



Community solar projects & models operating and succeeding in Australia

Are they possible in the NT?

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What is community solar?

- Refers to both **community-owned projects** as well as third party-owned plants whose electricity is shared by a community
- The solar panels and related equipment is set up in a central location, so residents don't need to buy and install equipment on their personal properties. The power produced by these projects is then shared by a community, and the hardware is either owned by the community itself or by a third party

Why do community solar?

- **Mobilise communities to act on climate change and take ownership of energy as they choose to generate renewable energy**
- We're used to waiting for governments and corporate retailers to provide energy, but renewable energy is a unique and opportunity for ordinary communities to create their own energy
- Provides energy independence, security and affordability
- Allows community the opportunity to share the benefits of solar power even if they cannot or prefer not to install solar panels on their property
- Ethical investment

Organisation	Project	Project Size	Model used
Sydney Renewable Power Company	Solar PV at Sydney Convention Centre	521kW	Community investment
Repower Shoalhaven	Repower 3	90kW	Community investment
Enova, COREM, Splendour in the grass, NCCH	Solar Garden	35kW	Donation / philanthropic for community benefit
COREM - revolving energy fund	11 small scale solar installations	6 - 33kW	Donation / philanthropic
Darebin Council	Solar Savers Program	1.5 - 10kW	Local Council funded

Sydney Renewable Power Company (SRPC) Sydney, NSW

Rooftop installation at the redeveloped International Convention Centre Sydney

SRPC aims to allow many people participate in a community solar project. SRPC is run by volunteers from the private sector and is investing in local renewable energy.

SRPC entered into a contract to fund the installation of solar panels for a fixed price.

SRPC receives revenues under this contract, based on the entire output of the system multiplied by a fixed price schedule. Also entitled to receive and sell renewable energy certificates (Large-scale Generation Certificates or LGCs).





Size	2004 modules, 521kW, weighing 40 tonnes, covering approx 12 tennis courts
Project length	25-year operating life
Where the money comes from	The \$1.4 million capital raising ran from early November 2016 until mid-March 2017. 519 unlisted shares, each worth \$2,750 – and equivalent to about 1kW of solar – to community and retail investors
Funding model	The electricity generated will be used and paid for by the operator of the ICC Sydney. SRPC will receive revenues for 100% of the electricity generated by this array over its 25-year operating life, based on an agreed pricing schedule per kilowatt hour of electricity generated. It is expected that SRPC will be cash flow positive when invoicing relating to generation from the PV Array commences in 2017. SRPC also enjoys the benefit of selling LGCs to willing buyers on a traded market.
Risks	Where electricity generation by the PV Array is less than forecast, potential earnings will be reduced.
Partners	ICC Sydney, Darling Harbour Live, Infrastructure NSW, LendLease, Embark. SRPC was made possible with the support of: Engineers without Borders, Baker & McKenzie, and Link Market Services
Possible in the NT?	Would need to find a large already operating site, or site that is being built that would use a large amount of energy. Would need to partner with said site. Potentially a site like the new CDU university?

REPOWER SHOALHAVEN

Repower Shoalhaven Shoalhaven, NSW

Repower 3 - Anderson & Sons Dairy Farm, Milkwood Bakery, John Hills Signs & South Pacific Roof Trusses

Repower Shoalhaven is a community group run by volunteers. Their aim is to develop community energy projects that benefit locals. Over the past 7 years, they've expanded from Shoalhaven to the greater region, developing community solar projects for business and individuals to participate in. So far, they have run over 8 community solar projects.

They use the Difference Incubator (TDi) model, using a Propriety Limited company as the Project Entity for each project.





Size	90kW of solar power systems
Project length	10 years, at this time, panels are outright owned by businesses
Funding	Funded \$143,500 in 7 days by community
Forecast cash return	5% over 10 year project length. Revenue mechanism is a power purchase agreement. Maximum shareholders is 20 members.
Legal structure	Non for profit organistaion and proprietary limited. Legal relationship with host is PPA
Risks	Risk that something will go wrong with the solar farm performance.
Model used	<ol style="list-style-type: none"> 1. The community funds, installs, owns and operates a solar power system on a business' roof (coordinated by Repower) 2. Investors pay for the panels to be installed on the businesses, meaning the businesses don't need to raise the capital. They can pay Repower Shoalhaven for the power used on site, at a price lower than retail but high enough for investors to make a 5% return 3. At the end of the project length, the businesses keep the panels
Viable in the NT?	Best suited to be on the premises of a business that is a medium - large electricity user, primarily operating in daylight hours and most days of the year, including weekends. Value of electricity saved is much higher than the price for selling electricity sold through the grid. Opportunity for community organisations to have the benefit like FoodBank or NT Shelter.

Enova Energy, North Coast Community Housing, COREM & Splendour in the Grass Lismore, NSW

Enova Solar Garden

Enova's first social housing solar garden is located on the roof of the North Coast Community Housing office in Lismore. The financial benefits of the solar energy generated are distributed throughout the community to social housing tenants and community organisations. This social housing solar garden is an important innovation toward ensuring the benefits of solar energy are accessible by all. This model has paved the way for Enova Community to work directly with other social housing organisations – so that more low-income people living in social housing can participate in the transition to renewable energy and benefit from solar panels. Currently delivering energy savings to 19 social housing tenants, four community organisations and North Coast Community Housing.





Size	35kW, 100 panel communal solar PV array
Project length	10 years, at this time, panels are outright owned by businesses
Funding	<p>While other solar garden models require solar gardeners to invest, the NCCH Solar Garden is fully funded by Enova's Renewable Development Initiative, Splendour in the Grass' Green Offset' program of, COREM and NCCH.</p> <p>Enova has been part of a collective effort by the community energy sector to establish solar gardens in Australia and built on the work of the Social Access Solar Gardens project. Led by the Institute for Sustainable Futures and the Community Power Agency and funded by the NSW Government and ARENA, this research was a collective effort to investigate the viability of solar gardens in Australia and the Enova-led the behind-the-meter model was a key case study from this project.</p>
Savings	Expects around \$160,000 to flow back through the community from the solar garden, over its 20-year life span, rather than being spent on electricity bills.
Savings forecast	As an Enova customer, NCCH purchases the electricity produced by the array for use onsite. Funds generated from the sale of that solar energy are divided between 23 'Solar Gardeners' - 19 NCCH tenants and four community groups: The Caldera Environment Center, Mullumbimby CWA, Marine Rescue Brunswick, and Federal Tennis Club. Difficult to get solar gardens using the social benefit model financially viable. Paybacks are much greater for community owned models.

COREM: Community-Owned Renewable Energy Mullumbimby

Mullumbimby, NSW

Revolving Energy Fund: Solar installations on community roof tops

NFP community action group dedicated to setting up community owned renewable energy projects in the Mullumbimby area. Pursuing a 100% renewables future for the region. COREM organises the fundraising and installation of small solar systems on community buildings (through donations to its Revolving Energy Fund (REF) and larger systems through investments. Savings in electricity bills are split between COREM's Revolving Energy Fund and the community group(s). The REF invests in more local solar PV partnerships and the cycle starts again. COREM seeks grant funding and donations.



Project sizes	Between 5kW and 33.4kW
Projects	The Drill Hall (12kW), Mullum Showgrounds (10kW), Brunswick Valley Volunteer Rescue Association (5.2kW), Brunswick Valley Historical Society (5.76kW), Byron High School (33.4kW), The Commons (6.6kW), LightnUp (6.44kW), Federal Hall (6.6kW), Dorroughby Hall (5kW), Coorabell Hall (10.5kW)
Project length	All projects have a 5-year project length to minimise ongoing admin as COREM is volunteer run
Where the money comes from	Donations, loan repayments from other solar pv installations
Legal structure	NFP organisation. Entered into legal contract with business with a 5-year term.
Risks	COREM manage the systems if they need servicing and maintenance. Use common sense due diligence when choosing groups to partner with, although as most are established community groups or using Council buildings, there have been minimal risk of bankruptcy.
Possible in the NT?	Yes. A community group, like ECNT, could fundraise or apply for a grant as seed money to create a REF to fund installations on community buildings, low income households, or community organisation premises. Can act as solar education, as you reach people through these clubs / groups that you may not otherwise reach.

Darebin City Council

Darebin, VIC

Solar Savers Program

Council program designed to help Darebin residents, organisations and businesses install solar power, for their own benefit, and the benefit of the broader community.

Council pays for entire upfront cost and installation, and resident / business owner pay back the loan via Council rates, over 10 years, interest and GST free. Council completed a tender process and chose a company with 10-year product and installation warranties and 25 year performance warranty. Most households are between \$100 and \$500 better off every year, even after making repayments.



Size	Between 1.5kW (6 panels) – 10kW (36 panels), which suits most homes. Commercial installations can be larger
Installations	At December 2019, over 1370 households and 21 organisations installations through program
Project length	All projects have a 10-year project length
Funding	Darebin Council pays for up-front costs and intallation, and resident or business pay back through rates. Interest free and GST free as Council is exempt.
Legal structure	After the system is installed, Council sends a quarterly Special Charge notice, just like a quarterly rates notice. The homeowner pays off the system in this way over 10 years or can choose to pay it off more quickly. It is interest free. Council owns the system until it is paid off.
Risks	Risk that tenant won't pay their rates on time. Council could do due diligence checking when choosing to accept a property to the program. When the property is sold, any remaining repayments to Council will be taken out of the proceeds of the sale, like any other rates or charges owed to Council.
Possible in the NT?	Yes. Darebin Climate Emergency Plan Council 2017-2021 commits to expanding the amount of solar PV in Darebin from 18,000 kW to 36,000 kW. In 2018, Council allocated \$20 million to grow the program due to demand. City of Darwin could replicate this successful model.



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Useful resources:

- Coalition for Community Energy (C4CR) - Small Scale Community Solar Guide
- Community Power Agency – Community-owned Renewable Energy How-to Guide
- UTS Institute for Sustainable Futures & Community Power Agency – Social Access Solar Gardens for Australia Research
- Clean Energy Council – Benefit Sharing for Renewable Projects Guide
- Speaking to existing projects and community groups

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