



Solar Powered Social Housing

The Greens Solar Powered Social Housing initiative will provide solar power panels and smart meters to 30,000 social houses, to ease the cost of living on our most vulnerable and to provide a sustainable solution to our growing energy needs.

The WA government recently announced a solar-panel pilot program for public housing to install solar PV panels on 500 properties at a cost of \$1m. This is inadequate and underwhelming and lacks a long term commitment.

The Greens initiative will fit 1.5kW solar power systems and smart meters on an estimated 30,000 houses and duplexes owned by the Housing Authority or community organisations.

It will also provide \$15m worth of direct grants to the community housing sector to fit solar power systems on close to 7,500 houses the sector manages.

The Greens recognise the state government has a much stronger role to play in providing leadership in sustainability and improving community assets they manage. This program is an initiative that could form part of a long term structural change to improve our entire affordable housing system. It puts money back in the pockets of tenants through energy savings.

The initiative will:

- Reduce the cost of living for our most vulnerable families by an average of \$500 per year.
- Lower carbon emissions from energy supply by 74,000 tonnes of greenhouse gases per year.
- Reduce demand for another centralised power station.
- Encourage the development of WA's renewable energy sector and create the drivers to grow capacity across the electricity grid for renewable input.
- Cost \$68 million.

The current situation for public housing tenants

In Australia in 2010, 98% of tenants in Australian public housing and 93% in community housing were low-income households in the bottom 40% of household incomes. Social housing tenants are therefore disproportionately affected by increases in power and costs of living. Being renters and low income earners, they are also less able to purchase solar panels and other items that improve the comfort and sustainability of their homes.

Australian social housing is of the poorest quality and performance of all housing stock. About 65% of Australia's public housing stock was built before 1980, and is ageing and expensive to cool and heat. The average 3-star home costs \$2227 per annum to heat, compared to around \$1271 for a 5-star home.



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Social housing tenants are struggling to pay their power bills. Power prices in WA have increased 62% in the last four years. The Hardship Utilities Grant Scheme is a State Government scheme which provides assistance to people with financial difficulties so that their water, gas or electricity supply is not cut off. This reflects the fact that a large number of tenants have been unable to pay their electricity bills on time.

The UK Example

In 2011 the UK 'Solar Europa' group announced plans to provide 200,000 council houses with solar panels.¹ Its 'Council and Housing Association Solar Program' is a £1.2 billion (A\$1.8B) program that will see around 200,000 council and housing association tenants across the UK getting free solar panels installed on their homes. Over the next four years, the deal is expected to create up to 3,000 jobs for installation and maintenance teams all over the country. It could slash every tenant's electricity bill by up to 50%.

Wide sector support for this initiative

A scheme to reduce power bills and greenhouse gas emissions can expect broad support.

- A commitment by State Government for these installations is expected to be welcomed by WA solar energy manufacturers and installers, particularly to drive demand and foster development of the industry in regional and rural areas.
- The Conservation Council of WA has called for 1.5kW solar panels to be installed on homes across WA. This initiative for Solar Panels on Social Housing is likely to earn their support. Many environmental groups have been campaigning for energy efficiency and reductions in emissions.
- Organisations who advocate for tenants, such as Shelter WA, the Community Housing Coalition, and other groups in the community housing sector, want measures to reduce the cost of living for people on a low income.

Benefits

- Panels on 30,000 public and community house rooftops would generate the same as a 45MW power station.
- Panels on a house generate 6kWh/per day, which equates to 2.19MW hours per year.
- Panels generate a third of daily house energy needs.
- Annual production is 65,700 MW hours of energy, which represents a reduction of 74,000 tonnes of CO2 per year.
- The program generates employment and improves capacity to deliver solar power systems to everybody including those in regional areas.
- Behaviour change that reduces energy use. People learn to manage electricity more efficiently by making use of cheaper electricity when it is available in the off peak.

How the program would be rolled out

- The Department of Housing in conjunction with Western Power and Horizon Power would be responsible for administering the program.
- Tenders for supply – there could be three or four different installers in each region, including regional installers. The program contributes to building industry capacity and employment.
- Deliver first to highest priority, most vulnerable households.
- Complete program in under three years
- Most would be provided with a 1.5kW system.

Cost

- The cost would be less than \$2276 per house. This is based on an estimated cost of \$2000 for solar power panels and \$276 per smart meter per house.²
- The total cost of the roll-out to 30,000 public and community houses is \$68m.
- If we can make this much difference to our emission profile with such a simple programme, surely the State should make all efforts to facilitate this.

Calculating energy savings

- An average household uses 18kWh a day. The Greens initiative to fit 1.5kW solar power systems will produce 6kWh of energy a day per house, equating to 2.19MWh of energy a year for each house.
- 30,000 homes with 1.5kW PV solar panels will produce 65,700 MW hours of energy over a year. This equates to 74,000 tonnes of greenhouse gases that would otherwise be produced yearly from burning coal in a power station.
- In terms of the energy saving expected with the use of a 1.5kw solar system on a home, we have used average household use of 18kwh a day and subtracted the expected 6 kw hour a day such a solar system is expected to produce. Based on a standard tariff of 25c a kW hour an average household could expect to save \$547.50 a year on their power bills. This equates to a saving of around \$10.50 a week.

Definition of social housing

Social housing is rental housing provided by not-for-profit organisations, either government (public) or non-government (community). It includes:

- **Public housing:** State/Territory owned/leased and administered to provide affordable rental accommodation for the lowest-income 40% of the population.
- **Community housing:** rented to low to moderate income or special needs households, managed by community-based organisations that receive capital or recurrent subsidy from government.
- **State-owned and managed housing for Aboriginal peoples:** dwellings owned/managed by State housing authorities for low-to-moderate income households with at least one indigenous member.
- **Indigenous Community Housing (ICH):** dwellings owned/leased and managed by ICH organisations and Community Councils.

Facts

- The number of roofs is calculated on 12,193 free-standing public housing homes, 4,639 public housing duplexes and 19,917 housing units (counted as having one roof for every four units).³
- A further 7,700 community houses (homes owned by the community sector and rented to low-income earners) were included in the tally of more than 29,511 public housing and community housing homes
- 70% of WA public housing is in the city, 16.4% is in the inner regional, 9.9% is outer regional, and 0.8 is remote to very remote.
- 120,000 solar panel systems were installed across WA on a private basis in 2010-2012.

¹ The UK Solar Europa plans are available at <http://www.solarbuzz.com/industry-news/solar-europa-plans-council-and-housing-association-solar-program>

² Synergy charge \$276 to install a smart meter on an existing house. It is likely that with economies of scale this cost might be lower.

³ Housing Authority Annual Report 2011-2012