

National Housing Conference 2008



Blacktown Solar City: Outcomes and Potentials for Social Housing Communities

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A Story

- Maybe ... social housing households are green, love renewable energy, and are sustainable exemplars for the 21st century?

“We know we have got a small carbon footprint ...”
(Mrs X, Waterloo)

“...its good to do the right thing making electricity with these solar panels...”
(Jim, Blacktown)

“Over-consumption isn’t really a problem for us...”
(Sue, Redfern)



Blacktown Solar City bid



- The 2004 White Paper ‘*Securing Australia’s Energy Future*’ proposed a \$75M Solar Cities Program.
- Blacktown City – urban growth and infrastructure constraints.
- \$37 million package submission included \$15 million Federal funding.
- Consortium members: BP Solar, Integral Energy, ANZ, Blacktown City Council, Big Switch, and Landcom.
- Housing NSW is a ‘participating organisation’ in the consortium, contributing \$0.7 million.

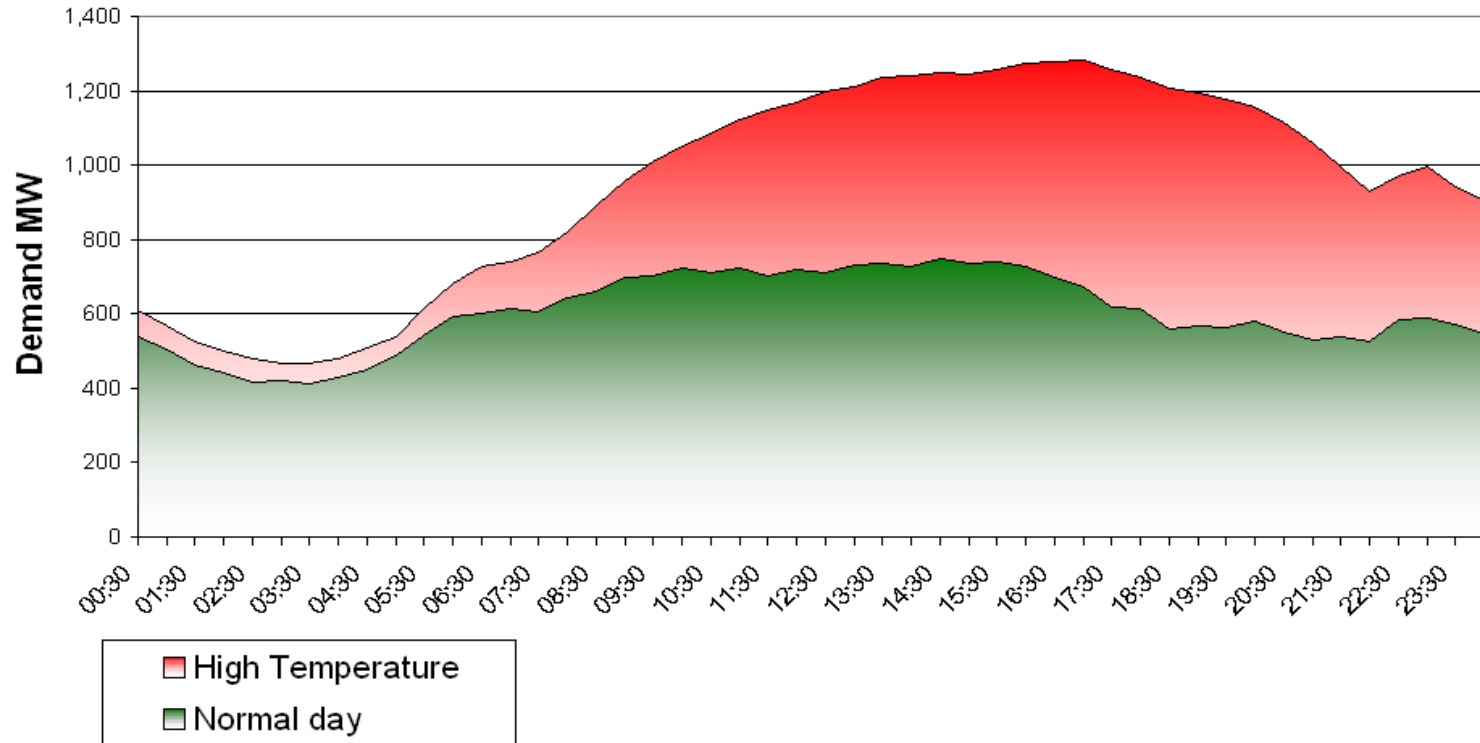


Blacktown Solar City Project outline

- A large-scale 6-year ‘real-life’ test of distributed energy solutions and reporting in a challenging urban setting.
- The project trials 15 energy-related elements - photovoltaic solar and solar hot water, energy efficiency, demand management, cost reflective pricing and smart metering.
- Annual savings of 22 gWh of electricity, and 25,000 tonnes of CO₂.

Energy Demand: Blacktown Airconditioning Impacts

Sydney West Bulk Supply Point Load Profile





The Complementarity of Social Housing and the Blacktown Solar City Project

Benefits include greater social equity, a large customer base, single ownership, capacity and scale.

Social housing

Renewables and energy efficiencies reduce energy tariff impacts/risks

Portfolio size

Sustainability mindset

Lower-consumption

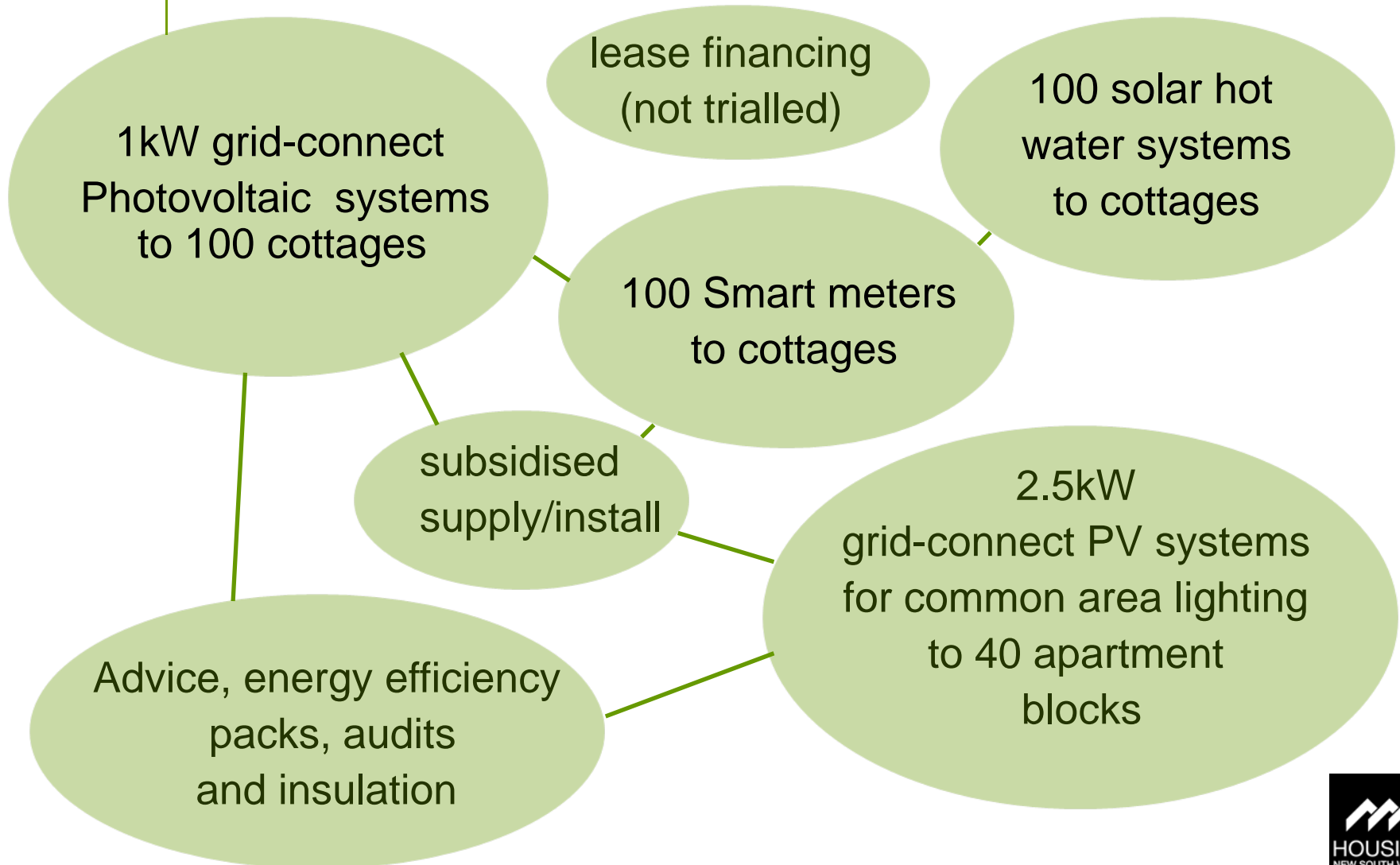
Blacktown Solar City

Renewables, energy efficiencies to reduce grid loads

Scaled-up strategies to improve capacity

Investment in community advice, marketing, incentives to alter private consumption/ behaviour

Social Housing Components



Social Housing Outcomes to Date

- cheaper energy bills for tenant households.
- Social housing gains 25+ year value of photovoltaic systems.
- Cost-benefit and payback periods for photovoltaic/ solar hot water systems is improving.
- Potential for a lease model to fund renewable energy systems.



Improved financial security, tenancy sustainability, and community resilience.

Very high levels of household support, with \$60-\$80 savings on quarterly bills.



Potential of Solar City Models for Social Housing

- Addresses energy affordability and equity
- Improves energy security
- Improves social housing households' adaptive capacity to climate change impacts
- Alters community perceptions of renewable technologies
- Social housing scale can deliver significant community and economic benefits
- Provides an urban model to meet 2020 national emissions targets.

Conclusions for Social Housing Households



A Solar City package:

- reduces tenant stress about energy bills.
- increases the sustainability of tenant households.
- Reduces greenhouse gas emissions
- Improves self-esteem and community engagement as social housing is recognised as a leader in sustainability.
- strengthens community adaptation capacity to meet climate change impacts.
- benefits other sectors such as reducing energy infrastructure spending.