CITY OF VINCENT

SOLAR FOR STRATA

Why it's good for people and the planet

Sustainable buildings or high performing buildings are designed for our climate, making them healthier and more comfortable places to live. They also generate electricity through renewable sources, which can save money and carbon emissions.

Nowadays it is common for new strata developments to incorporate sustainability infrastructure like solar photovoltaic systems (PV) battery storage and electric vehicle recharge capabilities to help generate, store and save electricity.

Embedded networks and infrastructure contracts like power purchase agreements, licences or easements and other forms of governance structures to support smart technologies have become easier thanks in part to new regulations in strata law.

Benefits for all

- **Reduces electricity costs** for lot owners and the strata company (depending on solar PV system and size).
- Provide **cleaner, cheaper energy** solutions to apartment developments.
- **Improves real estate value,** outperform other strata buildings (future-ready building plus lower strata levies due to cost savings from renewables).
- **Smart Metered System** informs residents and strata company of energy demand on a daily basis (real-time) helping owners manage and make better energy decisions; actively lowers energy costs and reduce environmental impact.
- Meets local planning requirements for Environmentally Sustainable Design (ESD) and achieve Green Star or Life Cycle Assessment (LCA) standards where required.
- Improves baseline star ratings like NABERS for Apartment Buildings.

First Steps – measure to be able to minimize and manage

Understanding your building's energy performance is the very first step to help your strata company make the right decisions.

We recommend starting with an energy audit of the common property areas, including collation of energy consumption data for those areas over a twelve month period. This will reveal the building's energy demand and areas of high use, which will help to identify the right opportunities to enhance overall performance.

Your strata company can conduct this audit using the National Australian Built Environment Rating System (NABERS) for Apartment Buildings, which is designed to rate building performance pre and post improvement and can also cover water performance. For more information go to **www.nabers.gov.au/apartment-buildings**

3 ways to adopt solar

1. Strata company installs and becomes an electricity on-seller to lot owners/occupiers.
2. Third-party retailer installs and sells power to lot owners/occupiers.
3. Individual lot owner/occupier installs for themselves; typically in grouped dwellings like townhouses and villas with no other dwelling above.

Understanding which option suits you and the strata company is paramount.

Embedded and integrated energy networks

An embedded network is where the strata company uses the buying power of the entire building to negotiate a better price for energy from a choice of different providers.

A big advantage of an embedded network is the ability to buy at wholesale rates when consumption is more than 50 MWh (50,000 kWh) per annum (which equates to approximately $15,000). The disadvantage for doing so is lowering access to the current dispute resolution process through the energy ombudsman (regulation is currently being reviewed regarding this matter).

An integrated embedded network is a combination of Solar PV and other sustainability infrastructure (Battery and/or Electric Vehicle) with grid supplied electricity using smart meters that remotely talk to billing systems. Real-time energy monitoring allows users to see how and when this electricity is used. Typically supplied, owned, managed, maintained, billed and serviced by the third-party energy provider (not the strata manager).

Energy solutions for strata

Some considerations when choosing the following sustainability infrastructure:

Solar PV & Battery

- Load management, what is the best size of solar PV, battery and is it just for common areas or also for individual lots?
- Is there enough roof area available (air conditioners and other equipment can reduce this area)?
- Is a third-party energy supplier the best financial alternative or are there sufficient funds in reserve to pay for the up-front costs of the infrastructure (solar PV, battery, smart meters, energy monitoring, etc.)?
- If all capital expense for the infrastructure is funded by the strata company, what return on investment is expected? What is the pay back period?
- What other infrastructure upgrades are required e.g. distribution boards, automated smart meters, etc.?
- What rebates are available?
- What ongoing discounts do lot owners receive? And how will billing occur?

Electric Vehicle (EV) recharge infrastructure

- Is the embedded network able to support EV recharge capabilities? How much electricity is available to the building?
- Is the network flexible enough to support upgrades required to supply EV recharge needs?
- Will it be a shared or private EV system?
- Does the billing system support billing direct to credit cards?
- What upgrades will be required? Distribution boards, metering etc.

NET ZERO ENERGY HOME

Local townhouse case study – grouped dwelling

- 18 townhouses under strata management.
- Existing townhouse, circa 1989.
- 2.6kW solar PV array installed in 2010 to supply individual lot.
- Synergy bill is now $100 per bill (61 days) including supply charge of approximately $60.

New By-Law written and agreed by all owners with 'Exclusive Use' to allow:

- Direct install into lot.
- By-law had a diagram showing placement location.
- Lot Owner confirmed they will indemnify the structure and insure under home and contents (also insured under building insurance).
- By-law confirmed that owner would remove if a majority wished for it (this never happened but a way to overcome one refusal).
- Four additional townhouse owners have since placed solar on rooftop following same process.
- Net zero energy – this home is classified net zero energy as the solar PV system produces double the energy the household consumes. Owner 'electrified' all appliances with induction cook top, heat-pump hot water system and no gas appliances were included.

This fact sheet has been produced in partnership with the Green Gurus™ Team; specialists who work in architecture, renewables, planning, engineering, law and urban design and who all share their experience, knowledge and passion for sustainable development that benefits people, places and the planet.

green GURUS™

W: greengurus.com.au | E: info@greengurus.com.au