Costs and benefits of an informal solar community organisation: the ‘Fruitloops’ of Carnarvon

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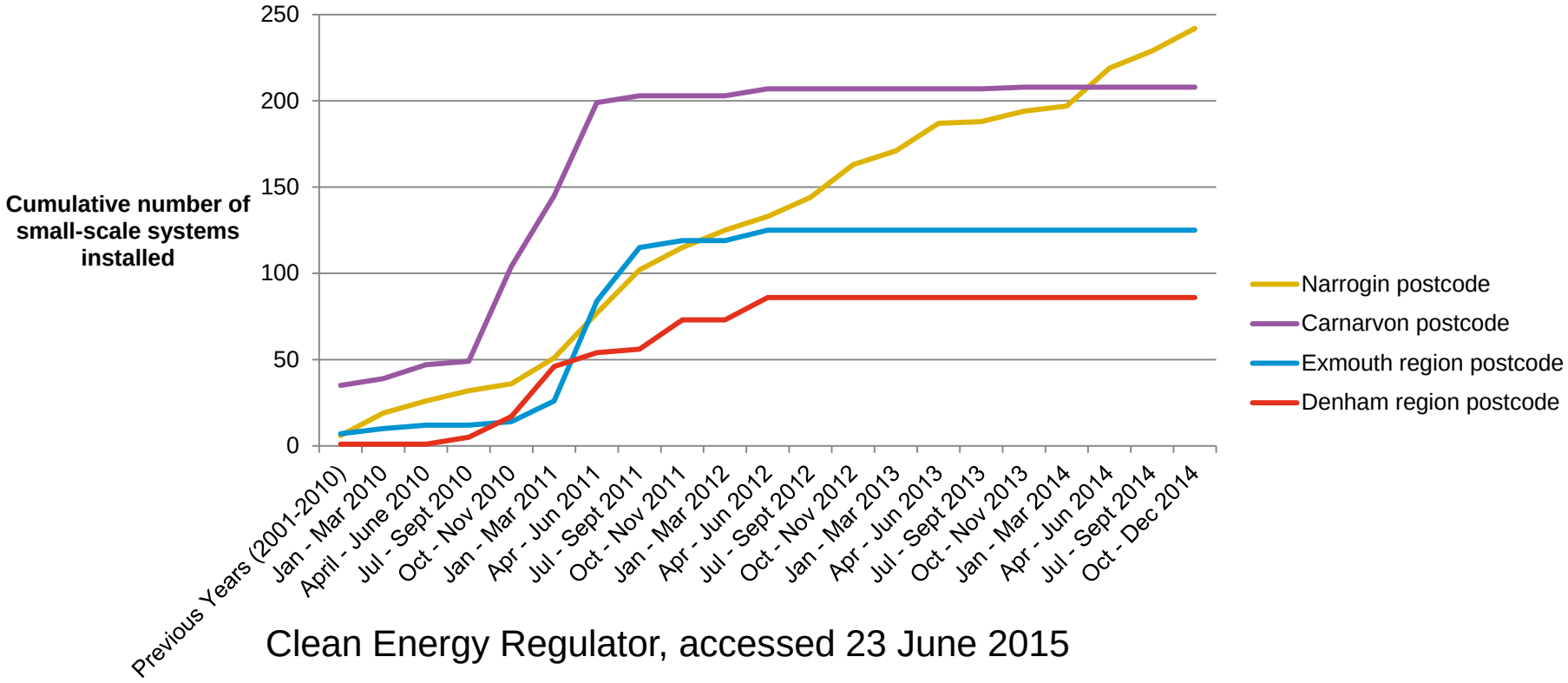
2016 Summer Study on Energy Productivity

Introduction | **Methods** | **Key Features and Problems** | **Conclusions**

Introduction:



Clean Energy Regulator, accessed 23 June 2015

Introduction:

Carnarvon:

- 5,350 people (2011 census)
- 127 residential PV systems = 1025 kW
- Horizon Power regional network
- 200 km lines; 6800 kW av summer load
- MORATORIUM ON SYSTEMS in 2011

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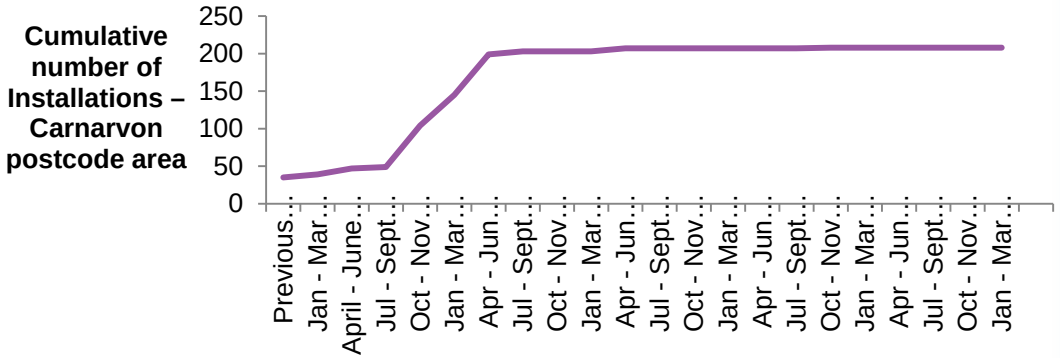


Introduction:

Why? How?

Evidence of?

- **Rogers (2003):** Diffusion of Innovations Theory: role of opinion leadership
- **Noll, Dawes, Rai (2014):** Active Peer Effects and Solar Community Organisations (SCOs)

Can industry or government learn anything from the Carnarvon experience?

Methods:

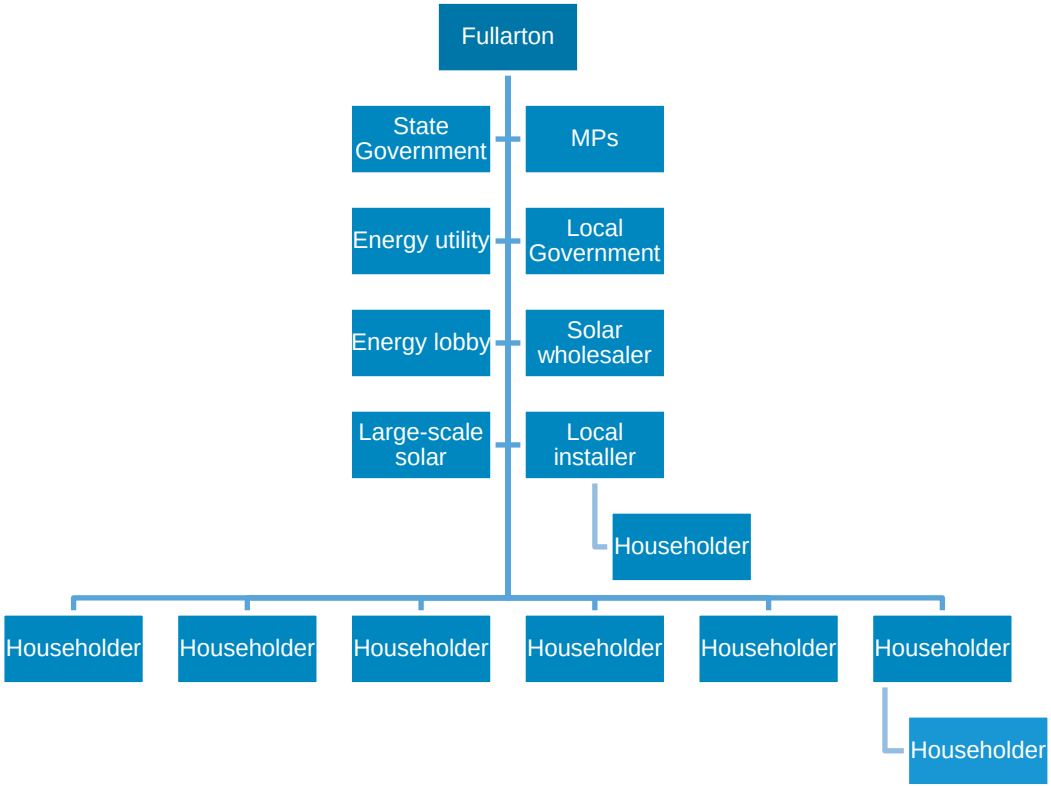
Semi-structured interviews (2015):	
Local government	3
State government	6
Members of Parliament	3
Solar industry (inc Fullarton)	4
Renewable Energy lobby	2
Local network operator	1
Community members	12
Postal surveys (2013):	
Motivation - Why people installed	23
Perceptions of solar subsidies	27

Questions about:

- Who they speak to about solar energy (from list of stakeholders)
- Interactions with Fullarton
- Whether they installed their own system; why/why not
- Processes of solar system installation

Feature 1 – Opinion Leadership:

Role of Fullarton as a facilitator



Connections:

- Life-long Carnarvon community member
- Member of the local council
- Former candidate for state MP
- Solar industry member (large-scale; lobby)
- Wildly persistent!

Feature 1 – Opinion Leadership:

Process of adoption in Carnarvon:

- Charismatic individual invested first
- Created interest in key players
- Engaged local media
- Developed community group
- Used accountancy skills
- Became a registered installer
- Liaised with local electricians to act as installers
- Contracted with Perth-based solar wholesalers
- Liaised with local network operator
- Liaised with local government

BUT:

- **Undue reliance on 'charismatic individual'**
- **Small number of local systems by 'regular' electrician = difficulty maintaining accreditation**

Feature 2 – Community organisation:

Solar Community Organisation - ‘the Fruitloops’

- Transported systems
- Made cyclone-proof frames
- Installed their own (and then other’s) systems
- Shared information

Created:

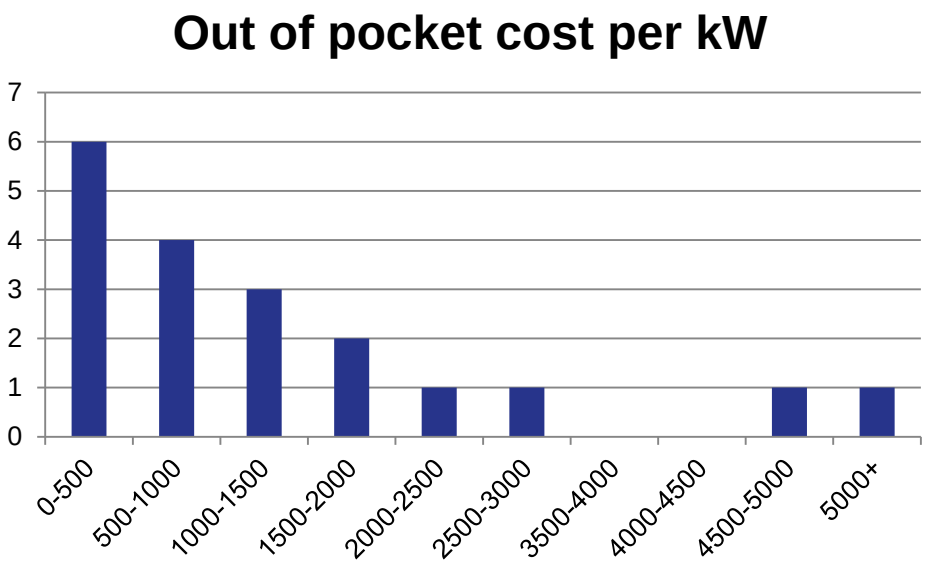
- Increased solar awareness
- Ownership of ‘solar project’
- Increased energy literacy
- Opportunities for vulnerable community members
- Investment in local industry
- Reduction in fossil fuels
- COST SAVINGS

BUT:

- **Households excluded after moratorium**
- **Perception of inequity in access to installation**

Feature 3 – Reduction in Costs:

‘Fruitloops’ reduced system costs by:



(Self reported in surveys – 2006-11)

- Accessing local government rebates
- Ensuring access to premium feed-in tariff
- Maximising REC value
- Accessing loopholes in subsidy ‘rules’
- Accessing cost-price systems
- Reducing installation costs

= $1,500 p/kW average cost

(approx. $500 p/kW less than Aus wide average – APVI)

Recommendations:

What could government or industry do to promote community-based residential solar?

1. Imitate sequence of events (pilot; information; accessibility; SCO)
2. Harness local interest, skills and existing social networks
3. Facilitate via ideal rebate conditions and policy literacy
4. Create/reinforce ‘trust’ in solar industry and products

Questions?

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