

Solar Apartments

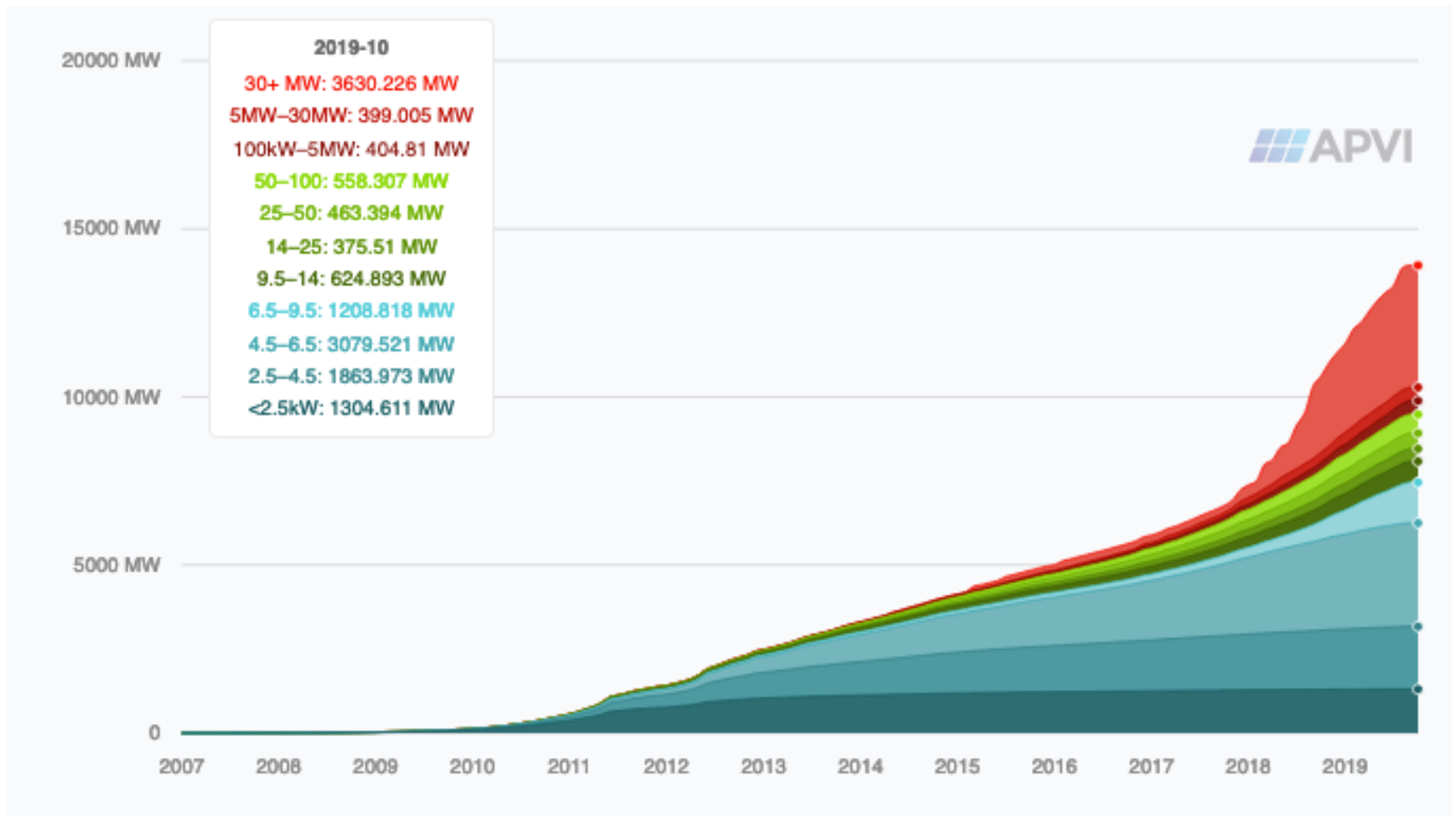
Waverley Council Webinar
June 2020

Mike Roberts

Collaboration on Energy and Environmental Markets (CEEM)
School of PV and Renewable Energy Engineering (SPREE)
UNSW Sydney

Australian PV Institute

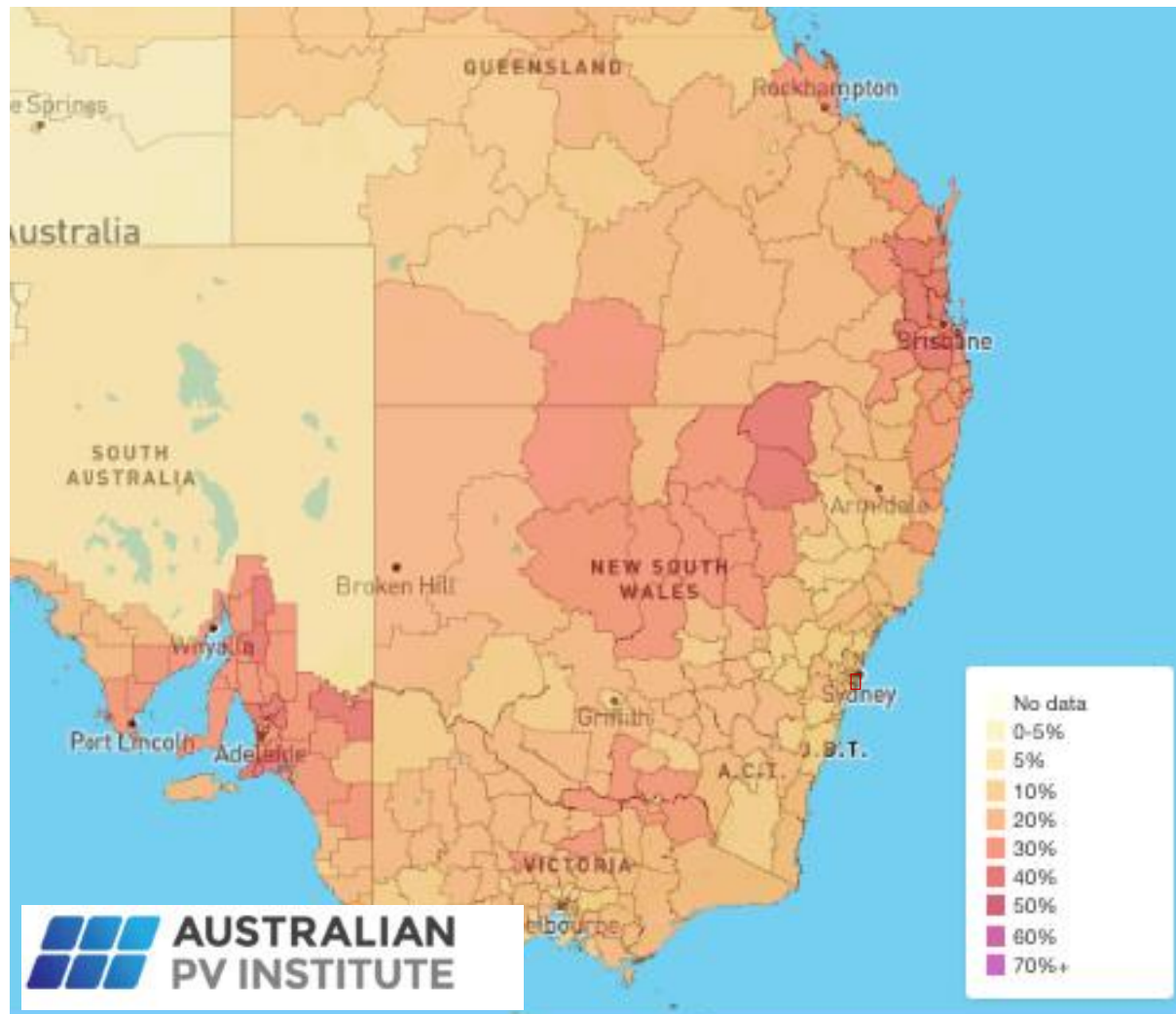
Solar in Australia



<https://pv-map.apvi.org.au>



Residential Solar in Australia

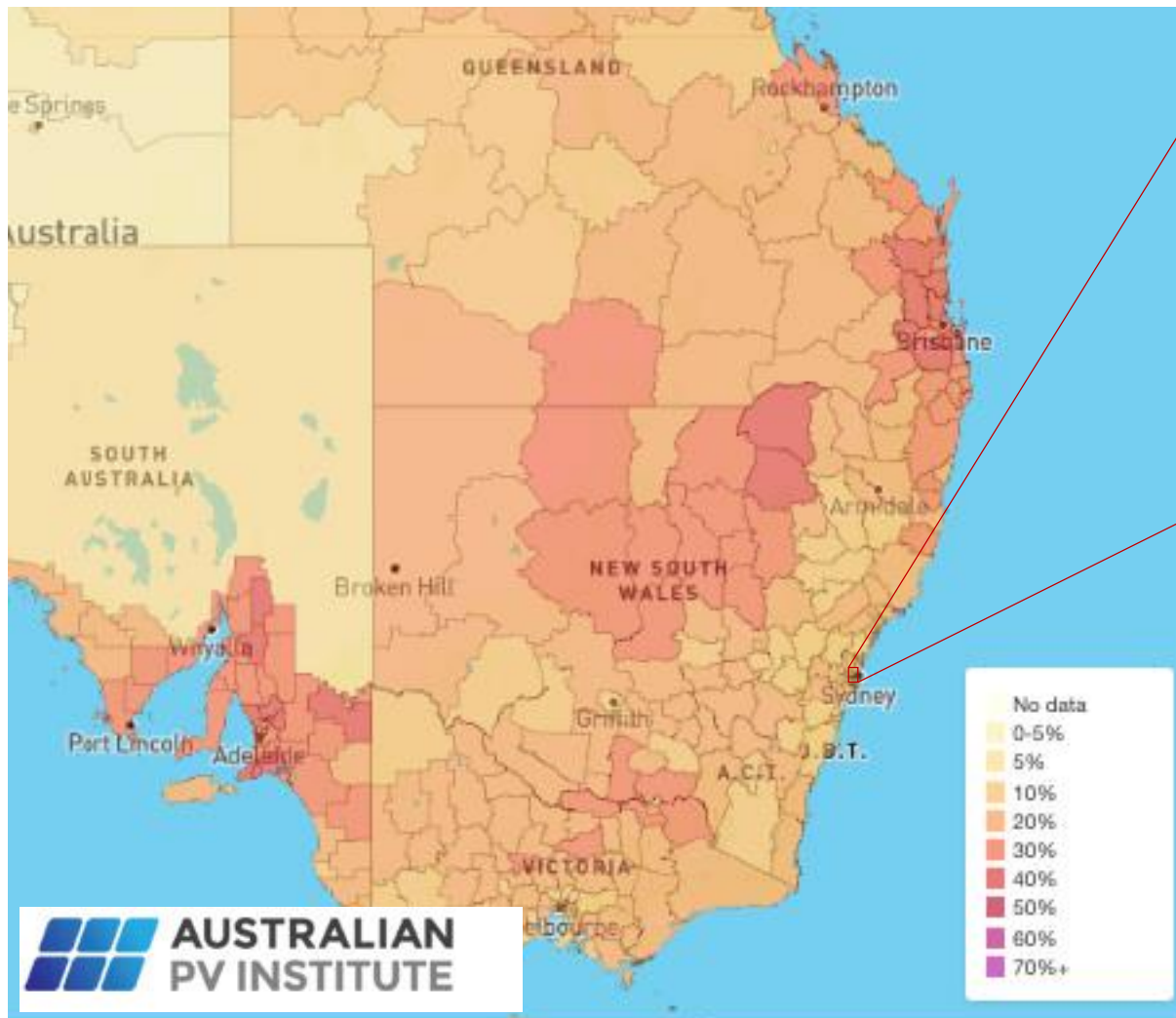


Australia

- 2,200,000 solar households
- One in four houses
- 7,600,000 kW

<https://pv-map.apvi.org.au/historical>

Residential Solar in Waverley



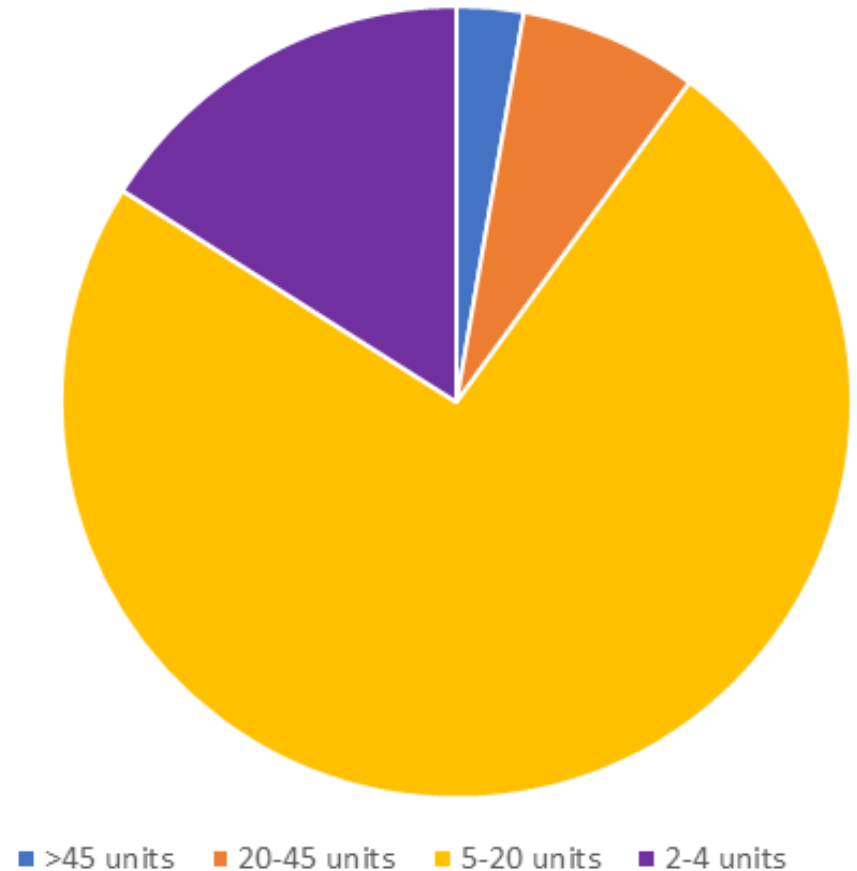
Waverley

- 1103 solar households
- 9.5% of houses
- 3,700 kW
- 0.5% of total

<https://pv-map.apvi.org.au/historical>

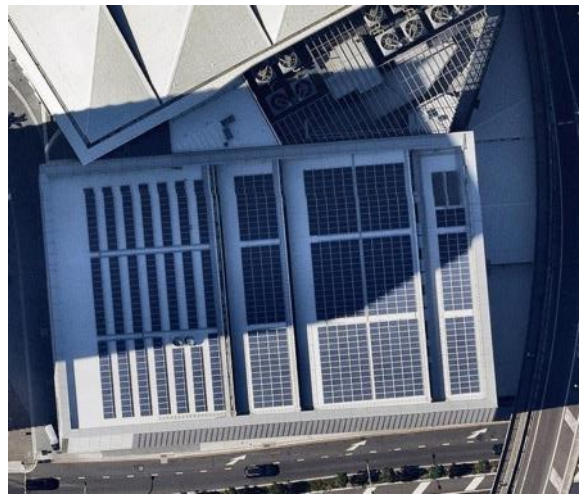
Apartments in Waverley

- 1600 apartment buildings
- 80% of all residential dwellings
- 80% of people live in apartments
- Mostly smaller blocks 5-20 units

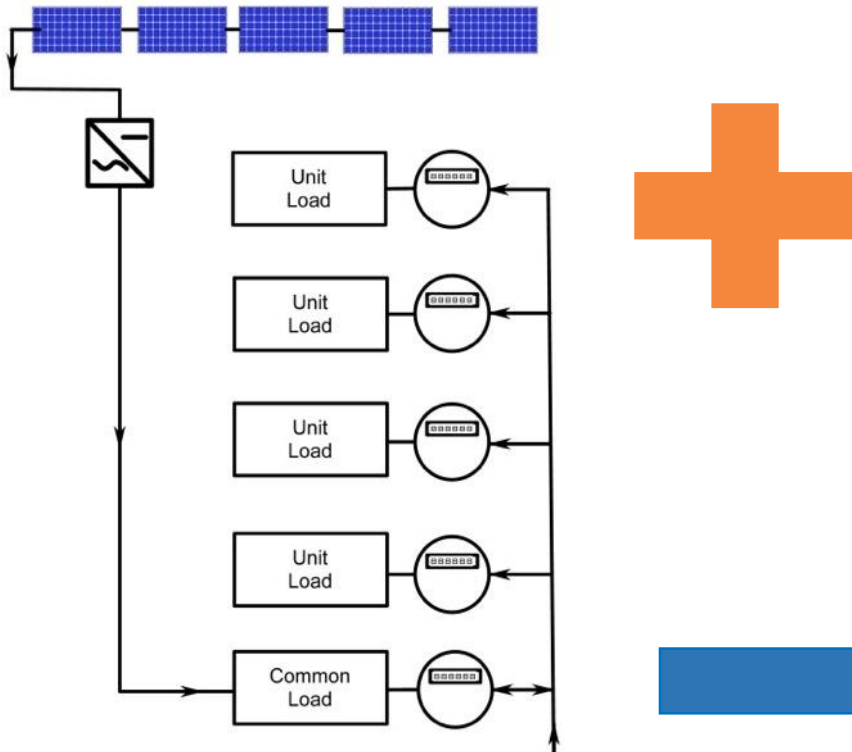


Rooftops are all different

Average solar potential
(based on City of Melbourne)
3 storey – 3.2kW per apartment
1-2 storey – 5.3kW per apartment
House – 6.0kW



Solar for Common Property



(Relatively) Simple!

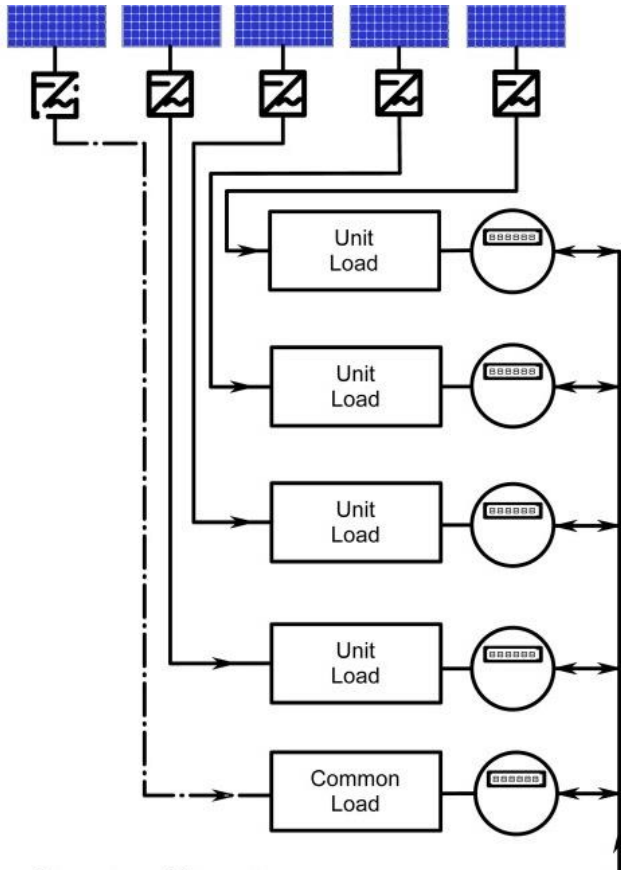
System owned by strata body
and benefit is reduced bills
for strata body

For high-rise,
achieves full benefit of roof
area

For low-rise,
under-utilised roof space

No reduction on household bills

Solar for Individual Apartments



Choice rests with each apartment owner

Owner occupier can be investor and beneficiary

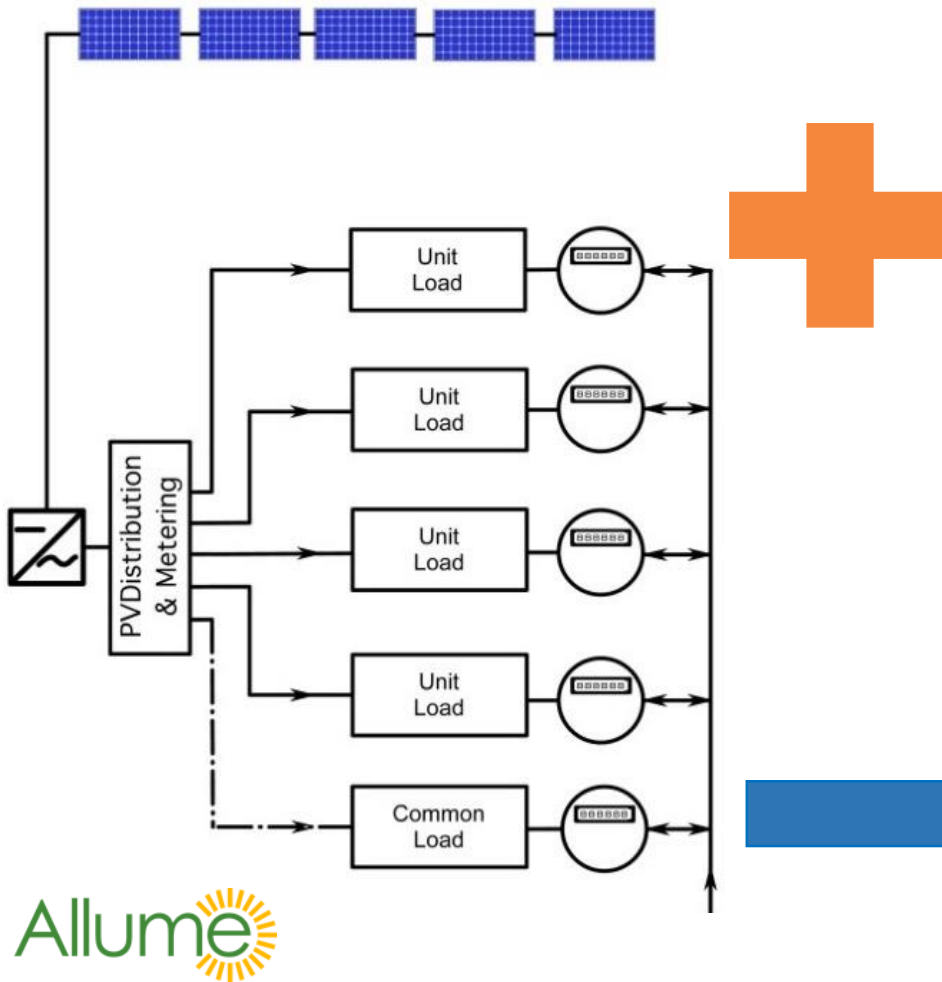
Roof allocation

Requires a bylaw

Low self-consumption

Landlord / tenant
Split incentives

Shared Solar Behind the Meter



Shared PV system / shared roof

Better utilised roof space /
higher self-consumption

Avoids costs and regulatory
issues of embedded network
regulatory issues

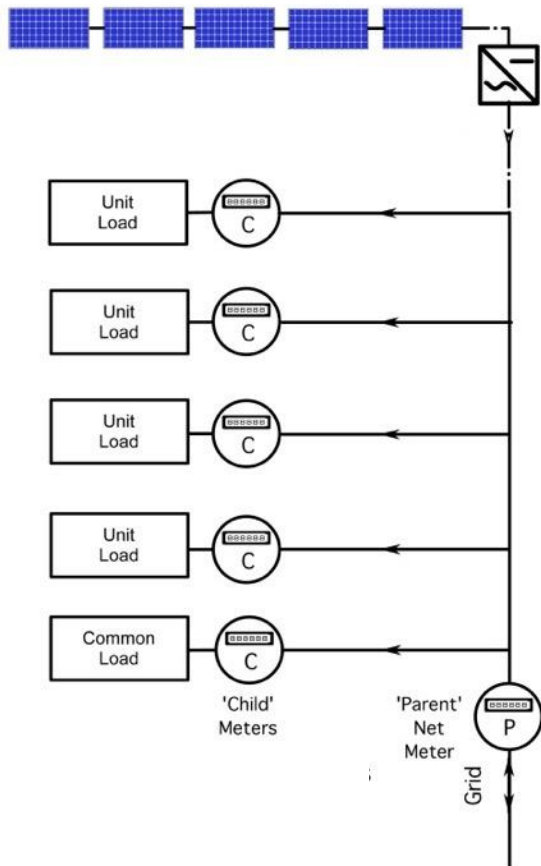
Households have 2 meters
and 2 bills

Requires strata agreement

No savings on grid electricity



Embedded Network



Shared PV system / shared roof

Better utilised roof space /
higher self-consumption

Access cheaper grid electricity

Split Incentives

EN Installation Costs

Regulatory Barriers

Partnership with Embedded Network manager / Operator

Some of the Barriers

Installation Issues

- Roof obstructions
- (Future) shading
- Height access
- Installer inexperience / aversion
- Switchboard / wiring upgrades
- Fire partitions
- Roof waterproofing

Organisation / Governance

- Information
- Communication
- Lack of engagement
- Split incentives
- Ownership churn
- Bylaw for individual system
- Embedded network regulation

Financial

- Access to finance
- Expenditure aversion

Building-Specific!

The Benefits



The Green Benefits

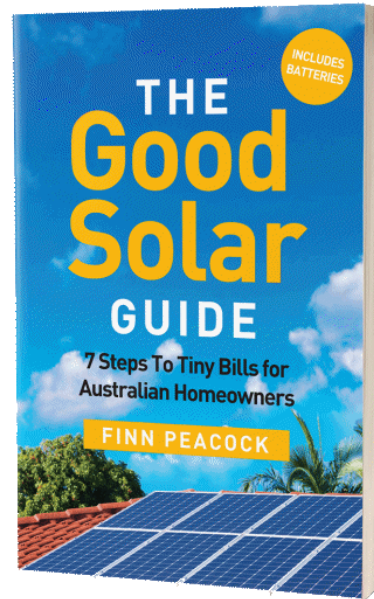


Some Resources

GUIDE TO INSTALLING
SOLAR FOR HOUSEHOLDS



visit solarchoice.net.au



www.solarquotes.com.au

Photovoltaics on Apartment Buildings



Project Report



www.ceem.unsw.edu.au



pv-map.apvi.org.au



Green
Strata

www.greenstrata.com.au



Solar for strata & apartment blocks:
Everything you need to know (almost)

By Solar Choice Staff on 19 April, 2020

www.solarchoice.net.au

