Australia's top electorates:

Wright
Mayo
Kingston
Grey
Fisher
Wide Bay
Wakefield
Longman
Braddon
Kennedy
Bowman
Canning
Pearce
Makin
Blair
Flynn
Richmond
Barker
Rankin
Port Adelaide
Fairfax
Dickson
Bonner
Oxley
Boothby
Petrie
Fadden
Moreton
Parkes
Forrest
Cowan
Lalor
Maranoa
Sturt
Tangney
Hasluck
Moore
Hindmarsh
Forde
Mcpherson
Hinkler
Fremantle
Lyne
Lilley
Adelaide
Mcewen
Ryan
Capricornia
Page
Flinders
Murray
Cowper
Indi
Mcmillan
Bendigo
Gippsland
Farrer
Corangamite
Gilmore
Groom
Gorton
Swan
Hume
Holt
Canberra
Paterson
Perth
Fraser
Stirling
Chifley
Charlton
Greenway
Macquarie
Mallee
Macarthur
Dawson
Eden-Monaro
McMahon
Mitchell
Dobell
Moncrieff
O'Connor
Durack
Griffith
Calwell
Herbert
Fowler
Robertson
Dunkley
La Trobe
Isaacs
Hunter
Wannon
Werriwa
Corio
Curtin
Aston
Calare
Ballarat
New England
Leichhardt
Shortland
Cunningham
Lindsay
Riverina
Berowra
Newcastle
Throsby
Casey
Hughes
Lyons
Gellibrand
Brisbane
Maribyrnong
Scullin
Blaxland
Mackellar
Deakin
Bruce
Bennelong
Chisholm
Menzies
Batman
Parramatta
Wills
Banks

The Solar Revolution in Goldstein

This publication provides a snapshot of the current progress of solar PV installations in your electorate, its rapid uptake around Australia, and gives an insight into the opportunities and the challenges for the future of clean energy.

Goldstein has
2,313
solar homes

Generating
5.8MW
of clean energy

Creating more than
15,500
jobs nation-wide

Investing
$17m
in solar power

Saving
7,228
tonnes of CO2

and saving
$1,295,280
on power bills

All in all, Goldstein now ranks:

133rd out of Australia's 150 electorates

NOTE ON FIGURES: These figures are estimates, based on an average 2.5W system size, and Clean Energy Regulator, Sunwiz, and Australian government data.

“It’s just the best thing I could do for my family”

—Alison, Sydney NSW

Alison recently changed to solar because it will provide her with more money to look after her girls in the future.

Rising installation rates

In Australia, there is now some 2,500MW of solar PV installed on one million of the nation’s rooftops—almost all of them households. Around $8 billion has been invested by Australian home owners in the last few years. This created 15,500 jobs.

More households want to follow. Even with the removal of some solar support mechanisms, the amount of solar PV is expected to increase to 8,000MW in coming years. That’s another two or three million households.

Why is this so?

Solar power is now cheaper than grid power

The cost of solar has come down sharply in the last few years and will continue to fall, making it attractive for households and commercial businesses to install rooftop systems.

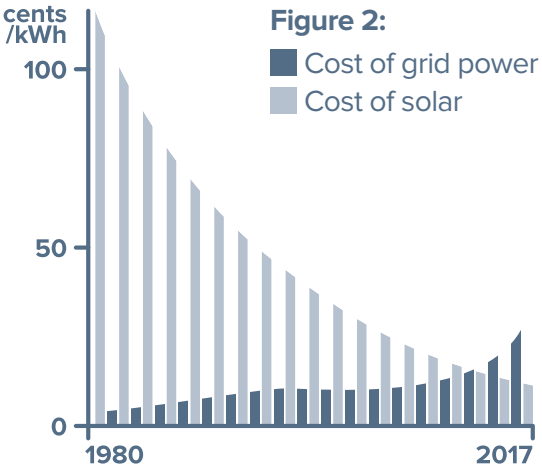


Figure 2:

Meanwhile, the cost of retail electricity will continue to rise, making solar even more attractive. This is a worldwide trend known as “socket parity”, where the cost of solar power is cheaper than electrons from the grid.

Solar: protecting consumers from rising prices

Macquarie Group says the progress of solar PV is “unstoppable.”[1] Not only is rooftop solar providing an option for households to reduce their own electricity costs, it is also helping to lower demand from the grid and

Figure 1

to bring down wholesale electricity costs. In turn, this is helping to reduce Australia's reliance on coal-fired electricity.

But the utilities and generators are trying to stop it. If more households produce their own energy, that means less need for retailers, generators and network operators.

So the incumbent utilities are acting to protect their business—labeling it "regressive," refusing connections, charging huge connection fees, changing tariffs, saying it is too expensive on the grid, and too difficult to absorb. They have used this argument to urge a dilution of the renewable energy target which has helped millions of Australians install solar.

Solar customers should not be penalised for trying to take back control of their power bills. If Australian consumers, businesses and manufacturers are to realise the benefits of cheaper prices, they must have the "right to connect" to solar and should not be hit by high connection fees.

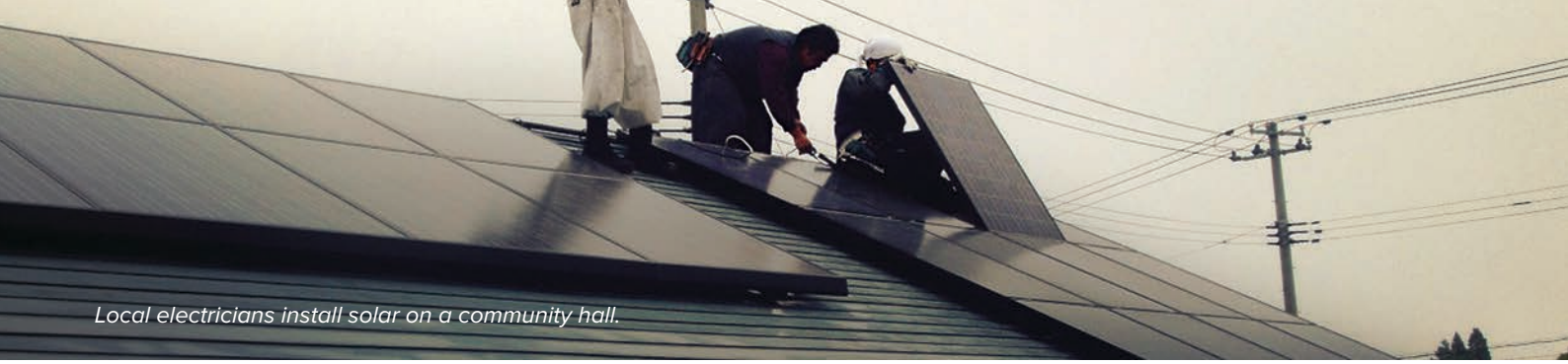
Falling behind with big solar

The cost of rooftop solar is already cheaper than the grid alternative, and soon the cost of utility (or large scale) solar will be cheaper than the fossil fuel alternatives as well.

> "This is a game-changer. Investing in solar will be a no-brainer for households"
>
> *—UBS Investment Bank*[2]

Australia is one of the leaders in rooftop installations and it should also be a world leader in big solar. But it isn't. Australia has only one 10MW utility-scale solar farm. By contrast the world's biggest solar farm, under construction in California, is 580MW.

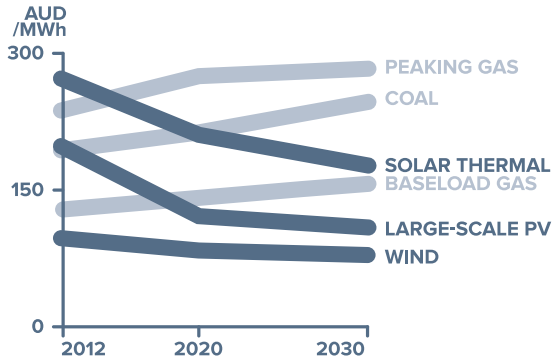
A recent analysis by Citigroup suggested that utility-scale solar could be cheaper than base-load coal and gas in Australia by 2017—it already is in many other countries.[3]



Local electricians install solar on a community hall.

But to get there, and to manage spiraling energy costs into the future, solar plants need to be built. Low costs are not just the product of cheap modules. They come from low cost financing, construction, maintenance and other know-how gained through developing projects.

Figure 3:



> "By 2020 large-scale PV should be significantly cheaper than burning expensive, export-priced gas"
>
> *—Bloomberg New Energy Finance*[4]

Policy continuity essential for managing energy costs

That's why policy measures such as the carbon price and the renewable energy target are important to retain.

They encourage utilities to think about new electricity generation in the same way we ask consumers to think about energy efficient appliances—ie. you pay a bit more up front but it costs much less over the long term. For the first time they also create a level playing field for power generation as the costs associated with pollution are factored in.

Institutions such as Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC) act to reduce the cost of financing for the first big solar projects. Once these are built, private financiers will follow, as they have in the Americas, Europe, Asia and Africa. For these reasons these institutions need to be continued.

References:

1. *"European utilities: German power system is broken", Macquarie Equities Research, January 2013*
2. *"The unsubsidised solar revolution", UBS Investment Research, January 2013*
3. *"Shale and Renewables: A symbiotic relationship", Citi Research, September 2012*
4. *"Renewable Energy now cheaper than new fossil fuels in Australia", February 2013*
Figure 1. *Data source: Australian PV Association, 2013*
Figure 2. *Data source: Energetics, February 2013 (cost of solar) and AGL Energy, April 2013 (cost of grid)*
Figure 3. *Data source: Bloomberg New Energy Finance, February 2013*