

# A SOLAR PROGRAM ACROSS DIVERSE BUILDING TYPES

## VPF ENERGY EFFICIENCY UPGRADES: HOUSING CHOICES AUSTRALIA CASE STUDY

### About HCA

Housing Choices Australia Group (HCA) is an independent, national, not-for-profit housing provider that delivers high quality, accessible and affordable housing for people who struggle to find a suitable home in Australia's challenging private rental market.

It operates in Victoria, South Australia, Tasmania, New South Wales and West Australia. HCA currently own and/or manage nearly 7,000 properties, over 1800 of them in Victoria.

### Motivation

The stress of high energy bills has always been a key concern cited by residents responding to HCA's annual resident satisfaction survey. Coupled with the organisation's desire to respond to climate change and improve the energy efficiency of its properties, HCA was keen to plan for future energy efficiency and solar projects that would provide its low-income residents with respite



from high electricity bills.

With money from the New Energy Jobs Fund, HCA had used the BOOM! platform to develop business cases on investing in solar on around 500 of its 1,400 plus owned properties in Victoria. It is now continuing energy assessments on its national portfolio via BOOM!, directly due to the impetus provided by the VPF program.

'So, by the time VPF funding came, we were ready with some energy efficiency assessment reports in hand,' says HCA's Assets Coordinator, Ravi Koneru.

HCA decided to target properties that the desktop business case assessment indicated would benefit the most from energy upgrades for the VPF grant round, using the funding to install solar on two apartment blocks and 64 standalone properties, and install energy efficient air conditioning in 16 apartments.

## Project overview

SOLAR INSTALLED IN:



2

APARTMENT  
BLOCKS



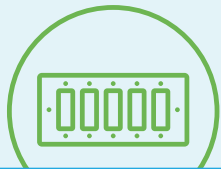
64

STANDALONE  
PROPERTIES



16 apartments

installed air conditioning



25 properties

upgraded switchboards

223kW

ANTICIPATED KW  
PRIOR TO TENDER

VS



228.6kW

ACHIEVED

Equivalent to avoiding



28,806 gallons

of petrol emissions\*

228 tonnes CO2

emissions saved per year

\*[epa.gov/energy/greenhouse-gas-equivalencies-calculator](http://epa.gov/energy/greenhouse-gas-equivalencies-calculator)

HCA had set aside \$192,000 for energy efficiency projects, with the VPF adding \$177,512 (48 per cent of the original VPF project budget, and 30 per cent of the eventual total project cost, including the Solar Homes rebates negotiated and facilitated by CHIA Vic and BOOMPower). The organisation was able to source matching Solar Homes rebates of \$206,848, enabling it to deliver an additional 41 solar upgrades.

## Impact

More than 140 residents benefitted from the project via a direct reduction in their electricity bills either as a result of the solar upgrades, or more efficient air conditioning units. **Verbal feedback from solar residents has been positive with some saying they have saved more than \$400 on their energy bills compared to the previous year.**

The community housing organisation itself is saving around 35 per cent on the electricity costs it pays for common areas in the two apartment buildings.

Additionally, the funded project has enabled HCA to upskill its employees about solar and develop procedures for future rollouts. It has shared this knowledge with the broader community housing sector to assist other organisations streamline similar projects, with HCA staff presenting to peers at a conference in South Australia, hosted by the Community Housing Council of South Australia in collaboration with BOOMPower.

**'The key achievement in these installations has been the ability to improve the thermal comfort and energy savings for our residents in complex multi-residential settings. Many residents on low-incomes and some with disabilities spend longer periods at home so energy costs are an important contributor to resident satisfaction.**

**HCA is committed to sustainability and the VPF co-contribution has enabled this project to stack-up and for pilot projects to proceed, where otherwise they might not have. The successful delivery of these projects has provided our Board with confidence to commit to wider initiatives on a national level. We look forward to working with the VFP, CHIA Vic and BOOMPower in the future.'** – James Henry, General Manager - Property Development and Asset Management

# Communication process

## Working with tenants



'Only once we had the money and a contractor ready to go did we communicate to the residents: "Your property has been shortlisted, and this is the day you're getting installation, and we will walk through the process from now what's the next steps."

'Once the assessments were done, and we had the money and everything was allocated, it took four to six weeks for the installation. Within that four to six weeks, we went to each area with the Housing Officer and Property Officer, and support workers if needed. We talked residents through the process, explained what it will be and how it will change their energy bills and energy efficiency, and what it means to them financially.'

In the apartment blocks, work was done both on the shared roof and in individual residents' homes. The HCA project team met with Property Maintenance and Tenancy Services staff to ensure they knew what was happening.

They then created a communications plan for each block, including posters and materials and face-to-face events like a barbecue or afternoon tea, where they could talk to the residents as a group and individually.

Coordinating the power outages was more difficult because it involved more people, Ravi says.

'You send letters to 40 people, 20 of them call you back to say they aren't available.'

'We learned we needed to give them plenty of notice... It's not just scheduling something like 10 days in advance or a week in advance. The other thing we noticed was that often people tore down the posters we put up in the common areas, so other people may miss out on the communication.'

'We ended up actually popping the letters underneath their doors to make sure they knew what's going to happen.'

Residents in standalone properties were contacted individually, with their Support Worker involved if relevant.

'Ninety-nine per cent of residents were happy. Nobody said, "I don't want the system". But there were a few people confused about whether they needed to change their retailer and some people couldn't understand how it affected them.'

'In some cases we asked the resident's support

agency to assist in explaining it to them, and for other residents, instead of overwhelming them on day one, we just stepped back and said, "Okay, we will come back to you in a few days".'

## Challenges for the organisation

### Staff considerations



Educating staff about the program and about solar and the short timeframe to deliver the large project, whilst managing their usual workload, was a challenge for the HCA team.

'It's new to everybody, the technology is new. And many of the team members within our office, including myself in the early days, had to start learning the new words like, kilowatts, megawatts, and about the inverters, panels and micro inverters. Then we had to try to convey the message consistently to the team members along with the residents and the support workers.'

'We've come a long way, and we are more confident now that we can go and explain the system to anyone in our office or any residents,' Ravi says.

## Challenges for residents

Some residents really struggled with communicating with their electricity retailer about their solar install, leading to delays of up to six months in them receiving the feed-in tariff.

Issues included being confused about the specifications of the system, such as the number of kilowatts. Language barriers and missing calls or visits from retailers were common problems. Supported residents depended on their support worker being available, which often caused connection delays.

In some cases, a fee was payable for electrical work to reconfigure the smart meter and despite HCA assuring residents it would reimburse them that fee, some residents refused to pay it and the organisation was unable to pay on the resident's behalf.

To overcome this issue, housing workers visited the impacted residents to explain again, in person, that HCA would reimburse them.

'That's the one big barrier for residents,' Ravi says. With residents being on extremely low incomes, they were literally unable to pay upfront.

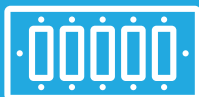
On the flip side, less than 15 residents have put in a request to be reimbursed. Whilst some residents declined to ask for a reimbursement of the retailers' fee because they understood that they would benefit from the savings in the future, Ravi believes many will have overlooked the fee on their bill as it would have been much lower than normal.

'Residents who were previously paying like \$40 a month or \$50 a month, all of a sudden have a bill for \$5 this month or even \$10 in credit. So, they haven't actually gone to the page two, page three, which eventually may have this extra line of cost.

'From an organisation point of view, we don't have the resources to follow up with each resident who has not asked to be reimbursed.'

## Learnings

### Switchboards and existing infrastructure



HCA's experience was that it was vital to include a contingency fund, with some properties requiring switchboard upgrades before solar could be installed. In three cases, other electrical equipment failed following the solar install and needed to be replaced.

'It's nothing to do with the solar as a technology, but because it's something actually added to that switchboard and metering system we have to send another electrician to check it because every time the safety switch drops, it actually cuts off the system. So, even though you don't spend any money on the switchboard, you may need to spend money on something else.

'There is always a 5 to 10 per cent deviation from the original cost you project at the time of tendering,' Ravi says.

'Also, don't communicate with residents too early; you don't want to raise residents' expectations that they will definitely be benefitting from an energy upgrade before the final decision has been made and the contractor has been engaged.'

**"The solar credit was \$152!!! Oh, my goodness gracious me :) Perhaps I won't have to pay for electricity again for a while?"**

**Bills are usually a big expense and not having to pay for electricity is absolutely superb and a big stress gone!"**

– email from an HCA resident.

## Input from CHIA Vic and

## BOOMPow

CHIA Vic's assistance in developing a funding application process for Solar Homes rebates for community housing organisations enabled HCA to maximise its VPF grant and increase the number of properties upgraded. BOOMPow, and the BOOM! platform enabled the energy assessments in record time, provided a pathway for aggregated procurement of suppliers with the other organisations, identified the optimum specifications, timelines and warranties for the solar installations and then evaluated the results of our project.

## Next steps

HCA is running education sessions for residents on maximising their use of solar, and other ways to reduce utility bills.

The organisation is planning to roll out solar to more of its property portfolio over the next seven to 10 years, utilising additional funding through Solar Homes as well as its own funds.

'We are using the learnings from this project and are actually building a database and a property pipeline for energy efficient upgrades, along with the normal upgrades for any refurbishments,' Ravi says.

Whilst the initial time and energy involved in this project was greater than anticipated, Ravi says the team now has procedures in place that can be used for future rollouts.

'It will save time from now onwards.'

## About CHIA Vic

The Community Housing Industry Association Victoria (CHIA Vic) is the peak body that represents the not-for-profit community housing sector in Victoria.

CHIA Vic works to support the growth of community housing as the most effective and efficient means of ensuring more disadvantaged Victorians can enjoy the dignity of safe, secure and appropriate housing.