

A review of the *Electri-FAIR-cation* program

The University of Melbourne Social Science Research Report

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About the Life Course Centre

The Australian Research Council Centre of Excellence for Children and Families over the Life Course (Life Course Centre, www.lifecoursecentre.org.au) is a national research centre investigating the critical factors underlying deep and persistent disadvantage to provide new knowledge and life-changing solutions, for policy, service providers and communities. The Centre is administered by the Institute for Social Science Research at The University of Queensland and is a collaboration with the University of Melbourne, the University of Sydney and The University of Western Australia as well as leading international experts. It is supported by key Australian government and non-government organisations and community, business and philanthropic partners working at the front line of disadvantage.

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1. Summary

The Electri-FAIR-cation (EFCN) program was a coordinated household electrification initiative in Morwell that aimed to transition residents from gas to electric energy while prioritising social fairness and equity. The program provided fully funded home upgrades - including solar panels, insulation, draught-proofing, and the installation of high-efficiency appliances like reverse-cycle air conditioners (RCAC) and induction cooktops - to participants, many of whom were experiencing financial hardship or health-related vulnerabilities. In this way 'Electri-FAIR-cation' sought to move beyond simple hardware installation, and this research gathered deep insights of customer's experiences of electrification.

Critical success factors

The EFCN model proves that technical upgrades and financial assistance alone are insufficient for vulnerable groups; success requires a human-centric approach led by trusted intermediaries. Not-for-profit organisations like the Gippsland Climate Change Network (GCCN) and Morwell Neighbourhood House (MNH) provided the essential bridge between energy systems and households lived experience and everyday practices.

- Dedicated coordinator removed complex decision-making burden from households
- Trusted local intermediaries built community confidence in the program and electrification process

Program outcome	
Satisfaction rating	9.5/10
Thermal comfort	Significant improvement
Energy bills concerns	Reduced
Energy-rationing behaviour	Eliminated for most participants

When financial and structural barriers are removed, so-called 'hard-to-reach' demographics are eager to participate in the renewable energy transition.

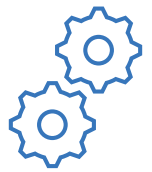


Trust and intermediaries drive recruitment

- Local organisations (GCCN & MNH) and neighbour recommendations overcame scam concerns
- BUT reliability worries limited program recruitment

Program coordination reduces friction

- A dedicated coordinator removed decision-making burden and managed end-to-end complexity
- Participant satisfaction averaged 9.5/10



Improvements in comfort and bills

- Thermal comfort improved significantly, especially in winter
- Four of seven perceived bills to be lower, BUT three reported "about the same"

Vulnerable households benefit most

- Low-income renters and those with health issues participated and benefited
- BUT vulnerable households, particularly rental properties, were the most difficult to recruit



Program unlocks household electrification

- Without the program's free offer and coordination, most households would NOT have electrified
- Successful scaling requires replicating coordination expertise

2. Research Design

Goals

- **Amplify Customer Voices:** Centring the perspectives of those often underrepresented or marginalised in energy policy.
- **Identify Effective Supports and Gaps:** Determining precisely which interventions work to improve future program design.
- **Ground Policy in Lived Experience:** Ensuring equity challenges are addressed through the lens of actual residents.
- **Build Empathy among Stakeholders:** Helping decision-makers understand the human impact of energy transitions beyond the data.
- **Shift the Narrative:** Moving the focus from technical feasibility to practical and social fairness.

Methodology

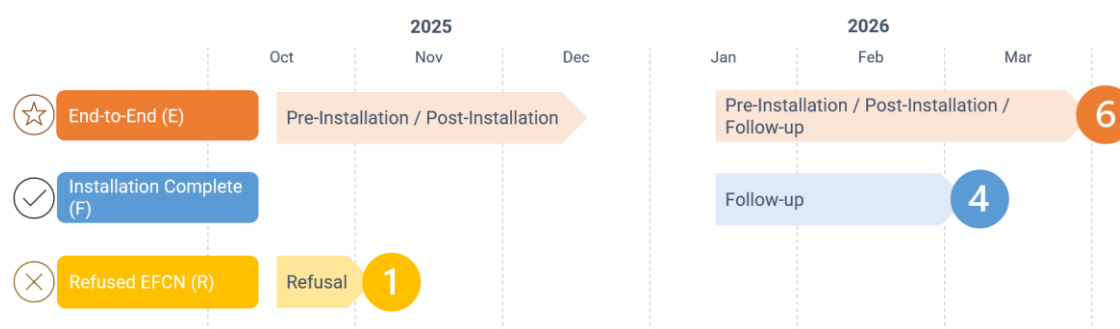
The study utilised a mixed-methods design, incorporating longitudinal surveys and one-on-one semi-structured interviews. This approach followed participants through three distinct stages:

1. **Pre-Installation** (recruitment and assessment)
2. **Post-Installation** (less than two months after installation)
3. **Follow Up** (more than two months after installation, with seasonal variation where possible).

In total 11 households were recruited. This is a small but rich sample with broad socio-demographic characteristics. Surveys were completed pre-installation and at the follow up stage. Where possible, interviews were undertaken pre-installation, post-installation and at the follow up stage, with some households only being eligible to be interviewed at the follow up stage (upgrades had already been installed at commencement of research). Household participants were reimbursed for their time at each stage. The project received University of Melbourne ethics approval. To ensure ethical rigour and protect participant privacy, all names used in this report are de-identified pseudonyms. The following participants were recruited:

- EFCN participants, households and landlords
- Households who refused the EFCN offer
- GCCN Project Officers and MNH personnel
- A tradesperson involved in the installations

Figure 1: Household sample groups and interview timeline



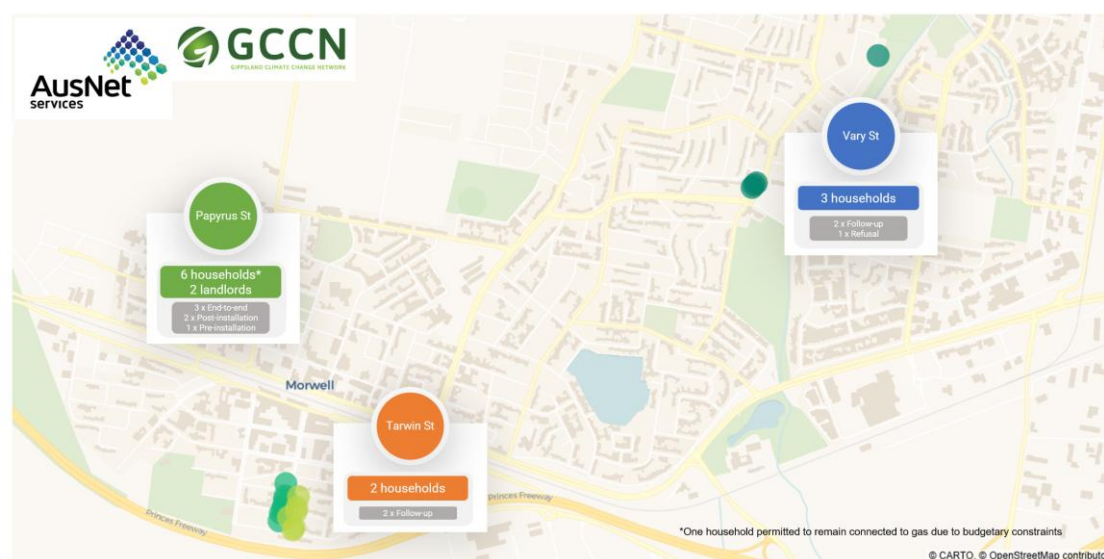
Surveys covered the following topics:

Pre-Installation	Follow Up*
Sociodemographic	
Energy use	
Thermal comfort, air quality, noise quality	
Appliances: replacements, preferences, benefits	Appliances: preferences
Hardship (energy and financial)	
Energy bills, energy prices	
Energy literacy	
Social networks	
Program expectations	Program satisfaction

*Where possible, seasonal differences and changes over time were considered e.g., thermal comfort and bills

The recruitment for the research phase of the project was concentrated across three primary streets in Morwell, reflecting a targeted geographic approach to recruitment to the program and therefore data collection. Papyrus St represented the largest cluster with six participating households, which included two landlords. This street also provided the most comprehensive data, with three households participating in end-to-end tracking, while the remaining households were captured at the post-installation (two) or pre-installation (one) stages.

Figure 2: Household and landlord recruitment by area¹



¹ Adapted from: *Electri-Fair-cation, Project delivery progress and insights* (AusNet, 2025)

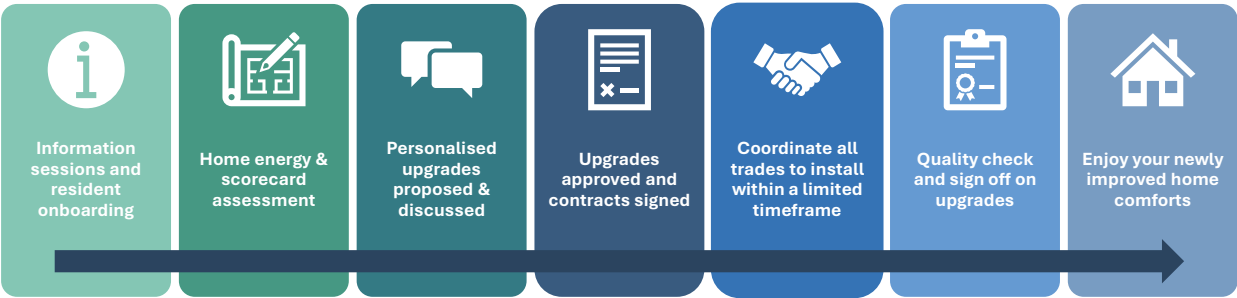
The EFCN program

The EFCN program aims to service around 60 households in Morwell and only specific households on identified streets were invited to participate. Selection of streets was based on technical criteria applied by AusNet, who were interested in understanding the impact of electrification on circuit substations. This would inform future planning for the electricity network. Whilst this kind of program could have been rolled out in a range of geographies; Morwell was selected as AusNet wanted to understand the needs of vulnerable or low-income households with a view to informing electrification policy and planning. AusNet formed a partnership with Gippsland Climate Change Network to deliver the

program. GCCN partnered with Morwell Neighbourhood House² to support delivery and assist with the recruitment of vulnerable households in the specific spatial areas.

The EFCN program offers eligible households comprehensive, fully funded electrification upgrades with end-to-end expert advice, coordination of trades and decision-making supports. The initiative eliminates out-of-pocket costs for participating households and provides coordinated service delivery through a trusted, local single-point-of-contact. Participating households receive upgrades that include removal of gas appliances, energy-efficient electric heating, cooling and cooking, as well as solar panels, insulation, and draught treatments.

Figure 3: The EFCN program customer experience³



² MNH is a community-based organisation providing local support services for individuals and families, and work to

advance the welfare of those within Morwell and our surrounding communities.

³ Source: EFCN Project Officer

3. The Households

The EFCN program successfully reached households often excluded from energy upgrades due to age, income, housing tenure, or geographic location. The demographic analysis below covers 13 individual survey respondents in 11 distinct households.

Household demographics

Profile of survey respondents	n = 13
Number of households	11 [^]
Number of households with complete data (Number of survey respondents)	7 (8)
Over 60 years of age	6
Female	5
Live with children	5
Born outside Australia	2
Speak language other than English at home	1
<i>Annual total (non-equivalised) household income</i>	
<\$40,000	2
<\$80,000	5
>\$100,000	2
Income support, household-level (Includes: Age Pension, DSP, Carers Allowance, Parenting Payments, WorkSafe Compensation)	5
<i>Housing tenure*</i>	
Private rental	2
Own with mortgage	4

Profile of survey respondents	n = 13
Own outright	5
Ongoing health conditions / disability	5
Care responsibilities as main activity	3
<i>Employment (under 60 years)</i>	
Full-time	5

[^]2 households had two members respond to the survey, considered independently for the purpose of demographics. Considered at a household level where appropriate.

*All dwellings are stand-alone

Indicators of financial hardship

Financial stress

Participants in this study had an average financial stress score of 0.8 (on a 0–7 scale). This is a slightly higher than the average score of 0.7 for households in a nationally representative HILDA sample of the Australian population (Wilkins et al., 2021).

Two households in our survey were identified as being under financial stress based on the HILDA Survey definition⁴, linked to lower age, tenure, the presence of a household member with a disability and unemployment.

⁴ Households face financial stress when they are unable to meet basic financial commitments because of a shortage of money. Our survey measured financial stress based on seven events which may have occurred in the previous 12 months, as used in the HILDA Survey. A household is considered to be in financial stress if two or more indicators apply. The seven events are: could not pay electricity, gas or telephone bills on time; could not pay rent or mortgage on time; asked for financial help from friends or family; were unable to heat home; went without meals; pawned or sold something; asked for help from welfare/community organisations.

Financial support

- **Income Support:** Five households received income support payments including Age Pension, Disability Support Pension (DSP), and Carer Allowance. Four of these households received multiple payments.
- **Rent Assistance:** Both participating rental households receive government rent assistance.
- **Energy Concessions:** Of the five households receiving income support payments, four were eligible for and utilised concession cards to manage high energy costs.

Baseline energy use and behaviours

Energy use and behaviour prior to EFCN	n =
Connected to mains gas	11
Solar panels installed (by intention)	4 (2)
<i>Appliance replacement in the last 5 years</i>	
Replaced a gas appliance with an electric appliance, utilising rebates	1
Replaced a gas appliance like-for-like	4
Very aware of limiting energy use	2
Aware of limiting gas use only	1*

*This household was less concerned about electricity prices and use due to solar panels

One household had recently replaced their gas heater with reverse-cycle air conditioning due to safety concerns:

"It was just really...old, and I was worried about...carbon monoxide"

Participant E6

Another household actively limited energy use to manage costs, particularly gas consumption, with one household noting:

"I do tell [my wife] to turn [the gas heater] on, but she just doesn't do it because it's too expensive"

E4 homeowner

Solar adoption was limited. Two households installed systems and accessed available rebates. Of the remaining two, one was unable to capitalise on daytime generation due to work commitments. The other household had solar installed but had not optimised their energy use. Only through EFCN engagement did they recognise the opportunity to shift appliance use to align with daytime solar generation.

4. Barriers and Enablers

Recruitment challenges

Recruitment to the program was challenging despite the generous offer of fully-funded upgrades worth approximately \$20,000 per household. Multiple strategies were attempted including direct mailouts, community partnerships, real estate agent engagement, door-to-door conversations, and community activation events (such as coffee van gatherings).

The coffee van engagement was relatively successful in one street but generated minimal response in another, suggesting that recruitment effectiveness varies by location and community context.

Relevant recruitment barriers included:

- A preference for independently upgrading their home over time
- Strong attachment to existing gas systems
- Structural obstacles in rental properties, including engagement challenges
- Life stage and health-related preferences (particularly among older residents)

The essential coordination role

A primary enabler of the program was the end-to-end support provided by the assessor and program coordinator. The scorecard assessment built immediate trust, providing knowledgeable advice that removed the decision-making burden from households, as one participant described:

A team from GCCN and MNH supported the coordinator, and it was the coordinator who was the key point of contact. They conducted a scorecard assessment which involved gathering high level information on socio-demographics; more detailed baselines on current energy use; and an evaluation of existing appliances. This information was analysed by the coordinator to develop appliance replacement options that aligned with household preferences and the budget envelope. This involved sophisticated

analyses of benefits and trade-offs for the household, rather than a one-size-fits-all approach. The coordinator was a qualified engineer and brought a great deal of experience and insight to this role.

"Well, I wouldn't have known what products to get at all and where to start, what direction to look at... I've never done anything like this on my own, so it was definitely helpful to have someone that knew what they were doing."

Participant F1

By acting as a single point of contact, the coordinator then managed the vetting of trades and installation schedules, turning what one participant (Participant F4) described as a "nightmare... Too hard for me" into a manageable, frictionless process.

"...if this program wasn't going ahead, there wouldn't be energy upgrades going on in this house...It was a refreshing thing"

Participant E1

Trust and the role of intermediaries

Trust as a precursor

Morwell is a community with a high level of knowledge and experience of the electricity sector. It has also been the site of significant restructuring of the electricity industry including retrenchments and decommissioning of plants, leading to scepticism of outside authorities. This was particularly evident with recruitment for the EFCN program. In some cases, the generosity of the EFCN offer was 'too good to be true' and that was a major cause of mistrust. An EFCN Project Officer revealed:

"It's just hard to get the foot in the door to have the conversation. Once you start talking and people are actually

listening...then it became a little easier... once you can convince them that this is not a scam..."

EFCN Project Officer

This made trust a key ingredient to the success of the program. Some residents expressed wariness of government 'one-stop shops' or corporate entities like AusNet the network service provider. Instead, GCCN and MNH provided a "friendly, relaxed space" for engagement. As an EFCN Project Officer noted, GCCN's "altruistic objectives" created a better association than a corporate contractor saying, 'we're going to give you free stuff'. Importantly, MNH's influence was concentrated in the area it is located, and was somewhat less effective in the Papyrus and Tarwin Streets.

"...[MNH] have the reputation in the area to be helpful. It's... a point of trust, which is a big factor".

EFCN Project Officer

"...because it was hosted at the Neighbourhood House, and they let me know it was not a scam either, in an immediate way."

Participant F1

Confidence in local tradespeople

The use of local, trusted trades was a critical factor in the success of the EFCN program, significantly enhancing participant confidence and program legitimacy. GCCN employed a rigorous vetting process, selecting experienced local professionals through face-to-face interviews to ensure a strong supply chain and adherence to program expectations. This local focus was appreciated by residents who valued the expertise.

"Telling people that we use local and trusted trades that we've had across, you know, the houses that we've used has been a, yeah, a crowd pleaser as well."

EFCN Project Officer

The visibility of tradespeople who were often seen working across multiple houses in the same street

also helped with recruitment and trust-building. The installation process itself was noted for its efficiency, with the bulk nature of the upgrades reducing transaction costs. The coordination role removed the stress of searching for and scheduling multiple contractors. Overall, the positive interactions with tradespeople ensured that most installations were completed smoothly within a short timeframe and left many households feeling more empowered and confident to pursue their own energy upgrades in the future.

"10/10... Fantastic... Would use the sparky again"

Participant E5

The rental triangle

The 'split-incentive' dynamic between tenants, landlords, and property managers remains a formidable barrier. The study revealed a lack of engagement from many real estate agents, who did little to promote the program to those in need. Renters face a severe lack of agency, operating under a 'reactive' rather than 'proactive' mindset; they frequently feel they cannot request upgrades unless an appliance is completely broken. Success amongst the renter participants relied on direct, positive landlord-tenant relationships rather than professional property manager intermediation. It was noted by one participant that renting households who were living in poor housing conditions could have benefited from the upgrades but there were barriers to landlord identification and recruitment.

The landlord perspective

Two landlords participated in the research and one of these had multiple properties enrolled in the program. One was quite hands-on, the other lived away from Morwell and visited only infrequently. Both were highly supportive of electrification, motivated by reduced maintenance costs, increased tenant satisfaction, asset value uplift, and environmental benefits. They expected a \$2 property value increase for every \$1 spent on upgrades.

While supportive of putting solar on rental properties, the landlords emphasised that the cost

would have to be recouped through higher rents, as rebates alone were insufficient. Mandatory roof upgrades (>\$20k) required for solar installation created significant upfront costs, and could inevitably lead to rent increases. Incoming rental and energy efficiency standards were viewed as onerous, potentially leading to future property sales.

Social housing: an exception with scale potential

For area level household electrification, clustered social housing presents opportunities to scale up electrification because there is a single responsible 'landlord'. Despite best efforts, there were institutional challenges to including social housing in the program. There was support for the upgrades from social housing renters:

"...there were a lot of houses where [the public housing tenants] were super keen to get upgrades with like solar and things like that. Many of them said that... "we've gone 10-20 years without receiving anything from... the department. The last thing we got was a gas heater.""

EFCN Project Officer

The reliability barrier

The fear of power outages and a lack of system resilience was a significant deterrent for potential households in the recruitment phase. This included households with health needs who preferred the reliability of instantaneous gas hot water to a tank that could run out, as well as households who feared not being able to cook in a blackout. There were differences in perception about the frequency and intensity of blackouts in the area. For those households who did get the upgrades they reported that outages were rare. When they did occur, residents utilised specific, resilient coping strategies:

- Using BBQs for cooking
- Utilising torches for light
- Visiting family members' houses
- Using back-up generators

Peer effects and local champions

Adoption was driven by social networks rather than traditional marketing. Three of four households not already on an electrification pathway joined EFCN because of their neighbours. 'Local champions' on each street – often neighbours who trusted GCCN – were essential in accessing more households and converting sceptics.

"So I definitely advocated for my neighbours and I let them know that I would, because they didn't know what the program was about."

Participant F1 (a local champion)

"[My neighbour] approached me and asked me if I was interested in getting involved, and I said, yeah, sure. I know [my neighbour] wouldn't be involved in anything that was in any way shonky, so there's no problems in that regard."

Participant F2 (approached by a local champion)

"...the people living on the street actually having those conversations is a huge benefit because you have people who work odd hours, shift workers, things like that..."

EFCN Project Officer

Visible street signs and trade activity further legitimised the program.

“Once they see one or two people doing it, seeing trades out there, they will get interested and try to get on board”

Participant E1

Figure 4: Visible street signs displayed on households receiving upgrades



5. Customer Journeys

The following household energy journeys illustrate diverse pathways, motivations and barriers to appliance replacement and electrification, revealing how individual circumstances and values, support systems and trusted intermediaries shape household energy transitions. All names are pseudonyms.

Vulnerable renters

Charlene and Frank are short-term renters on income support with significant health concerns and caring responsibilities. Their journey began with a failed gas system that left their home uncomfortably cold. A critical turning point was the installation of an induction cooktop, which directly accommodated Charlene's health needs: *"I'm happy I can now cook like not be exhausted... because I can use the oxygen when I cook."* Despite the improved thermal comfort, they remain anxious that these upgrades might trigger annual rent increases they cannot afford.

Energy use

- **Pre-upgrade:** Poor insulation and draughts made winter uncomfortable and energy-intensive; summer cooling demand minimal. Overall, fairly typical consumption for two people except for winter
- **Post-upgrade:** Insulation, draughtproofing, RCAC servicing has made a noticeable difference to cooling already – house is cooler, aircon needed much less and runs for shorter periods

Main likely benefits of upgrades:
Improved thermal performance, while lowering costs and safer cooking with oxygen tank

Charlene & Frank



Dependent on income support

 Lack of energy literacy

 Limited flexibility

 Motivated by affordability

"We got bonuses all around because we're just renters... I'm happy I can now cook like not be exhausted when I'm cooking, because I can use the oxygen when I cook. So that's been quite helpful."

Household

- Short-term renters; income support payments
- Health concerns
- Caring responsibilities; limited capacity to work
- Housing stress

"That stuff is... stuff that you imagine, dream about,... because we'll never own our own house ever"
 (Referring to solar and batteries)

Motivations

- Reduced bills
- Health concerns

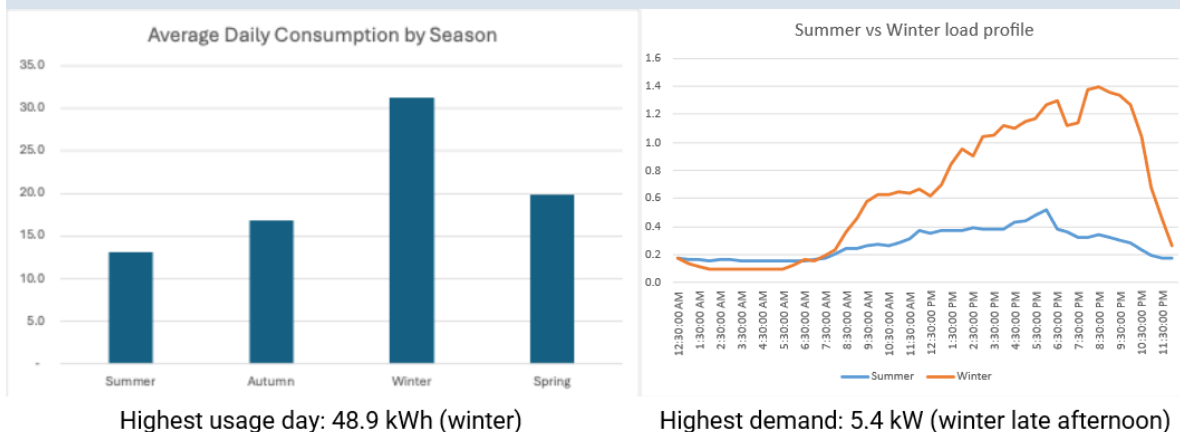
Barriers

- Financial constraints
- Lack of agency
- Low literacy

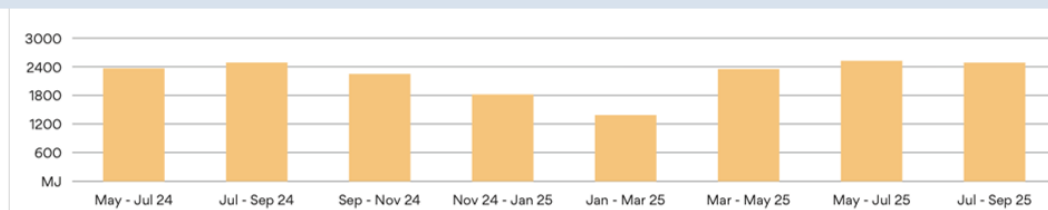
CHARLENE & FRANK'S ENERGY JOURNEY

	2022 onwards >	2025 >
APPLIANCE 	No home improvements or upgrades	EFCN Project: full home electrification
MOTIVATORS 	Appliances in working order / appliances not working poorly enough to warrant getting the landlord or property manager involved	Bill savings expected as already undertaking chores during the day Health concerns Improved thermal comfort in winter
ENABLERS 	Landlord visits the property regularly; often DIYs maintenance around the house Split incentive dynamics exist – C&F lack agency	Landlord onboard with the program, C&F had limited decision-making power Michael's role: "It was a big job...coordination would be pretty hard"
BARRIERS 	Concerned improvements will add to annual rent rises	"If it was someone knocking on the door, I don't think I'd believe. I'd think there was a catch to it." "I don't think I'll ever get my head around energy bills."

ELECTRICITY



GAS



Long-term renter

William is a retiree with high energy literacy who has lived in his rental for 16 years. He viewed gas as "old technology," famously stating: "We've got satellites and we've got phones... and we're still cooking on fire." Despite his knowledge, he could never have afforded these upgrades independently. The program enabled him to bypass the split-incentive barrier and 'limited agency' of the rental market, providing a "great idea" he otherwise could not access.

Energy use

- **Pre-upgrade:** Gas heating drives very high gas usage and cost. During winter, house is barely due to draughts and no insulation. Summer cooling demand minimal. Overall, electricity usage typical for household size.
- **Post-upgrade:** Insulation and draughtproofing has made an immediate difference.

Main likely benefit of upgrades:
Greater comfort for much lower costs,
especially in winter



William

High energy literacy

Positive landlord relationship

Motivated by affordability

Strong preference for electric appliances

"If this program wasn't going ahead, there wouldn't be energy upgrades going on in this house."

Household

- Retired; limited income
- Long-term renter
- Majority gas appliances

Motivations

- Reduced bills
- Safety concerns
- Environmental impact

Barriers

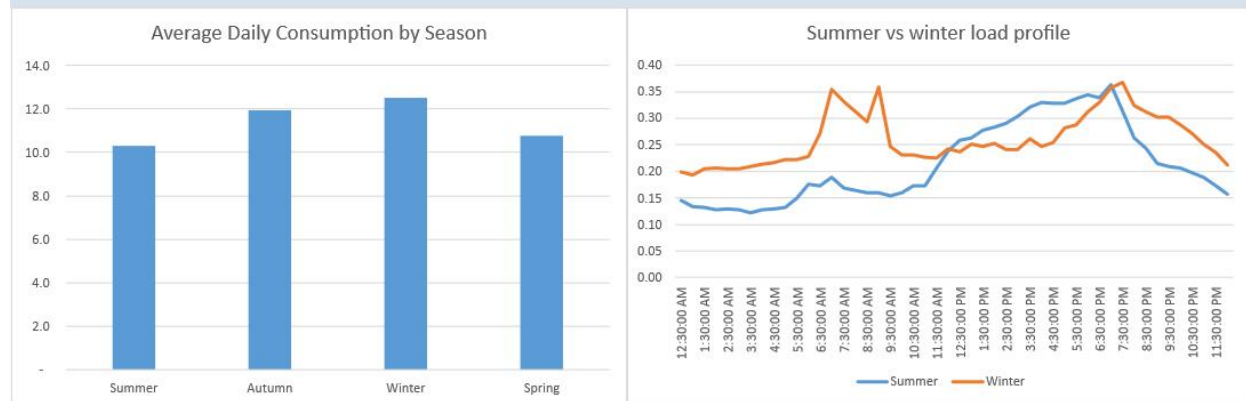
- Financial constraints
- Limited agency

"Gas is old technology... We've got satellites and we've got phones and they're all the smart things and we're still cooking on fire."

WILLIAM'S ENERGY JOURNEY

	~2009	~2009 onwards	2025-2026
APPLIANCE 	All-electric home Early heat pump and solar panels adopter	No home improvements or upgrades	EFCN Project: full home electrification
MOTIVATORS 	Prefers electric appliances Optimising solar panels Environmental: "Gas isn't clean energy"	Appliances in working order Self-maintains the house where possible	"I jumped straight in, I thought, this is a great idea. This will help the whole street. It'll just be a better thing."
ENABLERS 	Homeowner: "I just put solar panels all over the place...because it was mine" Financial capability whilst employed	Increased sense of agency with a positive landlord relationship Accepts living conditions: "There's no insulation in the roof or under the floor, but it's okay."	Trusted the information provided in the initial letter; all other information was clear – became a 'local champion' Decision-making power enabled by landlord
BARRIERS 	Rented the property: was unable to take advantage of own upgrades due to work commitments Forced to sell at a reduced margin	Relationship not strong enough to overcome the split incentive dynamic: "I don't want to put him under any expense because he's looking after me"	Delays in installation schedule due to additional requirements

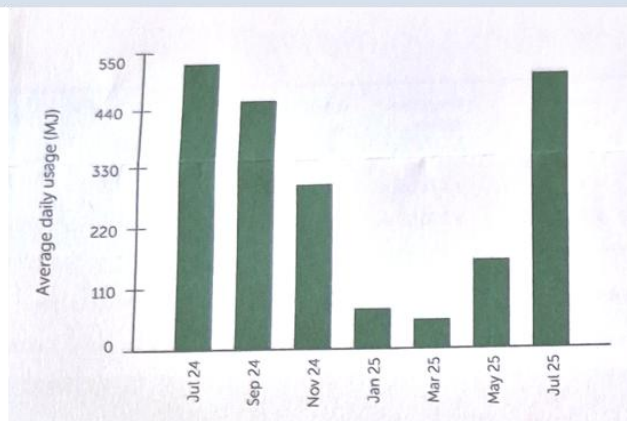
ELECTRICITY



Highest usage day: 33 kWh (early autumn)

Highest demand: 5.4 kW (winter late afternoon)

GAS



Typical winter gas bill (2 months): \$700+
(after ≈ \$140 concession)

Strategic renovator

Marko represents a single-income family from a Culturally and Linguistically Diverse (CALD) background. Drawing on his European roots, he finds fulfillment in DIY work and his veggie garden. For Marko, the program accelerated his plans for home liveability. Full electrification provided a *"tip off my shoulder"* regarding energy costs and delivered a healthier environment for his children: *"It's better that the gas is gone because there's more fresher, more cleaner air."*

Energy use

- **Pre-upgrade:** Gas heating in one room shapes gas usage during winter but rationing keeps consumption and cost down. Portable heaters moderated by solar. Energy consumption from electricity and gas networks is low for a household of four but not atypical for a small solar household.
- **Post-upgrade:** Insulation, draughtproofing and new RCACs will ease the pressure to ration usage.

Main likely benefits: Greater comfort all year round and reduced anxiety about energy costs

Marko



Strategic renovator
High energy literacy
DIY capability
Motivated by practicality & affordability

"The program is like crazy, unbelievable. It did actually help out a lot... The time spent and effort... It's a tip off my shoulder"

Household

- Single income family, two children
- CALD
- Energy-rationing behaviour

Motivations

- Reduced bills
- Streamlined appliances
- Health & safety concerns

Barriers

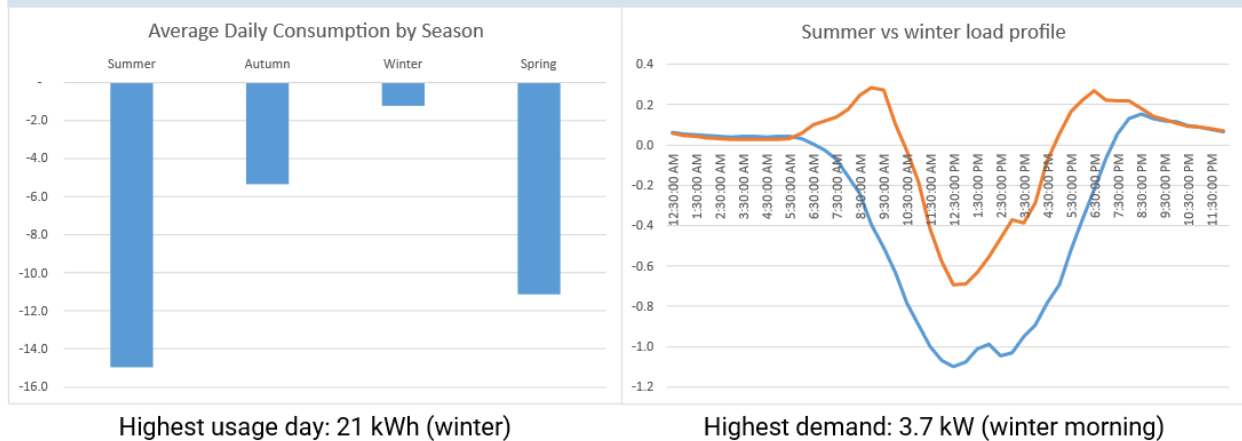
- Time constraints
- Financial prioritisation

"It's better that the gas is gone because there's more fresher, more cleaner air than the gas [appliances] that we had"

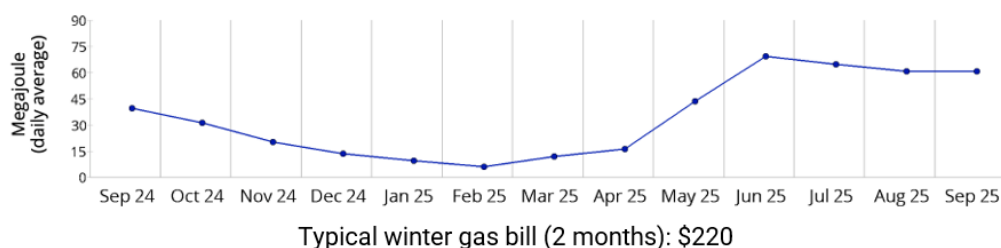
MARKO'S ENERGY JOURNEY

	2022 >	2022 onwards >	2025 >
APPLIANCE 	Installed solar panels	Home renovations and improvements	EFCN Project: full home electrification
MOTIVATORS 	"I just wanted to put on the solar panels because...I didn't have to pay that much electricity"	Improving the home for long-term livability Tending to the veggie garden: "I'm European. I gotta have some fresh tomatoes, potatoes, capsicums."	"I'm happy with...going electric and...in the near future when the better batteries come out, I'll probably...go with the battery as well."
ENABLERS 	Purchase of house in ~2022 enabled installation Took advantage of the government rebates	Technical capability and experience in building & construction Financial capacity	Accelerated plans to electrify – came at an opportune time Information provided was clear
BARRIERS 	Installed a relatively small system based on energy use at the time, but future-proofed for changes in electricity consumption	Self-renovating the house is cheaper and fulfilling, but finding the time to complete the list of renovations planned is challenging: "It's a busy time of life"	Initially sceptical towards fully funded upgrades and if they would benefit the household: "There's a catch to it"

ELECTRICITY



GAS



6. Program Impacts

The program's impact extends beyond energy savings, delivering significant improvements in quality of life and residential safety.

Overall Satisfaction: Household participants gave the program a 9.5/10 satisfaction rating, with overwhelming positive feedback on the end-to-end process. This included praise for the coordinator role, the scorecard assessment and the professionalism of local trades.

"I was ecstatic with the program. I was so grateful for the program... it really helped."

Participant F1

"I haven't come across anything that's been, like, uncomfortable or a drama, I'm pretty happy with the whole process."

Participant E2

Thermal Comfort: Upgrades predominantly eliminated 'uncomfortable' categories although the research timeframe did not allow for winter season effectiveness to be fully assessed.

Bill Savings: Four of seven households perceived bills to be lower more than 2 months post-upgrades. For the three who reported 'about the same' it was either too soon after their installations to tell or they had not yet switched to solar tariffs. One may have increased energy

consumption post-upgrades. We anticipate further bill savings to be possible especially in winter, but this requires further interviews.

Perception of changes in energy bills	n = 7
Much lower	2
Slightly lower	2
About the same	3

Energy literacy

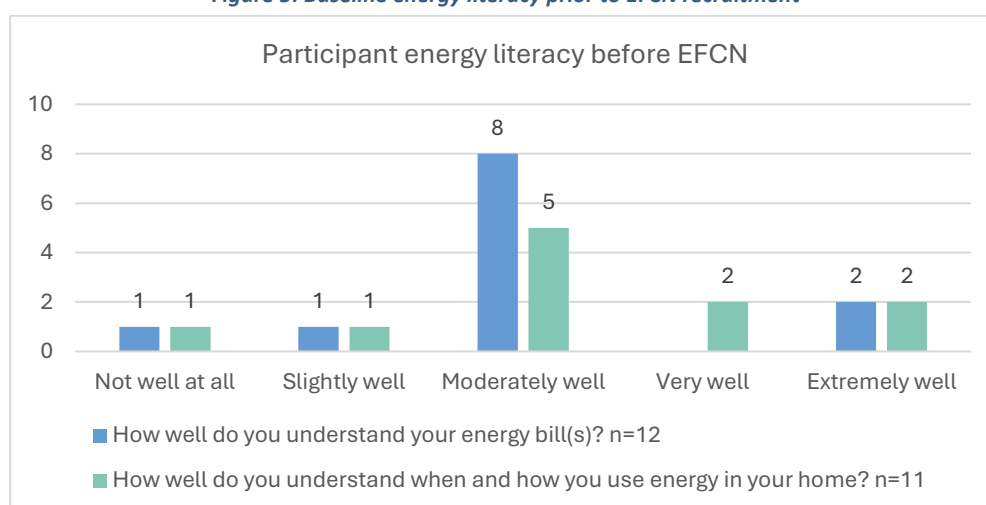
Overall, household participants had moderately high energy literacy at the beginning. Those with lower energy literacy had difficulties understanding the energy use and bills.

Since participating in the program five understood their bills better and six were more aware of their energy use.

"Solar has been a revelation to me"

Participant F2

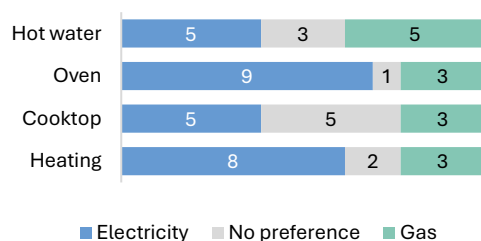
Figure 5: Baseline energy literacy prior to EFCN recruitment



Energy preferences

Preferences for gas over electricity, particularly for hot water, were overcome once the appliances were installed and used.

Figure 6: Energy preferences for different household appliances BEFORE EFCN upgrades (n = 13)

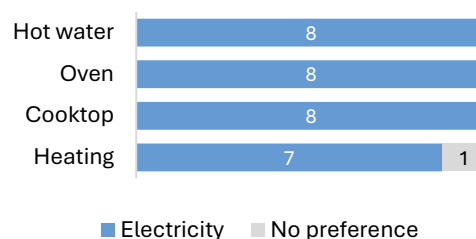


One household demonstrated strong emotional and experiential attachment to their central gas heating, based on positive associations in their family home. This participant declined the EFCN offer, with the prospective removal of their gas heating system serving as a primary motivating factor in that decision:

"Gas is more efficient [for heating] than the electric one"

Participant R1

Figure 7: Energy preferences for different household appliances AFTER EFCN upgrades (n = 8*)



*Complete data (before and after installations) received from 8 participants

Interviews revealed that changes in energy preferences occurred because of experiences with electrification upgrades

"The heat pump, I just can't get over how good that is."

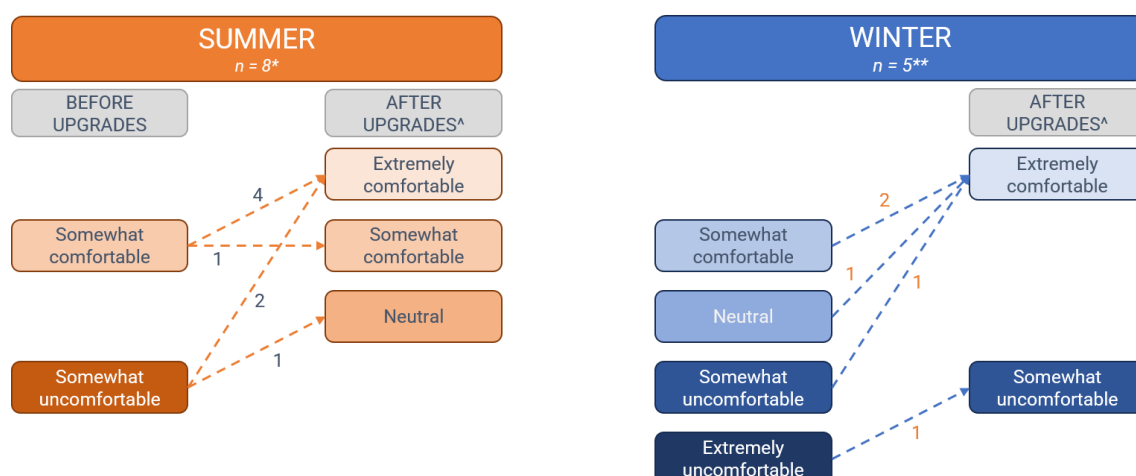
Participant F2

Households with new appliances meant they sometimes needed to adjust their behaviours and practices, which was generally smooth. Induction cooktops required more adjustment for four participants.

Thermal comfort

There were improvements in thermal comfort because of the upgrades from all but one participant for whom it stayed the same.

Figure 8: Household thermal comfort before and after electrification upgrades, by season



*Complete data (before and after installations) received from 8 participants

^At least 2-months after the upgrades were installed

**5 participants had their installations completed before/during winter

Overcoming hidden costs

The program's success was underpinned by its flexibility to cover 'hidden' costs that standard rebate schemes ignore. These essential enablers included:

Switchboard and mains upgrades	Necessary for supporting new electric loads
Roof repairs and plastering	Required to ensure the integrity of new solar installations. Where not too costly these were covered within the program with a co-contribution from the owner
Induction-compatible 'pots and pans'	Removing the final barrier to appliance adoption

"I got a really cool cook set out of it... They're really good. They're Baccarat ones... really, really expensive. I'm careful when I use them. Been looking at the instructions, don't want to destroy them, could never afford them."

Participant E2

"There's two properties... that were owner occupiers and they weren't able to afford any roof upgrades. We've come up with a solution to offer them smaller [solar] systems."

EFCN Project Officer

Willingness to pay

Half of the follow-up participants were willing to contribute to the cost to be part of the program. Of those who said they could not make a co-contribution two were renters and unable and two were retirees and financially constrained.

"Yeah, probably would have [been willing to contribute to the program] because we're always thinking about doing so eventually, you know, it makes sense on a domestic scale"

F3 homeowner

"That's going to get paid off through not paying my bills"

F1 homeowner

7. Conclusion

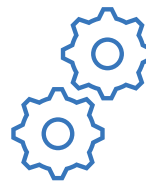


Trust and intermediaries drive recruitment

- Local organisations (GCCN & MNH) and neighbour recommendations overcame scam concerns
- BUT reliability worries limited program recruitment

Program coordination reduces friction

- A dedicated coordinator removed decision-making burden and managed end-to-end complexity
- Participant satisfaction averaged 9.5/10



Improvements in comfort and bills

- Thermal comfort improved significantly, especially in winter
- Four of seven perceived bills to be lower, BUT three reported "about the same"

Vulnerable households benefit most

- Low-income renters and those with health issues participated and benefited
- BUT vulnerable households, particularly rental properties, were the most difficult to recruit



Program unlocks household electrification

- Without the program's free offer and coordination, most households would NOT have electrified
- Successful scaling requires replicating coordination expertise