

# UNLOCKING SUSTAINABLE APARTMENTS

You deserve an efficient, comfortable, safe and healthy home. You deserve clean energy and affordable bills. Identify the efficiency and sustainability opportunities that are right for your apartment. Consult with your owners corporation committee about making improvements in the common area too.

Don't forget to check if you're eligible for [Victorian Energy Upgrades](#) or [Solar Victoria](#) rebates.

## The Victorian Owners Corporation Act Supports Sustainability

Window shading, double glazing, split system air conditioners, and heat pumps all require external infrastructure visible from the outside of your building. You may need permission from your owners corporation prior to retrofitting these items.

Remember, the Victorian Owners Corporation Act states that "An owners corporation must not make rules that unreasonably prohibit the installation of sustainability items on the exterior of a lot".

## Ready to retrofit, not sure where to start?

Share this guide with your owners corporation committee and manager to start the discussion. For more information about how to work with and make decisions with your owners corporation, visit the [Owners Corporation on the Consumer Affairs Victoria website](#).

## Plan for an All-Electric Building

We are living in the clean energy revolution. Rooftops are now resources and in the near future, an electric vehicle will act like a big battery. Our homes will be all-electric, powered by renewable energy and have cleaner indoor air that's good for our health.

It's important that apartment buildings aren't left behind. [Unlocking Sustainable Strata's Guide to Electrifying Your Apartment Building](#) will help you and your owners corporation committee electrify common areas and private apartments / townhouses. It outlines the steps to take and provides options for the best all-electric retrofit technologies across heating, hot water, cooking and more.

## WHAT YOUR OWNERS CORPORATION COULD DO

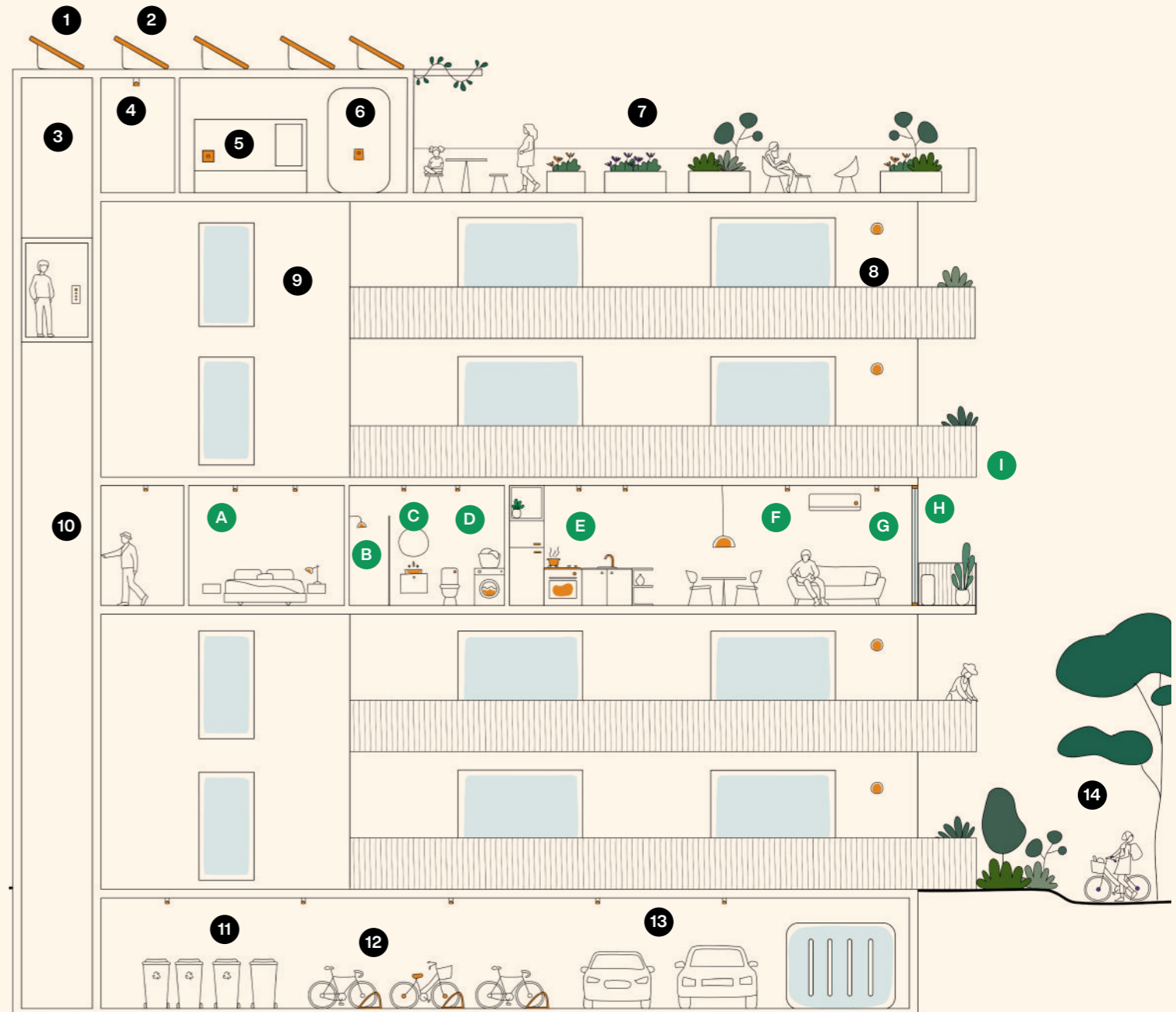
1. Install solar
2. Maintain your solar panels
3. Tune your building
4. Switch to LED lighting\*
5. Switch to a centralised hot water heat pump
6. Install an efficient air conditioning system
7. Start a community garden in your common area
8. Buy GreenPower
9. Install a Building Management System (BMS)
10. Make it easy for residents to live sustainably
11. Turn your food scraps into a resource
12. Install bike parking\*
13. Install or facilitate electric vehicle (EV) charging
14. Let nature cool your building

## WHAT YOU COULD DO IN YOUR APARTMENT

- A. Switch to LED lighting\*
- B. Upgrade to an all-electric efficient hot water system
- C. Reduce water use\*
- D. Buy electric energy efficient appliances
- E. Switch to all-electric cooking
- F. Switch to efficient electric heating and cooling
- G. Draught proof your apartment
- H. Install double glazing
- I. Install external shading

\* If your building was constructed after 2005, these actions may not be relevant to you.

Illustration by Nayan Puri



Supported by:



For mid rise apartment owners, owners corporations & managers

Got the basics? Check out our detailed outline below for more information to assist with your retrofitting journey.

## OWNERS CORPORATIONS

### 1. Install solar

The vast majority of Australians want their homes powered by renewable energy, so it's no surprise that we have the highest penetration of solar PV per capita in the world. The average solar system in Australia pays for itself within 4 years, and after that, the electricity it generates is free.

New [Solshare](#) technology is making it easy for owners corporations to install one solar system to power the common area and individual apartments. This means cutting electricity costs for common areas and for residents. The Yarra Energy Foundation has developed a [Guide to Solar for Apartments](#) to help you understand the process.

### 2. Maintain your solar panels

Solar PV and solar hot water systems require some maintenance to operate efficiently. The surface of the panels should be cleaned every 6-12 months. Many local solar businesses offer cleaning and maintenance services.

### 3. Tune your building

Buildings can commonly achieve a 15 - 30% reduction in energy use just by ensuring control set points are reset, based on demand and regularly servicing equipment to maximise performance.

Talk with your facilities management company to understand how your equipment is being tuned and maintained. The [Good Practice Facilities Management Guide](#) can help identify opportunities for improved building turning.

### 4. Switch to LED lighting\*

LED lights use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

### 5. Switch to a centralised hot water heat pump

Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions. If your building has a centralised gas hot water system, switch to a heat pump. For centralised solar hot water systems, keep the existing solar system and replace the gas equipment with a new heat pump.

### 6. Install an efficient air conditioning system

Buildings with significant common areas or facilities, may have centralised heating supplied by gas fired boilers. Gas is no longer the most efficient way to heat and is being phased out across Victoria to support the transition to zero emissions. The best replacement for a centralised heating system is a VRF air conditioning system, which can also provide cooling during summer. Air-sourced heat pumps are also a good option. For single common area rooms, split system air conditioners are the best option.

### 7. Start a community garden in your common area

Communal gardens provide health and wellbeing benefits. Residents can access fresh food and green space, stay active maintaining the garden, and connect socially. Knowing your neighbours makes your complex safer and builds social resilience. Start with a small garden, managed by a group of residents. Expand the garden as interest grows.

### 8. Buy GreenPower

Become part of Victoria's clean energy transition and support the green economy. Historically, long running contracts with embedded network operators limited access to GreenPower. This is no longer the case. Sparked by Victorian embedded network regulatory changes and retailers recognising the switch to renewable energy is inevitable, embedded network operators are starting to offer GreenPower to existing customers. Contact your embedded network operator to ask about GreenPower offers. If none are available, let them know your owners corporation will switch to a new operator when your contract ends.

### 9. Install a Building Management System (BMS)

Poorly controlled and monitored buildings are unable to quickly and easily identify systems that are not working or working inefficiently. A Building Management System (BMS) is an 'intelligent' controller network installed to monitor and control a building's services, including how efficiently they are operating.

Reach out to your facilities management company to understand the benefits and application of a BMS in your apartment building.

### 10. Make it easy for residents to live sustainably

Some sustainability upgrades - double glazed windows and window awnings - provide a huge benefit to residents. They also impact the look of your complex and therefore typically need approval from the owners corporation.

Often there is a desire to maintain a consistent look to the building facade. To do this, owners corporations can develop style guidelines that specify colours, materials, size of the windows or awnings. This gives owners the freedom to undertake upgrades, while respecting the visual amenity of other occupants.

### 11. Turn your food scraps into a resource

Check if your council or waste contractor offers a food and garden organics collection to turn your food waste into compost. If not, consider installing a worm farm. A well-managed worm farm has little to no smell and recycles food scraps in nutrients that can be used on gardens. Worm farms have been effectively used in [apartment basement car parks in Melbourne](#).

### 12. Install bike parking\*

More and more people are discovering the health, economic and environmental benefits of travelling by bike. Most new apartment buildings include bike parking so older buildings need to play catch up to maintain market appeal and to ensure bikes can be parked safely and in a tidy fashion in basements or other common areas.

Install bike hoops or racks to basements or common areas so bikes can be parked safely and securely, encouraging active transport. [Bicycle Network Victoria](#) or [this guide from the City of Sydney](#) can help find the right parking solutions.

### 13. Install or facilitate electric vehicle (EV) charging

The transition to EVs has already begun, including a [growing secondhand market](#). EVs are expected to match petrol vehicles on purchase price and range by the mid 2020s, so the demand for EV charging in apartment car parks is likely to skyrocket in just a few years.

EV charging can have a significant impact on your building's energy demand. The vast majority of EV charging is done at home overnight during off-peak times, when electricity prices are lowest. An EV charging installer will be able to determine the most appropriate solution for your building, taking future demand into consideration. Following, your committee can discuss whether charging stations will be funded by the owners corporation or by individual owners.

### 14. Let nature cool your building

Concrete acts like a heat trap, making your building hotter, increasing the need for air conditioning. Trees and plants throughout common spaces will shade the concrete and reduce the temperature of air moving into apartments.

Plants and soil provide a cooling effect through the process of evapotranspiration, and plants can also be used to provide shade and funnel cooling breezes. Shading to the north of a home should be provided by deciduous plants which lose their leaves in winter.

## APARTMENT OWNERS

### A. Switch to LED lighting\*

LEDs use up to 80% less electricity. Switching to LEDs is one of the lowest cost, highest benefit actions you can take.

Halogen downlights and old incandescent bulbs are the most energy guzzling and should be replaced immediately. Fluorescent lights should also be switched to LED. This can be done on failure if funds are limited.

### B. Upgrade to an all-electric efficient hot water system

Hot water systems are the second highest user of energy in Australian homes. Gas is no longer the most efficient way to heat water and is being phased out across Victoria to support the transition to zero emissions. If you have a gas hot water system dedicated to your apartment, the best replacement is an electric instantaneous hot water system. For more information, visit the [A Guide to Electrifying your Apartment building or Townhouse](#).

### C. Reduce water use\*

Reducing hot water use will cut your water bills and reduce your energy bills. In Victoria we should use a maximum of 155L of water per person per day. If you are using more, make sure you have a modern, low flow showerhead. Then upgrade your taps or DIY install flow restrictors from your local hardware shop. Lastly, replace your single flush toilet cistern with a low water, dual flush alternative.

When purchasing, look for the [WELS water star rating](#) on taps, showers, toilets, dishwashers and washing machines.

### D. Buy electric energy efficient appliances

Home appliances and equipment use an average of 25% of household energy. Buying highly efficient appliances will reduce ongoing electricity bills.

Energy star rating labels will help you purchase efficient appliances when shopping for an air conditioner, dryer, computer monitor, dishwasher, fridge, freezer, washing machine or TV. However, it is important to [understand how to use the label](#), especially when comparing between different sized products.

## Unlocking Sustainable Strata

## Mid Rise Apartments

### E. Switch to all-electric cooking

Gas cooktops are inefficient and lead to poor indoor air quality. A child living with gas cooking in the home [faces a comparable risk of asthma](#) to a child living with household cigarette smoke. Switch to an induction cooktop and electric oven. For more information, see the [Guide to Electrifying your Apartment Building or Townhouse](#).

### F. Switch to efficient electric heating and cooling

Gas is no longer the most efficient way to heat your home and is being phased out across Victoria to support the transition to zero emissions. The best replacement is a split system air conditioner, which can also cool your home in summer. For more information, see the [Guide to Electrifying your Apartment Building or Townhouse](#).

Ceiling fans are also a low cost way to cool your home, and can be used in reverse during winter to push hot air down into living spaces. During summer, remember to open all your windows when the temperature drops. This will cool your home overnight and reduce the need for air conditioning the following day.

### G. Draught proof your apartment

Up to 25% of winter heat loss from homes is caused by drafts (gaps and cracks in walls and around doors and windows). Draught proofing will make your home more comfortable and cheaper to heat and cool.

Draught proofing can be done by a tradesperson or using products from your local hardware shop. The [Sustainability Victoria website](#) has some useful guidance.

### H. Install double glazing

Double glazing can improve the thermal performance of windows by around 30%, and reduce outside noise entering your apartment. Windows can be made from timber, aluminium or uPVC. Timber and uPVC have excellent thermal properties. However, timber windows require maintenance, whereas uPVC windows do not so they are usually a better solution for apartments.

Windows are an intersection between private and common property. Work with your owners corporation to confirm any agreements around aesthetic guidelines and how the window retrofits will be funded.

### I. Install external shading

Windows are the main source of heat gain into your home. Appropriate shading over windows and doors will help keep your home cool in summer, and allow sunlight in during winter. Shading is most effective when installed externally, so an awning is better than an internal blind. The type of shading you require will depend on the orientation of your windows and doors. The [Your Home website](#) provides advice to help you select the best solution.

Remember your owners corporation may have guidelines regarding changes to the building facade so remember to check with your owners corporation committee or manager before proceeding. Don't forget to talk with your neighbours too, they might like to follow your example.