He would like to return to work but, now in his sixties, says finding work is difficult *'once you're over a certain age'*. He currently receives Newstart Allowance and volunteers at a local health program for men.

Don lives alone in the small home he owns and he manages his finances carefully to ‘*make the best use of the resources*’. He prioritises utility bills, paying them at least a day before the due date to have them ‘*out of the way*’ because it’s important for his mental health. Don says ‘***it’s not a case that you starve yourself. But you’ve just got to be, you’re picky as to what you want to do***’.

Minimising energy consumption is one of the main ways Don manages his budget. He has reduced his electricity bill to around \$100 per quarter (2.5kWh/day) and his gas bill to \$70 per two month period [verified by interviewer]. He is frustrated that fixed supply charges make it difficult to reduce his bills further. Don does not use heating and decided not to replace his gas heater after it broke down: ‘*I sort of looked at it... We don’t get really cold in Melbourne. Some people say, it’s 10 degrees, and they say it’s freezing... I bite the bullet... if it’s cold I’ll put a jumper on... And I survive*’. He only uses a portable electric heater if friends visit because ‘*they’re virtually like a taxi meter... But for somebody else’s comfort, yes*’. If Don feels cold, he goes to bed early. Don says he is ‘***resigned to the fact... I’ll accept it. And I’ll move on. I’m not going to dwell on it***’.

Don doesn’t have air conditioning and his ceiling insulation is old and ineffective. He says his ‘*energy levels are pretty low*’ on hot days. One of the ways Don copes in hot weather is to ‘*lay on the bed and read a book if I can, if I can concentrate. But when it gets too hot, I even find it hard to concentrate... just close my eyes and... try to think of something cooler*’. He hopes to install a ceiling fan in the bedroom. On extreme heat days he sometimes goes to an air conditioned library or supermarket. To avoid expenses he says, ‘*you don’t take any money, so you can’t spend any money*’.

When his washing machine broke down Don decided he could also manage without this appliance, ‘*I sort of worked it out, well I can go down the laundrette every fortnight and do my washing... now, if I was still working, then when you’re earning a lot, your judgement is different*’. He keeps his showers very short but says that after going to the gym, ‘*I would love to stand under a hot shower for ten minutes... I’ve sort of said to myself, no*’. Don thought about being ‘*decadent*’ and getting a television in the bedroom but decided against it: ‘*when you look at your money supply... there’s lots of things that you want. What about need as opposed to want?*’

Don tries to put some ‘*rainy day money*’ aside because ‘***you’ve got to realize that you’re only one drama away from slipping***’ and ‘***once you get behind, you stay behind***’. Don has had unexpected expenses in the past. His cat provides good company but has needed several expensive operations since being mauled by a dog.

Don avoids the ‘*vices*’ of smoking and gambling (‘*you’ve got to have a disciplined mind to say no*’) and he doesn’t go out to ‘*have a drink with the boys*’ anymore. He says ‘*I explain to people, you can still have a good life... you just don’t do these things but there are others [that] have taken their place*’. Don can’t remember when he last went to a restaurant but he enjoys trying new recipes and cooking for himself at home.

If Don had more money he says the first thing he would do is install a reverse cycle unit to heat and cool his home and then he would get a washing machine. Although Don says he has the physical capacity to live very economically he expects this will change: ‘*there will come a time, and sometimes it comes pretty quickly... I’m quite okay now, and then bang!*’. Don has considered selling his home and moving somewhere cheaper but his local community and amenities are important: ‘*I can walk to most places, which I do. I have a hospital there. I have a bus service just next street. Train over there, tram, da, da, da*’.

Rachel

Rachel is in her late fifties and receives regular treatment for post-traumatic stress disorder (PTSD). Her son, David, lives with her in her public housing unit on an irregular basis. David has struggled with mental health issues for several years and during a period at home with depression the heating was used without restriction, with Rachel saying she decided to *'turn[] the heater on and worry about the consequences later'*. Rachel wanted to *'shield'* David and not *'burden'* him with her financial concerns. Rachel was unable to pay gas bills despite accessing the Utility Relief Grant. She wanted to be on a hardship program but found it difficult to get past the retailer's regular call centre team, *'they were very tenacious at the frontline'*.

The Energy and Water Ombudsman (EWOV) assisted Rachel with her difficulties with her energy retailer. Despite being advised against it, Rachel thought the only way to manage financially was to disconnect from gas permanently. She said the energy company *'couldn't have cared less that my son was really sick... that's why in the end to them I said "I don't care. Turn it off. I don't want to deal with you... if you don't have any compassion for the situation"'*. Rachel has since moved to an energy company which she says makes access to *'the wellbeing team'* much easier.

Now living without a gas connection but having a gas-boosted solar hot water system, Rachel takes some showers at home, *'on a hot day there's probably about three minutes of hot water, which I can have a quick shower. But that's unpredictable'*. She showers at a *'women's house'* run by a local charity where she used to be a committee member. For cooking, Rachel uses an electric hot plate which sits on top of her unpowered gas stove. Rachel says that when it's cold:

'I'll just plug in an oil column heater, the electric one. But I do think they're expensive to run from what I can gather, so I just do it when I have to'

'It might just be that I have a shower when I'm out, and it might just be that I have a cup of tea when I come home, have the heater on for a couple of hours, and then go to bed'.

Before next winter, Rachel hopes to buy electric panel heaters which she understands to be energy efficient.

Worrying about her son's health and safety, Rachel has found it difficult to put time and attention to energy issues:

'All of this energy and effort going into all these other things... there were times when we'd come home where I was seriously expecting the electricity and the gas to be disconnected. It was just that point of, just even hiding from it. Just that sense of regression and avoidance, it was just almost like I just can't deal with that'.

Rachel has an outstanding debt from the gas bill, *'eventually I might deal with these people but right now I don't have the mind space to. Because they have not been an easy company to deal with... I just don't feel it was an equal relationship'*. She is focused on keeping her electricity bill paid to avoid disconnection which was threatened when she had a \$400 debt and could not manage fortnightly repayments of \$100. Rachel has now arranged more manageable Centrepay deductions of around \$60 per fortnight but feels she *'can only manage with an electricity account'*. Her water bills remain unpaid.

Rachel has spent much of her limited income responding to David's health and legal issues. She reduces living costs where possible such as buying second-hand clothing and household items. Council-provided cinema and swimming pool vouchers helped Rachel cope without air conditioning during the summer when she experiences debilitation due to her cardiac failure condition. As a Disability Support Pensioner, Rachel makes use of free public transport on weekends to travel over one hour to the Victoria Market to buy

cheaper fresh food than is available in her suburb: ***'it's hard to just cook for one person because everything's more expensive when you're trying to buy it in smaller proportions'***. Hoping sport would help with her son's health, Rachel accessed community funding *'for some soccer boots for [David] so that I could still try and encourage him back to that'*.

Rachel keeps many of the challenges in her life to herself and tries to take a positive attitude: *'look I mean I'm as happy as I can possibly be, to be honest. I'm happy that my son's alive. I'm happy that I manage the best I can'*. She appreciates the community support she receives including food vouchers *'maybe every three months, just so that I could say get over a hump to the next pay'*. However Rachel feels judged at times:

'It feels like they're full of shame around that... you're clean and respectable and you go into an agency for assistance, [it feels like] you've really got to look like you've just rolled out from a dirt heap and you've got to look sad'.

Beth

Beth and Andrew's busy household includes their four children from previous relationships. Beth has been studying full-time and recently started a part-time job; Andrew works full-time.

Prior to repartnering, Beth could no longer afford to live in Melbourne as a single parent (10km from the CBD):

'Everything was expensive in there – the cost of food, everything just seemed much higher, particularly the rent, and the quality of the property that you would get for your rent, like we were living in a bit of a dive... there was just no way I could afford to be in the city anymore; it's impossible'.

To reduce rent costs, Beth moved further out (25km from the CBD). Since Beth and Andrew met, the blended family have rented a small home in a more affordable town located 55km from the Melbourne CBD. They like the area but the train line does not extend that far out and peak-time travel to and from the CBD totals over three hours per day, *'you spend most of the day in the car'*. Due to the additional childcare, travel and time costs, Beth looked for local employment. With limited employment options in the vicinity of the town, Beth's new job is ***'a massive downgrade in my earning capacity... I've completely gone down a level in my career. But it was a choice based on the whole family and what all of the children needed as well'***.

Beth has Hashimoto's disease involving temperature sensitivity. The family uses fans and water spray bottles in summer and rugs up in winter with lots of layers and sheepskin boots. Their new home has ducted heating but the family is concerned about the running costs and are considering using small electric heaters instead. Hot weather has severe impacts for Beth, ***'I get almost completely debilitated. My brain stops working quite literally, I can't think, I can't move, I get really swollen and puffy, so it's painful to move, and I get migraines'***. Beth uses a small *'expensive to run'* portable air conditioner or sits in her air conditioned car to cool down. Beth says there is *'a lot of disagreement in the house over summer'*. Beth feels like she *'can't function'* whereas in winter (with heating) Beth says *'I have energy, I'm motivated, I enjoy doing things'*.

To address these issues, Beth would like a reverse cycle unit installed but is reluctant to ask the landlord in part because of requests refused in previous rental properties:

'Don't ask because they're not going to do it. In my experience of renting owners are not interested in improving any of those things because it makes no impact to them at all... it's so competitive that if you're not happy they just get rid of you and get someone else... [there] was an apartment I was living in... I asked for an air conditioner because it was insanely hot, and I [laughs], that wasn't received very well!'

When Beth first became a parent she did not feel comfortable about living with her baby in a share house with strangers. The Single Parent Pension did not cover living independently and she used a credit card to pay rent and bills. Beth acquired a \$10,000 debt which she is still paying off and she fears her credit history will impact the rest of her life including her ability to buy a home. Beth accessed the Utility Relief Grant when sole parenting and she is now very focused on paying her energy bills on time, *'partly because of the [pay-on-time] discounts, because it's significant'... it's [also] about your stability and I can't risk that... rent, bills, food; that's my list of priorities, and then incidentals come after that'*.

Beth says that high energy costs impact her ability to buy quality fresh food and the cost of living means they cannot take the children to movies or the dentist. Fuel costs are also impacting the family budget *'because we've been pushed so far away from the city'* and Andrew has to drive to work. Beth has tried finding better energy offers, *'sometimes it's worked, sometimes it hasn't worked... there's been a lot of time and energy put into finding better deals and swapping over and then changing back, and it's incredibly frustrating and time-consuming'*. She is reluctant to try again because *'it feels like a lot of wasted energy'*. She says she would be prepared to change suppliers: *'if there was something just clear and easy about a good deal that was fair and was ethical... I would love that... to see the options clearly and [if] there wasn't too many options it'd be great'*.

Ursula

Ursula bought her first house while at university and felt she had a solid financial base working part-time whilst renovating and reselling houses. In her mid-thirties, Ursula and her partner had a child but soon after her relationship ended and she became a sole parent. Initially she coped financially but then she experienced a series of shocks including: higher interest rates; reductions in child support; and lack of stable employment for a sole parent with a frequently unwell child. It took considerable time to sell off her investment properties in regional areas. Ursula says they were living *'in the worst kind of poverty'* and *'very much struggling to try and keep [her] home'*.

Ursula hoped to stabilise her finances by renting out her own home in inner Melbourne and renting a home in the country. She grew much of her own food and received a lot of social support from community groups. However, lack of insulation, no energy efficiency features in her rental home, and a cold winter climate contributed to \$1400 electricity bills. During this period Ursula redrew money from her mortgage and used credit cards for essentials including utility bills and mortgage repayments. Her credit card debts reached \$50,000 and she now owes more money on her house than before. She recently renegotiated remaining credit card debts to reduce the interest costs but says her credit rating is *'ruined'*. Ursula says

that without loans from friends and family over the years, ***'I don't even know where I'd be living. I couldn't afford to rent anywhere. It's horrible for some people'***.

Ursula now lives back in her own home in Melbourne which she made energy efficient before experiencing financial stress. However, because of permanent heart damage she is cold-intolerant and needs to use electricity heating regularly. Recently, a neck injury impacted her capacity to work and complete current studies, and involved tests and doctor's bills with significant out-of-pocket costs. Ursula required full-time care and a relative moved into her home. Energy use was higher during this period:

'I was home. I couldn't do anything. It was like I had a stroke... I was on the couch, so the heater was on a lot... I don't watch TV very much but people that took care of me would watch it. And my son and I have been home a lot more since, so we're home on weekends when we're not normally... he has a TV and an Xbox and iPad, so he usually runs them a lot when he's home, especially since I've been sick, he's bored'.

Ursula has been on energy hardship programs and has never been disconnected. She received the Utility Relief Grant last year and now pays her utility bills *'sometimes a little late, it just depends, because I had such a hard year physically last year'*. Recently a water leak resulted in a high water bill which Ursula negotiated down but she is unsure why her gas bills are high. The last one was \$280 (for 2 months) despite the stove being the only the home's only gas appliance and she is unsure how to resolve this since she is *'not confident with tradesmen, especially someone tinkering with my gas'*.

Ursula says *'we're just trying to pull ourselves out of [financial hardship], which is hard because my career [is] down the toilet'*. When people ask Ursula how she manages she says *'you just go without sometimes'*. Now living without credit cards and limited income, Ursula has had to limit her son's involvement in sports which he enjoys. Ursula also noted the long-term impact on her own health: ***'I think my stress levels have been so high [for a long time], it's just not a good way to live for anyone, at all'***.

Nola

Nola is an exceptionally busy and active member of the local community. One of her main priorities is to assist her children with access to educational opportunities. Since separating from her husband, she primary responsibility for her four children, three of which moved out of home during or after their university studies. Tom (school-age) lives with Nola, and Michael recently moved back home because his Centrelink study support payments were insufficient to cover the cost of living independently and Nola could no longer afford to subsidise his rent. Michael had to switch to a less well reputed course in a university closer to home.

Nola has had a difficult time financially. For many years, she provided full-time care to her parents who lived nearby with degenerative neurological conditions. Nola received Carer payments from Centrelink during this time. She has outstanding debts for money borrowed to cover living and children's education expenses after her Centrelink payments were cut off for eight months. She also borrowed money after her daughter had a minor accident driving her father's car (who no longer lives with them) on which the insurance had lapsed. It cost \$15,000 to settle a legal dispute with the other driver.

Nola says she's *'known for being good with stretching a dollar'* and the family has discussed the difference between *'needs'* and *'wants'*. One of the ways Nola's family manage financially is to never use cooling or heating. The air conditioner has been broken *'for donkeys years'* and they don't use fans because the *'electricity bill is high enough as it is'*. She notes, ***'the things that you have to go without in order to meet those bills... what other people would take for granted we would consider luxuries'***. When it's hot family members cool themselves with refrigerated water, frequent face washing and hand-held (unpowered) fans. The home's external blinds no longer work. Nola says that *'I know some people do go to the cinemas [on hot days], but again, it's the cost, and paying to get there or transport to get there'*. She visits the air conditioned local library more frequently in hot weather.

It's been so long since the gas heater was used that Nola doesn't know if it still works: *'if I was to turn it on I'd feel I needed to get it serviced first, which would be expensive'*. Her gas bills are so consistently low throughout the year (gas is only used for cooking) that *'someone came out to inspect it because they thought something dodgy might have been going on'*. Nola says ***'it would be nice to have a house that had heating and had cooling, but I'm still thinking that amount of money I would utilise elsewhere'***.

Nola successfully taught her children to minimise energy use but her youngest son Tom has mental health issues including irrational fears. Tom is at home full-time and *'he isn't too keen on the dark'* so has lights on in the rooms around his bedroom through the night. Nola doesn't want to, *'lay down the law'* about the lights because it would cause him distress. The treatment costs for Tom (not covered by Medicare) have been significant and Nola is hopeful her son will be able to return to education.

Nola checks each year that eligible concessions are applied to her energy bills and has *'helped so many older people, contemporaries of Mum and Dad, that haven't realised to do so'*. However it was too time-consuming to compare electricity tariffs and she didn't think there would be wide variation in costs, ***'I just figured this was the electricity bill, you just paid it'***. Nola had consistently been paying \$600-\$660 per quarter for electricity and a friend recently noticed high rates on her bill. The friend negotiated on Nola's behalf and she now pays \$380 for the same level of consumption with the same retailer [difference verified by interviewer]. Nola is grateful for her friend's help and says:

'It's annoying to think that I've been... overpaying for years and years and years... my own view is that why should you really have to do that?... I think people are disadvantaged... I've been paying the utility bills 35 years... there wasn't this need to be, ringing up asking for discounts [before privatisation]'.

Nola is reluctant to change retailers due to *'the horror stories in the media too, where people have switched companies and then there's been no gas and no electricity, or they've paid twice'*. Nola keeps her bills highly organised and wants to continue receiving paper bills and a paper receipt when she pays them at the post office because *'you can go back and keep track of them'*. She is concerned about the impacts on *'someone who does things the way I do'* when businesses such as energy retailers and banks stop providing or charge for paper statements: *'that's pushing you too... do you need to have your own computer [and printer]? Do you pay for internet? Do you go to the library? Do you go to a community centre?'* She is also concerned about charges for paying in cash instead of using direct debit.

Nola has a car but walks most places to minimise petrol costs: ***'the priority with petrol is anything to do with the kids, because as I said, I'd walk up [to] an hour to save the bus fare... depending on the weather'***. Nola has not been able to maintain the family's home in the way she wishes and *'always [has] a wish list of things that I want to do'*. She was going to have her old, ineffective ceiling insulation replaced when there was federal government program but it was too hard for her to be at home for quotes and supervision when she had to visit her mother's home every three hours to administer medication: *'who would be*

looking after Mum while I was in my house doing that?'. The family has an old electricity-intensive hot water system which makes it difficult to reduce electricity use further. A boundary fence fell and broke a tap, resulting in a leak that was not discovered for some time, causing a very high water bill.

Over the years, Nola has volunteered regularly at various organisations and her involvement has helped financially with access to free but not ideally healthy food (high in carbohydrates and fats). She notes, **'again the trade-offs, because we don't have a lot of protein'**. The community organisations appreciate her skills and accept that she needs irregular and flexible working hours to meet her family commitments but Nola says Centrelink is *'giving me a hard time about that'* because their rules require her to prove that she is working regular volunteer shifts. Now that Nola's caring responsibilities are reduced she hopes to return to paid work, *'which I would enjoy, this work and the mental stimulation and things, I would have a very different life'*. However, she is concerned that despite having several qualifications and completing additional courses recently, her age combined with many years out of the workforce, **'getting back to paid work would be very difficult'**.

Lanfen

Lanfen is in her eighties and moved from China to Australia 13 years ago to be near her daughter. She used to work in a hospital in China. Lanfen cannot read English and has very limited speaking proficiency. Her interview was interpreted by a Mandarin-speaker. She lives alone in high-rise public housing apartment.

Lanfen has five stents in her heart. She says, *'when the day gets very hot or very cold, it's very bad for my heart condition because my blood vessel around the heart are very fragile. It can't sustain too extreme temperatures'*. In winter, she can maintain a healthy temperature in her apartment by using the building's central heating system which does not contribute to her energy bill. However, in summer her apartment gets very hot because it is located on the top level of the building, her west-facing windows have no shading, and there is no air conditioning. Several years ago her doctor wrote a letter to say that she needs air conditioning to reduce risk to her health in summer. The housing office gave two reasons for refusing – that the letter had 'expired' and that the government did not have enough funding to install air conditioning.

On hot days Lanfen drinks lots of water, prepares cold congee or green bean soup, and uses fans in every room. She tries to keep the heat from entering the apartment by pulling the blinds down. She uses the security door to allow air flow to ventilate but the apartment can become unbearable and she relies on going to free public venues to cool down. She tries to get to the council's library in the morning before it gets too hot or goes to the common room on the ground floor of the building.

Lanfen always pays her electricity bills on time and attributes this to her cultural background: *'Chinese people are very frugal people. We don't like to owe money to other people... We don't smoke. We don't drink. We don't go to the casino and we don't go to restaurants. Always, we cook at home'*. This approach helps Lanfen afford the five different medications she has been prescribed which although subsidised, add up to around \$50 a month. She is pragmatic about her finances: **'in the end, I have to gather the resources to pay the rent otherwise I will have nowhere to live. I can only save up in other areas of my life to pay for these costs. It's not something within my power to change'**.

Lanfen has noticed that the cost of her electricity has increased and she sees this as consistent with other areas of her daily life: *'the prices of grocery shopping is going up all the time. So similarly, I felt it's only normal to see the electricity to go up as well'*. Sometimes Lanfen receives *'a much larger bill than the usual'*. She uses the interpreter service to check that her electricity retailer has her current concession card details but *'if we forget, we miss telling them that our card has been renewed or due to be renewed, they sometimes will cancel our status as a concession holder'*. She is concerned that others in her community may be missing out on concessions. Lanfen has never heard of pay-on-time discounts, negotiated her rates or changed her electricity supplier:

'I never have done that. I'm not aware of such possibility... I thought they are [a] large and reputable company, so I chose them... Similarly, for the telephone company, I'm also able to choose between different companies to provide a service to me, but I've never exercised such discretion or such right. Because we're not good at computer to do research about that. We don't read English either'.

There isn't anybody who checks on Lanfen during hot weather but she has a device which requires her to press a button each day: *'a daily reporting system in place so I can let them know that I'm still alive and kicking'*. She says the *'Australian government are very good towards people like us, who have lost the ability to work or are retired... From the bottom of my heart, I'm very grateful... we are really very, very, very lucky'*. However she is worried about her health in summer:

'I hope the government will be able to help us with installing the air conditioners because it's quite important. I'm hoping that the government will show some favour to us elderly residents living on the top floor of a public housing block'.

Lanfen is trying to save money. She says, *'it's a little embarrassing for me to admit that I'm actually saving up money to prepare for my own tombstone. In case I pass away in the future, I need to get that sorted out... so that I wouldn't burden my children with that cost. I want to be self-sufficient'*. Lanfen says she will still be able to afford her energy bill if she gets an air conditioner, *'I'm not worried... I would only switch on the air con when it's very hot. Not all the time'*.

Tess

Tess works voluntarily for the co-operative housing provider (co-op) through which she rents a house for \$200 per week. She is studying part-time to complete a post-graduate qualification which she started before her son was born. He is now in primary school. Tess has a medical condition and receives the Disability Support Pension.

Tess is at home most days – either doing the administration work for the co-op, or studying. Sitting still for long periods she says:

'In winter I have the heating running... It's very draughty this house, too. It gets very very cold. So, it gets very expensive, the bills. I'm just not the sort of person that can be completely frugal and just sit there in the cold... I know a lot of people that do that, but I just, I like to be comfortable'.

The home's gas ducted heating system cannot be zoned so has to heat the whole of an uninsulated, draughty house with only very light blinds on the windows. Even with the thermostat set at 20°C or below, Tess says the winter gas bills are *'a killer'*.

Medication for her health condition makes Tess feel hotter than the general population and it's harder to cool her body down. She has a portable air conditioning unit: *'I do run the aircon because this house has never been insulated, it's very, very hot. So it does get expensive, the electricity bills'*. Tess says ***'I wanted an air conditioner, at one stage, but I didn't push for it'***. Tess was going to pay for half of the cost to install it but was concerned she would *'have to leave it in the house if [she] left, or else take it out and patch up the wall'*.

Tess says her 90 year old home is *'an amazing house'* but has been deemed to have structural issues. The gas hot water system is 20 years old and Tess tries to reduce hot water use by bathing after her son. Tess applied to be part of a program run by the local council which installs solar electricity systems in low-income households without up-front costs but the housing provider refused, *'it got all too complicated with [the co-op's] financing'*. She expects the property will eventually be sold or redeveloped and this may be reducing the likelihood of maintenance or improvements.

Tess wants to avoid having a bad credit rating so tries to pay utility bills on time. She uses fortnightly deductions through Centrepay to set money aside for energy bills but at the end of each billing period, she still owes around \$150 each for gas and electricity bills. Tess calls up for extensions on the due date when she is short of money. She is frustrated that due to her financial constraints, she only receives the pay-on-time discounts for about one in five of her bills. Tess would like to find better energy tariffs and tried a comparison site but *'just found it all so complicated with kilowatts and I just didn't know. I just like to hear it word of mouth'*. She considered changing when an energy salesperson knocked on her door, *'to try and get me to swap companies, but I just found all that too confusing and she was too much of a sales person. And in the end I just didn't trust her and I was just about to sign up and then I said, "Forget it!"'*

After a community organisation told Tess about the Utility Relief Grant, Tess says the retailer call centre advised her to *'wing it'* despite Tess believing she didn't meet the criteria to apply. *'They were trying to encourage me to think of things with the car that might have fitted'* but she *'just didn't feel right about doing that either'*. Every few months Tess gets food vouchers from a charity ***'so I could sacrifice the food money to pay the bills... when I get a electricity or gas bill it just stumps me, and then rent on top of it'***.

Providing her son with good food and opportunities to play sport are priorities for Tess. She never puts credit on her mobile phone and rarely goes out socially. She says the following about her financial circumstances:

'I don't sit and actually think about it but I think it gives me anxiety in the back of my mind because it's like, every day, if I go and buy milk I'm pricing the milk. I price everything. And just trying to hold on... I feel like we're just keeping afloat most months, but every four or five months we will crash a bit'

Tess is currently \$300 in debt to a great-aunt who occasionally lends her money, *'but I have to pay it all back too... it is better than having a credit card'*. Despite the challenges Tess says, *'I feel like we're a bit lucky too, because we're in cheap housing... it could be a lot worse'*.

Helen

Helen is in her sixties and lives alone in a very small terrace home she bought over 30 years ago while working. As a single woman, the banks refused a mortgage but Helen eventually cobbled together a small mortgage, two personal loans and a private loan bank loan. When interest rates increased Helen took in boarders. Up to five people lived in a home with a kitchen so small it fits only one person at a time: ***'I was determined, whatever happened I wasn't losing the house, you do what you got to... I rented out rooms. And I wouldn't advise it on anybody. It is the pits. And in a house this size and this small, it really is'.***

Now retired and living alone with unemployment benefits as her only source of income, Helen has reduced her energy bills by:

- Making energy and water efficiency improvements where feasible such as low energy lighting, gap sealing and changing to an instantaneous gas hot water unit, but *'being [on] a low income I've got to save to do these things so it gets harder and harder.'*
- Minimising energy and water use: *'I try to be responsible and sensible... everything I've got that I can control I probably control to the 'nth degree'.*
- Choosing not to install air conditioning despite severe hot flushes. Instead she uses a hand-held fan or a ceiling fan despite discomfort: *'humid day and hot flushes, worst enemies. I mean that's just the way it is.'*
- Negotiating better rates: *'if I can negotiate with the companies to get the best price I do that too. And I do it regularly'.*
- Advising retailers if unable to pay energy bills on time to avoid losing pay on time discount: *'You are polite, you are to the point. Not only do you ring and say "No, I cannot pay by that due date" but you know what you can pay, when you can pay and how long it will take... You don't dither and worry, you get on to it'.*

Helen's experience working in the public sector helps her navigate the energy sector and plan a strict budget with other strategies to minimise costs, such as:

- Only doing necessary structural fixes on her unrenovated home, nothing *'cosmetic'*.
- Not having a car and using a free weekly bus provided by the local council to get to the shops.
- Giving up private health insurance. Four years ago she investigated getting basic cover again but *'no matter how much I searched for a good deal it wasn't affordable'*.
- Pawning items to pay for unexpected costs such as vet bills.
- Buying second-hand clothes, furniture, appliances and marked-down fresh food.
- Using a calendar to plan for each bill, including rates, home insurance and phone bill.
- Trying to put a little money aside for emergencies by *'go[ing] through your wallet every few days. Take out all the gold coins, put them into the money box'.*

Helen's precarious financial situation can impact her health and wellbeing. To manage an anxiety condition without taking medication which *'destroys you'*, Helen tries to:

'Stay on the top front foot whatever the bill... if you don't do [that], you stress, you stress you get sick, you fall behind in everything and you can't cope. You stop eating well, you stop exercising... you let a few things go and it eats at you... when you're already stressed or prone to anxiety, tumble, tumble, tumble. And if you're low income that can, one bill can spin you so out of control that you've lost everything'.

Helen feels powerless to manage some aspects of bills, ***‘the way they keep putting the bills up, is out of my control and yes I can get angry but I’m powerless’***. Having worked hard to minimise energy and water use, Helen is particularly angry about the cost of her water bills, *‘I got my water bills [usage] down to under \$20... Yet, my bill with all the concessions is \$190?’*

Retailer practices have also caused stress and distrust for Helen. She had been concerned about not receiving an electricity bill for many months. She rang the retailer saying, *‘I want to receive a bill, I want to pay it’*. She was later sent a bill for nine months of usage and given two weeks to pay to avoid disconnection. Involving EWOV resulted in Helen being given nine months to pay and an apology from the company. More recently Helen received an overdue notice for her electricity account which worried her again. She called to query it and after some time *‘[a manager in the call centre] ended up apologising, she ended up giving me her personal extension number for any problems in future, and not only did I not owe them money I was in credit’*. To help avoid falling behind, Helen pays regular advance instalments on her energy bills but noticed that the pay-on-time discount was only applied to the small amount owed at the end of the billing period. She queried this with the retailer and has since received the full discount but this experience has also impacted her trust in retailers and discount offers.

Helen feels financially vulnerable, particularly as she recently had to spend her small savings on essential home maintenance:

‘I’m totally dependent fortnightly. So if the cat got sick [or]I needed tests... so many things that were available on Medicare that I could access for testing, the scans, whatever, I have to pay for now. They’re no longer covered by Medicare. I can’t have them’.

Helen gets upset about perceptions of people like herself and is worried about possible welfare benefits may change in the future:

‘The fact that they want to keep cutting pensions because we have it too easy... that would probably make me emotional is this divide we’ve got... we are the ‘takers’... I never expected to be in this situation. So that, sorry, that gets to me... being on a pension, I have no certainty that it’s going to continue. Or if it is going to continue under what circumstances... I can’t feel proud of having worked for 40/45 years, and achieved, because now I’m made to feel ashamed in some way?’

To *‘stay in control’* Helen is keen to save a little money: *‘it’s going to have to be done until I, **even if I can just get \$500 to begin with behind me, I’m going to breathe easy’***. To do this requires Helen to make hard decisions about eating and social interaction. Helen has a friend who likes to go out for dinner but says, *‘I am now thinking “Please don’t ring this week”’*.

Overall, Helen is stoic about her financial situation saying, *‘you either learn and, it’s not that you enjoy that you’re living in poverty but it’s doable... you just got to stay reasonable... I’d rather not be in this position, would be the truth. That’s the honest truth. I’d rather not be this way’*.

Peter

Peter is 75 years old and lives alone since his wife died. He was born in the small 130 year old home which he inherited from his parents. He has numerous health problems including heart problems which required surgery, a large persistent ulcer on his leg, arthritis, asthma and bowel cancer. Peter jokes, *'I've got everything but hypochondria'*. Since the age of 14, Peter worked as a delivery driver including as the local milk man delivering seven days a week. He is now retired and recovering from a long stretch in hospital after surgery.

Peter would like to visit his new grandchild in New Zealand but *'can't see that happening any time soon'*. He says, *'the side of the house is falling down, it's structural'* and he wishes he had gone ahead with the quote for fixing it which he got in 2011, *'[the tradesman would] be dead now!... he was good and he was cheap, I kick myself now... it would cost double that now'*.

Being unwell, Peter is at home and sedentary a lot more than he used to be. Last year, he decided to get better heating: *'my mother used to say "you should always have enough money to keep yourself warm"'*. Peter has deductions from his pension to repay a No Interest Loan (NIL) used to install a reverse cycle air conditioner. In cold weather, he runs it at the temperature programmed by the installer – 24°C. He never uses the unit for cooling in summer even though he *'can't take the humidity'* which exacerbates his arthritis pain. Peter doubts that his old *'powder'* ceiling insulation is very effective and has noticed it coming through ceiling vents when it's windy. The new reverse cycle unit only heats the lounge room due to the single-front terrace layout of his home so Peter still relies on an electric fan heater in the kitchen.

Peter manages medical and household costs carefully but his health issues have made it more difficult.

He says he doesn't worry, *'if I've got some [money]'*. The Pharmaceutical Benefits Scheme helps with the 15 medications prescribed by his doctors but he regularly receives bills of over \$100 for dressings and other wound care products. There are also out-of-pocket expenses for his surgery. Peter often has to take taxis to medical appointments because they cannot be conveniently reached using his preferred travel mode – public transport. One clinic is only 4km from home but with limited capacity to walk he would need to catch two buses and a tram to get there. Not being well enough to join his friends in drinks is helping Peter cope with other expenses.

Gas and electricity bills were a shock for Peter *'when they started going up'*. In winter, his electricity bills are high for a sole occupant household. He rings up his energy retailer each year (regarding concessions) but doesn't bother renegotiating his rates anymore because he was disappointed with the outcome after being attracted to retailer pay-on-time discount offers: *'they tell you they are going to give you 35% of this and 17% of that, then you get the bill and it's only a couple of dollars off and the bill is over \$100, how they work it, I don't know'*. Peter had not been aware that the discounts would not apply to the supply charges which were a large component of his bill. Peter did switch suppliers *'once when [my wife] was alive, she died 4 and half years ago, it was probably 8 years ago, maybe 10... they're all about the same so after a while I didn't bother, just stay with one'*.

Peter's home telephone bill is *'constant'* at around \$125 per quarter because he waits for people to ring him instead of increasing the costs by making calls. Despite his small house, rising land values in his area have increased his rates to \$450 per quarter. He finds paying the annual house insurance bill difficult because his insurer will not take instalments due to Peter's refusal to authorise direct-debit. He wants to be certain how much money is in his account.

Peter feels more financially vulnerable since he *'got pushed into it a Home Care scheme'*. He is allocated up to \$1200 of assistance services each month and receives four hours each of cleaning and shopping but the

hourly charges are high and (once administration and advisory fees are also deducted) there is little or no allowance remaining to cover other assistance. He has stopped using his Home Care provider for transport to medical appointments and cancelled the gardening in attempt to reduce the charges. Peter used to use taxi vouchers and get help with cleaning, visits to the shops and home maintenance via the local council and/or hospital. He has been told he can no longer do this as it would be 'double-dipping'. 'Bob from the council' used to do small maintenance jobs including cleaning the gutters, fixing the front door when it wouldn't close, and keeping the smoke alarm working. Peter was only charged for materials but recently when his fence was falling down, he couldn't call on Bob to help. Peter says:

'I'm going to miss all of that. The costs are not going to fit in the [\$1200] Home Care allowance... see all I can afford with this mob is the shopping and the cleaning, and then I've got to save what I can in case something goes wrong, or I've got to have the money myself or I've got to go to NIL (No Interest Loan) provider and get a loan'.

Peter says 'I get by, I don't buy a lot of stuff... with the Meals on Wheels, it's not costing me a fortune'. He pays about \$40 per week to receive one meal for each day but was told this may also stop because has a Home Care plan. **Peter is uncertain how he will cope if unexpected expenses arise:** 'I don't know what's going to happen. The government says everybody has to be in these [Home Care] schemes, I only wish that [the local council] had a [Home Care] scheme'.

Peter is reluctant to sell his home and move away from the important local community connections he can reach via the local buses, trams and trains. Referring to the very small size of his house, he says, '**if I'm going to downsize, how am I going to downsize from here?**'.

Overall, Peter takes a positive attitude to his financial circumstances: '*I've got no ambitions to travel the world*'.

4 Key Themes

This section summarises the key themes which emerged from the household case studies. The themes highlight the consistencies between household experiences and illustrate the relationship between energy use, energy costs and household health and wellbeing. These themes may assist service providers, energy retailers and regulators, and policymakers across other sectors to:

- understand the layers of complexity in people's lives that contribute to financial hardship;
- identify further areas for research; and
- develop strategies that help secure affordable access to utilities and energy efficient homes for financially constrained households.

Vulnerability in sole adult and sole parent households

'It's just not a good way to live'

Sole adult or sole parent households on low-incomes reported experiencing ongoing stress and/or anxiety associated with paying their utility bills alongside other regular and unpredictable expenses. Another participant, now partnered, remained financially burdened by her time as a sole parent. Some participants' were providing financial support to children who were over 18 but not yet financially independent. The regular household bills had to be budgeted from one limited income (including electricity, energy, water, rates and home insurance (or rent), internet, telephone). Several participants were currently, or had been, responsible for the care of others during ill-health or advanced age and this had impacted their capacity to do paid work, maintain a regular income, and afford rising utility costs.

The older participants owned small, older houses bought much earlier in their lives or inherited from their parents. The maintenance these homes needed was unaffordable, particularly on a single income. The sole parents were all women juggling financial stresses alongside the day-to-day practical and emotional challenges of caring for children without assistance from another adult. Most faced difficulties returning to paid work such as: poor physical or mental health; reduced employment opportunities and lower pay due to time out of the workforce, limited employment opportunities for older workers; and/or difficult coordinating parenting responsibilities (such as transporting children places) with available paid work hours. Where possible, parents sought to improve their chances by working voluntarily.

Lack of access to affordable energy efficient housing

'As long as they give you a place to live'

One of the reasons households were vulnerable to health, wellbeing and financial impacts from rising energy prices was limited access to energy efficient housing and appliances. Low-income home owners had been unable to spend money on improvements such as insulation and energy efficient appliances. Those living in public or private rental properties felt their housing choices were limited and that they had little or no capacity to get home efficiency improvements made to their homes. Even where health was clearly at risk, such as with cardiac conditions, affected households found it very difficult or were unable to access air conditioning which was especially important where lack of insulation, shading, sealing and controllable ventilation resulted in very high indoor temperatures during hot weather. Some households relied on

inefficient portable air conditioners. Lack of access to energy efficient housing increased the energy households used to heat and cool the home.

Some households had old and inefficient hot water systems, only one had a solar hot water system, and none had solar electricity. Current or previous government programs to improve the energy efficiency of homes had not reached or been accessible to these financially vulnerable households. One household had sought more affordable and efficient housing outside of Melbourne but this had resulted in reduced employment and pay opportunities and high travel costs for the family.

Household health and energy consumption interconnected

'You should always have enough money to keep yourself warm'

Almost all interviewed households either had health issues that increased their use of heating and/or cooling, or would have benefited from using (more) heating and/or cooling. Several research participants were experiencing health issues which caused heat intolerance and created a need for home cooling, but were apparently not eligible for the Medical Cooling Concession (e.g. cardiac conditions, Hashimoto's disease). Affected households that had access to cooling had expensive electricity bills and/or tried to limit their use despite health impacts or discomfort. Many participants used public air conditioned places such as shops and libraries to manage home electricity costs or their lack of access to home air conditioning. This strategy was not always suitable due to health reasons or could result in unbudgeted expenditure. Some participants hoped to have air conditioning installed in the future to reduce their symptoms and discomfort but would potentially face unaffordable electricity bills.

Poor health contributed to some participants or their dependents being home and sedentary throughout the day (e.g. recovery from surgery, injuries or depression). This increased their use of heating and/or cooling and also energy demand from lighting and other appliances. Restricted movement as a result of musculoskeletal problems also increased energy use, for example by preventing use of the washing line and creating reliance on a clothes dryer.

Two households lived in draughty older Melbourne homes but chose not to use any heating in winter due to energy costs. In addition, two participants went to bed early in cold weather to reduce heating use. While some households are resilient in cold weather, avoidance or under-consumption of heating can have negative health, wellbeing, and social outcomes⁷. Importantly, the households who avoided using heating would have preferred their homes to be warm in winter. Access to home heating can be especially important for health in older age and during illness, and when living in older, poorly designed and ineffectively insulated homes.

⁷ Cornwell, A, Hejazi Amin, M, Houghton, T, Jefferson, T, Newman, P & Rowley, S 2016, Energy Poverty in Western Australia: A comparative Analysis of Drivers and Effects, Bankwest Curtin Economics Centre, Perth.
Liddell, C & Morris, C 2010, 'Fuel poverty and human health: a review of recent evidence', Energy Policy, vol. 38, no. 6, pp. 2987-97.

Trade-offs to keep utility bills paid

'What about need as opposed to want?'

Energy and water bills and uncertainty about rising energy prices worried participants and they looked for ways to minimise expenses. Some were fearful of what would happen if they fell behind on their bills without any savings or foreseeable ways to improve their financial situation, so they prioritised payment of utility bills to 'stay in control' and avoid exacerbating mental health issues. Others were frequently stressed by overdue bills.

As well as restricting their use of heating and cooling (see previous section), households managed to pay utility bills by going without other things that could be important for health and wellbeing. Households spoke of the ways they weighed up 'needs' versus 'wants', including going without a car, restricting social activities that cost money, restricting cooking, and eating food which was less healthy than they wanted because it was available free or cheaper. Some could not afford items important for their children's health and wellbeing such as school books and participation in sporting activities. For those who owned homes, maintenance needs were often ignored but caused worry as their home deteriorated. In addition, after appliances broke down they were often deemed 'non-essential' so as to avoid the costs of replacement, repair and future energy consumption.

One household insisted on having the mains gas disconnected in the hope this would enable her to afford to pay her electricity bills. This strategy to avoid high gas supply and usage charges risked exacerbating financial vulnerability by increasing reliance on electric heating and cooking. In addition, if the electricity was disconnected the occupants were at greater risk of adverse health and wellbeing impacts. By prioritising payment of utility bills, the other households had all avoided being disconnected from electricity or gas supply. Most had not been in utility hardship programs. As such the impact of utility costs and financial stress on these vulnerable households is far less likely to gain the attention of policymakers.

Energy sector not facilitating consumer trust and engagement

'I just thought never, ever again'

Only one householder actively engaged in the energy market on a regular basis. She had strong negotiation skills gained during her working life and was now retired without extensive responsibilities caring for others. However, most participants did not trust there would be a good outcome from trying to find cheaper tariffs. Past efforts had often resulted in poor outcomes – such as receiving bills from two retailers at once or having switched and then found out the new tariff cost more. Others had heard about concerning experiences from trusted friends, acquaintances or family members. The complexity of comparing offers (including differing discounts and base rates) and high-pressure sales tactics had contributed to people having made unsatisfactory switches in the past and being reluctant to engage with the energy market again. Several had been attracted to high 'discounts' which disappointed when they were only applied to usage charges, were missed due to inability to pay on time, or were not applied because the household paid upfront in instalments. Some households believed that energy costs are similar regardless of the retailer and tariff. Without confidence that switching would be advantageous, the time required to compare tariffs was not felt justified.

Participants expressed feelings of frustration, anger, disadvantage and/or powerlessness as an energy consumer. Some felt that the level of research and time required to understand tariffs and their rights was

unreasonable. Participants who had minimised their energy consumption were frustrated that fixed supply charges prevented them from reducing their bills sufficiently to fit their one limited income. Some felt it was unfair to be charged extra for paper bills or payment in cash when electronic methods did not suit their filing or budgeting methods, or where they did not have easy access to computers and internet.

Communicating with call centres had sometimes been unproductive or upsetting and people were reluctant to engage again, particularly when experiencing significant stress in other parts of their life.

Vulnerability to financial shocks

'You're only one drama away from slipping'

Households juggled a range of strategies which (in most cases) had enabled them to keep their electricity and gas connected. Some carried significant debt from earlier in their lives due to use of credit cards or redrawing from their home mortgage to pay for rent, living and other costs. The impact of debts on credit ratings and their future concerned them, as did money owed to friends and family from informal loans used to pay bills.

Most of the households had received assistance from community organisations for basic living needs such as meals, vouchers for food or other household costs, grants, showers, advice (including legal) and more affordable rent. Some mentioned feelings of shame associated with receiving community and government support and several participants volunteered with local organisations. Household costs were also reduced by using free local council services and facilities. Several households had accessed the Utility Relief Grant and one had used the No Interest Loans Scheme to buy an efficient heater. Participants were highly appreciative of the support they received from community organisations and its important role in helping them manage financially and emotionally but the assistance these organisations could provide was limited and dependent on ongoing funding.

All participants had little or no financial buffer to respond to unexpected costs in the future. The importance of local friendships, shops, community facilities and events accessible by walking or public transport, meant that older participants who owned homes were reluctant to sell and move, despite their discomfort in seeing their homes deteriorate. Opportunities to 'downsize' were limited by already having very small, modest homes and lack of affordable alternatives in their local area.

Participants had few remaining options to accommodate future financial shocks, particularly where health issues or age meant they were unlikely to be able to boost their income. Out-of-pocket expenses for medical treatment, vet bills for pets (which were important for wellbeing especially in sole occupant households), legal costs, and unavoidable home maintenance were some of the unexpected expenses that had caused financial shocks in the past and were likely to recur in the future. With homes and appliances already run-down, unavoidable but unbudgeted expenses were inevitable. Participants faced further health problems as they aged and reduced mobility would hinder their ability to access warm or cool spaces beyond the home, while some of the broken appliances (such as heaters) would eventually need repair or replacement. The prospect of further increases in energy and water costs worried participants, as did the possibility of reductions to social security benefits and Medicare coverage of health expenses. Precarious financial situations caused anxiety and other health impacts as participants worried about their ability to maintain and find new strategies to 'hold on' financially.

Appendix A: Participant Demographic Details

No.	Age Group	Country of Birth	Years living in Australia	First language	Years living in home	Occupancy Status	No. of dependents living at home	Work status	No. of home occupants in paid work	Type of work (current or former)	Highest level of education	Concession type	Annual household income (gross) ⁱ
1	30-39	Australia	NA	English	4	Public Rental	5	Not in paid work	0	Childcare	Year 12	Pensioner Card	\$20,900-\$41,600
2	50-59	Australia	NA	English	25	Own home	0	Not in paid work	0	Mechanic	High School	Health Care Card	\$13,000-\$20,800
3	50-59	Australia	NA	English	3	Public Rental	1 (part-time)	Not in paid work	0	Nurse	Tertiary	Pensioner Card	\$13,000-\$20,800
4	40-49	Australia	NA	English	14	Own home	1	Part-time	1	Architecture	Year 12	Pensioner Card	Not provided
5	40-49	Australia	NA	English	7	Co-op Rental	1	Not in paid work	0	Hospitality/Admin	Tertiary	Disability Card	\$20,900-\$41,600
6	50-59	Australia	NA	English	25	Own home	2	Not in paid work	0	Education	Tertiary	Pensioner Card	Not provided
7	60-69	Australia	NA	English	32	Own home	0	Retired	0	Public service/Retail	High School	Disability Card	\$20,900-\$41,600
8	40-49	Australia	NA	English	< 1	Private Rental	3 (+1 part-time)	Part-time	2	Midwifery	Post-graduate	Health Care Card	\$104,100-\$156,000
9	80-89	China	13	Mandarin	5	Public Rental	0	Retired	0	Pharmacy assistant	NA	Pensioner Card	\$13,000-\$20,800
10	70-75	Australia	NA	English	75	Own home	0	Retired	0	Delivery driver	Incomplete high school	Pensioner Card	\$20,900-\$41,600

ⁱSome households report income based on what they receive from Centrelink, e.g. after Centrepay deductions, NILS repayments etc.

Appendix B: Interview Questions

Introductory questions

Can you tell me a bit about yourself or your household?

Does anyone have any medical conditions or disabilities which increase energy use in your home?

Is there usually someone home or do you/others have regular commitments outside the home?

Energy and water bills

Do you have both gas and electricity bills or just electricity? Do you have any solar panels?

Would you say your energy bills are large? Why do you think your bill is large/small/other?

Do you feel you have control over how much energy is used in the home? By you, by others? Why/Why not?

About how much does your electricity cost (each month or each quarter)?

About how much does your gas cost (each month or each quarter)?

About how much does your water cost (each month or each quarter)?

What sort of strategies do you use to keep the energy and water bills paid (on time)?

Have you ever been disconnected in the past?

If yes

Are you managing to pay your bills on time now?

Does falling behind on the bills worry you? What sort of other effects can it have on your family?

Can you tell me a bit about being disconnected?

Are there things you do now to avoid being disconnected again?

Is there anything you or your family go without to keep the energy bills paid?

How important would you say it is for you to be able to pay the energy and water bills on time? Why? What happens if you don't?

Are the energy bills a higher priority than some other bills or costs? Which ones?

Do you think your or your family members' health or happiness is affected in any ways by energy or water bill costs?

Do you receive paper bills or electronic bills? If electronic, do you still monitor your energy bills as much as you did when you received paper ones? Who sees, reads the bills now? Who pays them?

Do you have automatic payments of bills, e.g. regular direct debit or Centrepay? If yes, how this affected you? Do you conserve energy/water any more or less as a result of making smaller, more frequent bill payments?

Do you do anything to track how much energy is used in your home or how much the bills are?

The home

Do you know if your home has any insulation? If yes, what/where is it?

Was the insulation there when you moved in or did you arrange it yourself?

If no, have you wanted or tried to get insulation? What prevented it happening?

Are there energy or efficiency improvements that have been done to the home since you moved in? What are they? How did they come about?

Did you notice these changes have any effect on your energy bills? Your comfort?

Are there any other improvements to your home you would like to make? /What are the 3 things which you would most like improved in your home?

What is preventing these from happening?

Do you know much about ways the home can be improved so that it uses less energy or water? What sort of things do you think would help? Do your windows have curtains, blinds or some other type of covering?

Are they sufficient?

If renting, did you ever ask your landlord/housing provider to improve or fix anything in your home? What happened?

Would you ask your landlord to install a more efficient heater or cooler / provide better window coverings / install insulation? If no, why not? If yes, do you think you will anytime soon?

Thermal comfort - heat

What is it like in your home on very hot days? How uncomfortable is your home?

What things do you (and others) do to try keep cool? What appliances do you use?
How are your children/other family members affected by the heat?
Do you think this affects your/your family's health in any ways? Happiness?
Have you or any other household members ever become unwell at home on a hot day?
If have A/C, how much do you run the air conditioning?
If A/C, is it ducted or individual room units? Can you cool a small area only and is this OK?
Do you ever leave the home because of the heat? If yes, where do you go?
Do you have pets that are affected by the heat? What do you do for them? What about in winter, how do they stay warm?

Thermal comfort - cold

Thinking then of colder times of the year, how do you manage?
Do you experience much discomfort from the cold in winter? If yes, can you tell me a bit more about why you are uncomfortable.
How are your children/other family members affected by the cold?
What sort of heating does the home have and how/when you use it?
Is your heating ducted or individual room units? Do you heat a small area only?
Do you feel comfortable using the heating when you need it? Do you limit your heating use because of energy costs? If yes, in what ways?
Do you ever go somewhere else because it's warmer than your own home? Where?
If money wasn't an issue, would you use the heating or air-conditioning more (or get it installed)?
When the weather is very hot or very cold, does this cause any disagreement in your home?

Water and other appliances

Do you know what type of hot water system you have?
Are you concerned about hot water use and costs? If yes, what do you do about this?
Do you restrict water use in any ways? How?
Do you or family members have less baths/showers than you would like to?
Do concerns about energy or water use affect the way or how often you wash up dishes?
Do you have dual flush toilets or single flush?
Would you say you can afford to do as much clothes washing as you need to?
Do you limit your use of lighting to reduce energy bills? If yes, what do you do? Do you ever sit in the dark or go to bed early to reduce the use of lights?
With your efforts to stay on top of your energy bills, does this affect how much or how you cook?
Are you familiar with the term 'standby power'? Would you say there is much standby power used in your home? Why?

Supports / other strategies and their effects

Do family or friends ever help you out with the energy bills? Or other costs you have?
Do you manage to pay your rent/mortgage on time? If no, why not?
Do you have, or have you had, and debts to keep your energy or household bills paid?
If yes, what sort of effects do these debts have on you/ your household? How do they make you feel?
Do you ever get help from charities or other organisations for your household costs? Which and from who?
Where have you heard about these things?/Where would you go for this type of information?
Do you receive any concessions on your energy or water bills? What are they? On your water bills?
Have you checked in the last two years that you are definitely receiving these discounts? Whether you are eligible for any more?
If eligible, do you receive the Medical Cooling Concession?
Do you know how to find this type of information? Who would you ask? Where would you look?
Does your household compare energy offers? When did you last switch/compare? If not, why not?
Have you heard about or accessed the Utility Relief Grant?

Conclusion

Are there other things you think would help your family be more comfortable (or healthy) at home?
Are there any other things that would help you with your household finances?
Is there anything else you would like to say, or anything you would like to ask?