After Hours 'Phone-In'
(02) 9977 1801

WATTBLOCK ENERGY REPORT

BASIC ASSESSMENT

Owners Corporation
1 John Street
Sydney NSW 2000

Block Type:	High Rise
Total Floors:	16 + 4 Parking
Total Units:	82
Age of Block:	41 - 50 Years

Estimated 2-STAR ENERGY RATING

Common Energy: $52,234 p.a. | Residential Energy: Est. $127,500 p.a. | Water: Est. $32,028 p.a.

FAST PAYBACK OPPORTUNITIES

Wattblock estimates the annual energy costs for your common areas can be reduced by 40% after all fast payback projects.

ESTIMATED COST REDUCTION	ESTIMATED ANNUAL SAVINGS	ESTIMATED PROJECT COSTS (AFTER REBATE)	ESTIMATED PAYBACK
40%	$20,897	$66,793	3.2 Years

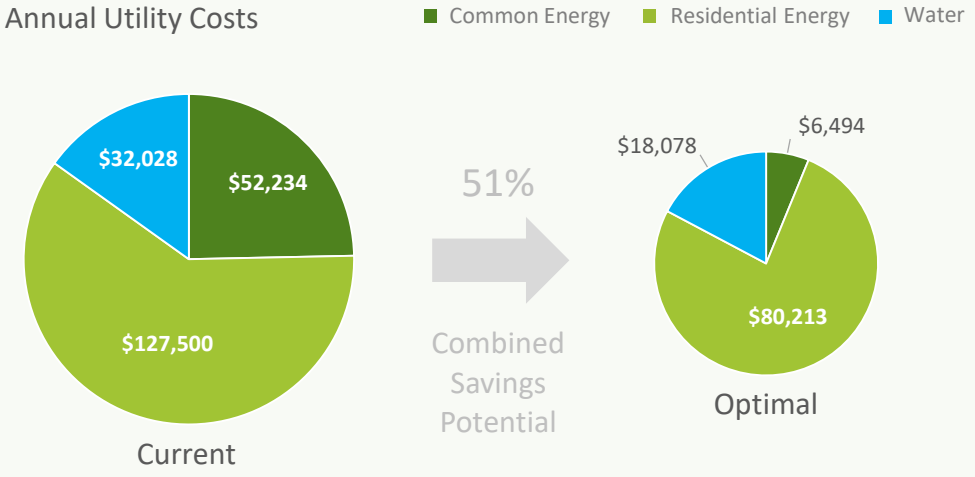
Note: All figures are GST inclusive.

SUSTAINABILITY ROADMAP

Energy efficiency upgrades (e.g. LED lighting) and renewable technologies can lower your energy bill by reducing grid usage.

Residential energy costs can be reduced through bulk billing systems.

Water savings can be achieved by targeting leakages and efficiency.



LOW HANGING FRUIT

Wattblock recommends the top projects for your block as summarised in the table.

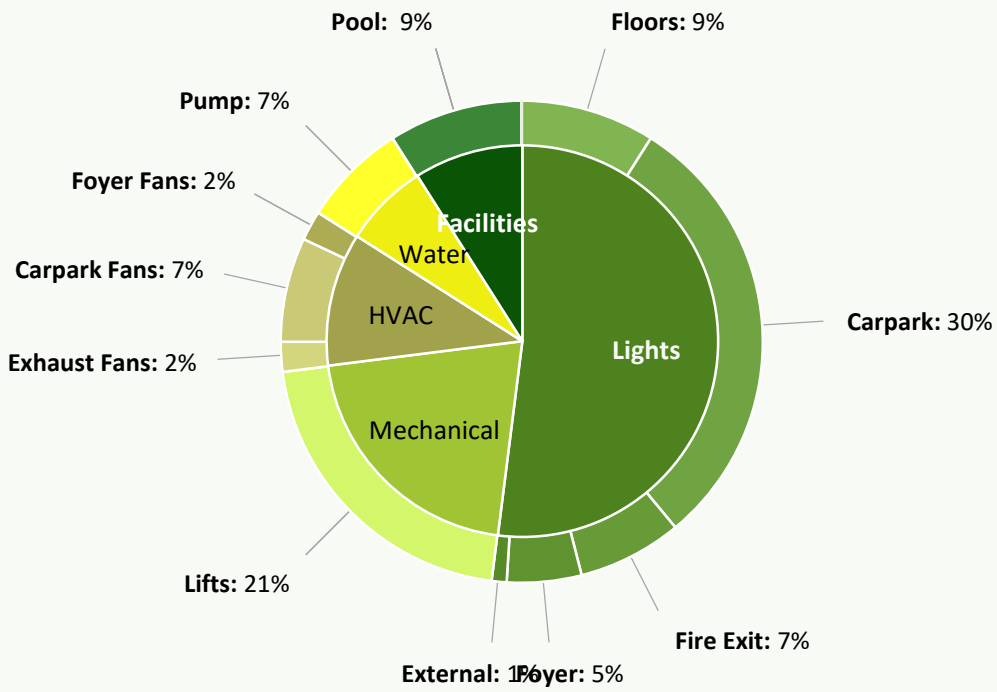
Projects	Description	Est. Savings	Est. Cost	Est. Payback

Requires Site Visit

COMMON AREA ENERGY CONSUMPTION

Understanding which assets are likely to be contributing to your block's common area energy consumption is the first step in building an energy reduction roadmap.

* Split by energy costs

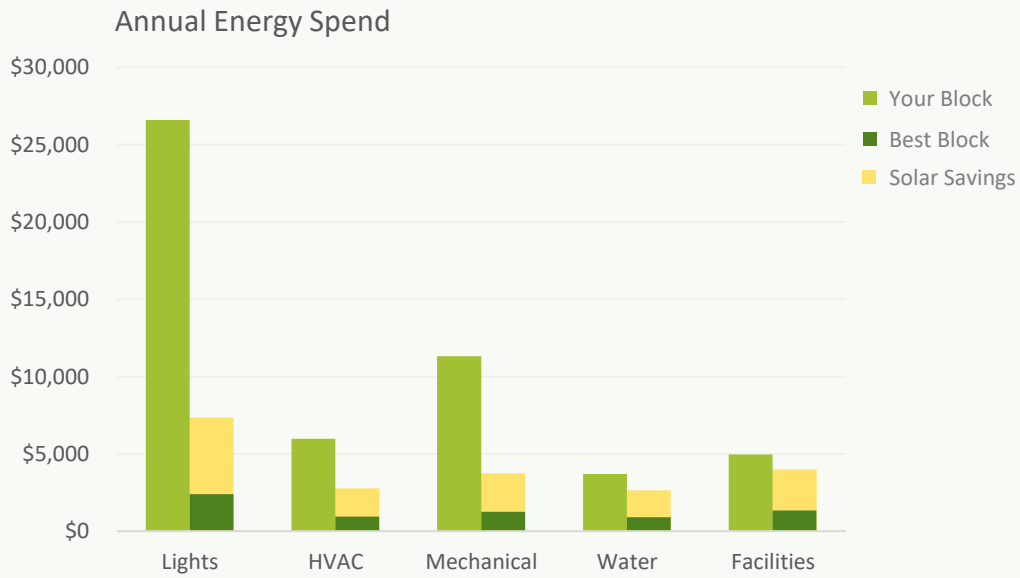


COMMON AREA ENERGY SAVINGS

Annual common energy cost of $52,234 includes $45,763 in energy billing and an estimated $6,471 in light replacements.

Best Block represents the optimal future state of your building. This is based on proven savings in other best-in-class buildings.

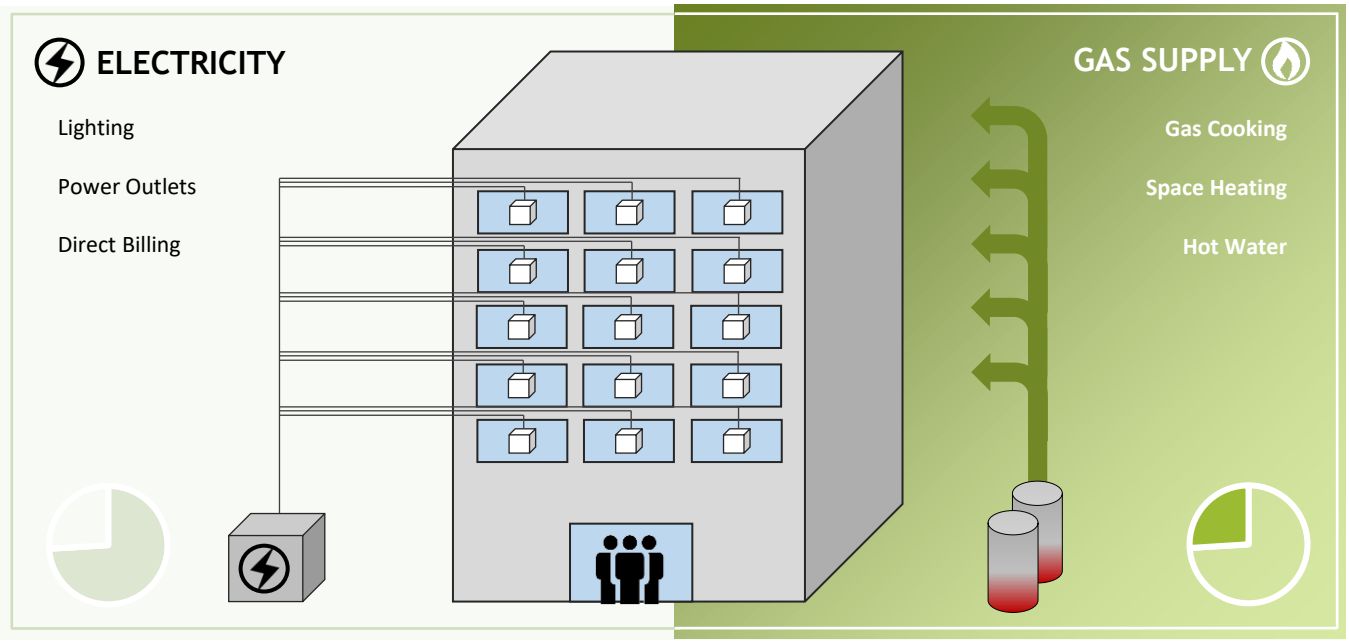
Note: HVAC stands for Heating, Ventilation and Air Conditioning systems.



	Your Block	Best Block	Difference	
Lights	$26,534	$2,327	$24,207	✓
HVAC	$5,910	$878	$5,032	
Mechanical	$11,261	$1,187	$10,074	
Water	$3,625	$838	$2,787	
Facilities	$4,904	$1,264	$3,640	

RESIDENTIAL
ENERGY CONSUMPTION

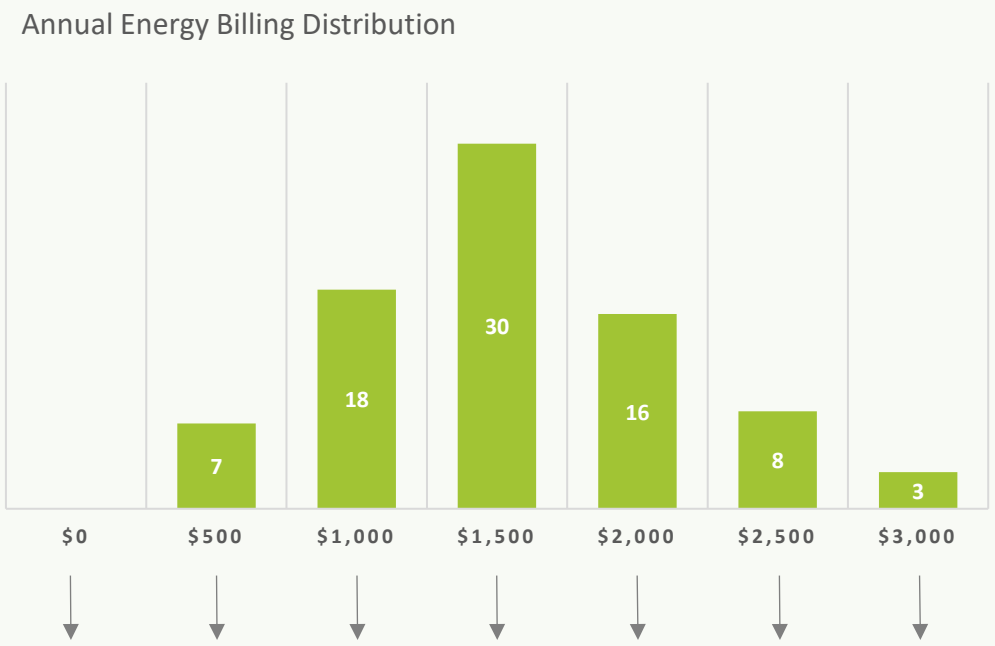
Coordinating electricity purchases across common areas and individual residences provides mutual benefit. An integrated system will also allow EV recharging to be added to resident bills.



RESIDENTIAL
ENERGY BILLING

Wattblock estimates the annual energy cost for all residents to be $127,500 p.a. This cost is distributed among 82 residences as follows.

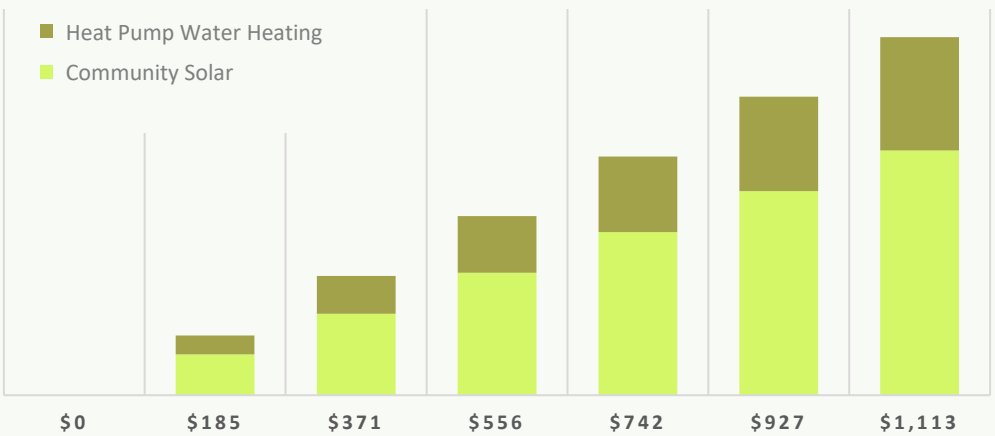
For example, it is estimated that there are 16 residences that are spending about $2,000 per year on energy usage.



RESIDENTIAL
ENERGY SAVINGS

The Owners Corporation can generate futher revenue for residents by using a communal solar system and heat pump for water heating.

For example, a residence currently spending $2,000 p.a. could reduce their bill by $742.



WATER USAGE ASSESSMENT

Average water usage is compared against benchmark data to provide an indication of potential water savings opportunities including elimination of base flow leakages.

Note: Figures are based on statistical averages only. Contact Wattblock to add actual water billing data.

WATER SAVINGS OPPORTUNITY

Estimated cost saving opportunity includes elimination of water leaks and other water efficiency measures.

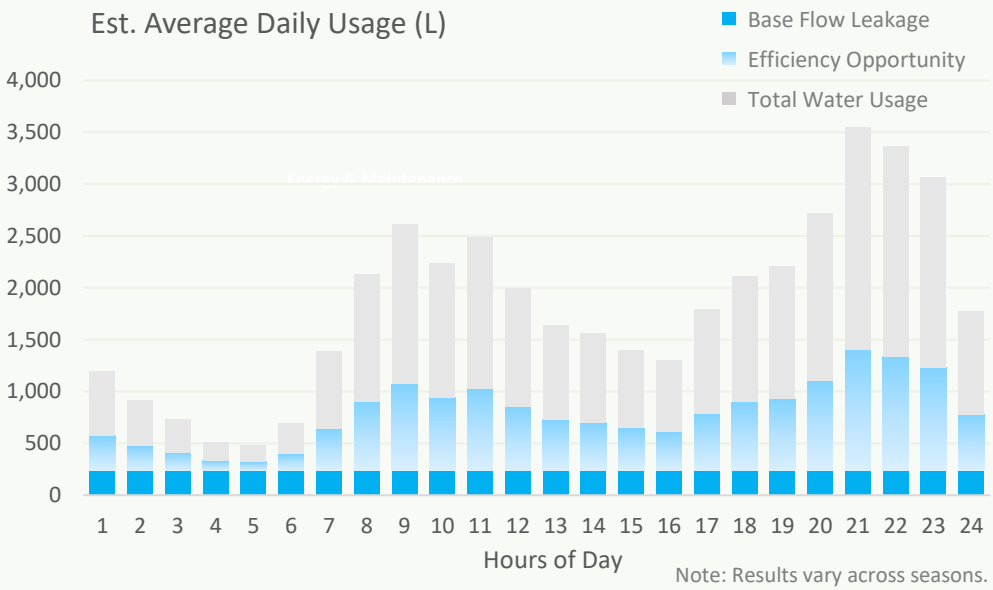
DAILY WATER USAGE PER RESIDENCE	ESTIMATED ANNUAL COSTS PER RESIDENCE	ESTIMATED ANNUAL SAVINGS OPPORTUNITY	PERCENTAGE SAVINGS OPPORTUNITY
536 L Typical Usage Range	$391 Avg 2.1 Bedrooms	$170	44%

Note: Excludes fixed charges.

DAILY USAGE PROFILE

Analysis shows higher daytime usage with peaks in the morning and evening.

Total savings opportunity of $170 per residence can be split between $119 of water efficiency gains and $51 of water leak fixes.

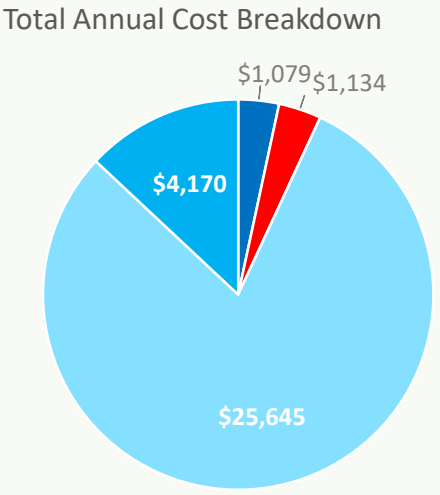


Note: Results vary across seasons.

TOTAL COST BREAKDOWN

Water savings in common areas like pools and toilets can be achieved through inspection by plumbers and other professionals.

Further savings can be achieved through engaging residents with information and checklists.



Rank	Cost	kL	People*
1	$1,134	567	8
2	$794	397	5
3	$718	359	5
4	$605	302	4
5	$567	283	4

*Estimated people based on usage

SOLAR + BATTERY IMPACT ASSESSMENT

Solar energy viability depends largely on available roof space for solar panels, the electrical usage over the day and across seasons of the year. Adding batteries enables a larger solar system to be installed.

ENERGY SAVINGS OPPORTUNITY

This entire page assumes all energy efficiency projects (e.g. LED lighting) have already been completed.

Add Batteries
Based on Tesla Powerwall

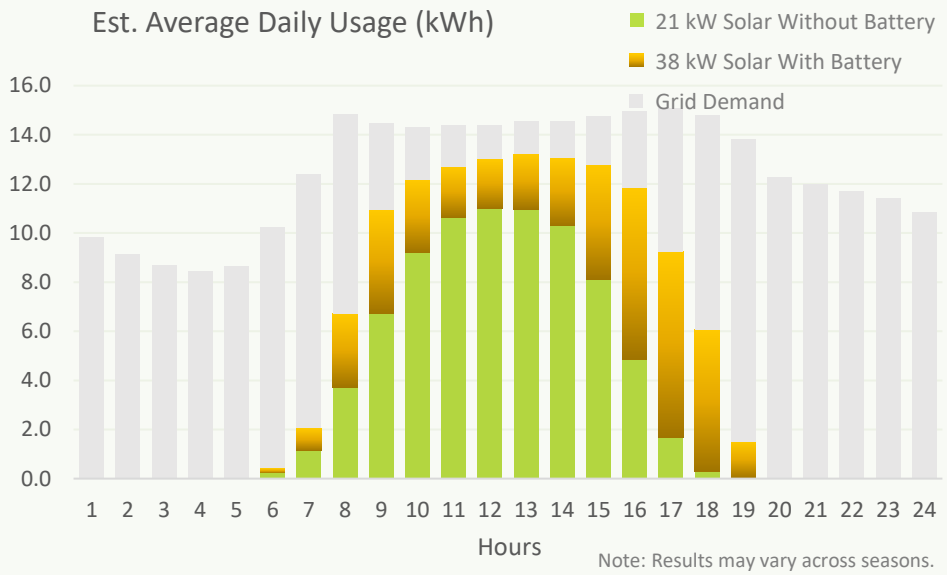
SOLAR SYSTEM SIZE	ESTIMATED ANNUAL COST SAVINGS	ESTIMATED PROJECT COSTS	ESTIMATED PAYBACK
21 kW 84 Solar Panels	$6,355	$30,146	4.4 Years
38 kW 152 Solar Panels	$10,707	$75,867	6.6 Years

Note: Contact Wattblock for alternative system configurations.

LOAD PROFILE ASSESSMENT

Taking into account the available roof space and your common area energy usage, a 21 kW solar energy system is possible.

This can be increased to a 38 kW system with 26.8 kWh of batteries.



Note: Results may vary across seasons.

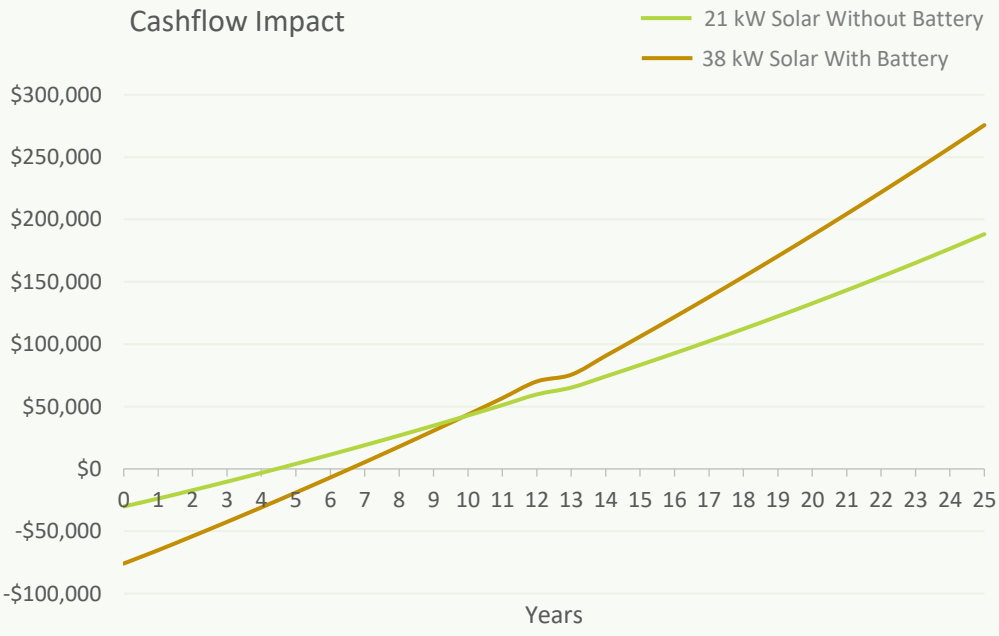
SOLAR PAYBACK ASSESSMENT

Upfront purchase of the 21 kW solar energy system without batteries is estimated to cost $30,146 with a 4.4 year payback.

The 38 kW system with 26.8 kWh of battery is estimated to cost $75,867 with a 6.6 year payback.

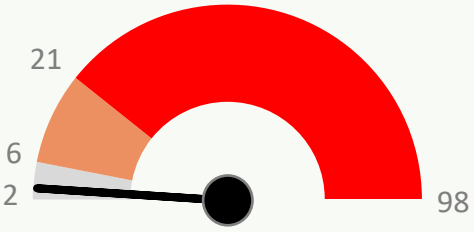
Solar energy suppliers may also offer a no upfront cost installation via a power purchase agreement.

Note: Analysis includes inverter and battery replacement in year 12.

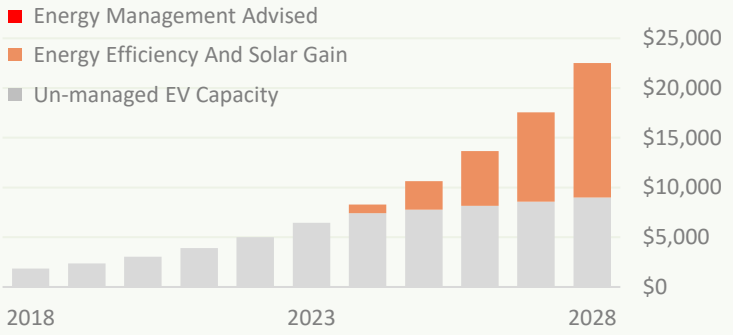


ELECTRIC VEHICLE CHARGING

Understanding how Electric Vehicles (EVs) will affect common area and individual energy costs will help committees in working with current and future EV owners.



Number of Electric Vehicles



Annual Charging Costs

The building has an estimated 2 electric vehicles today, growing to 15 by 2027 with a charging cost of $22,528 p.a. Based on similar buildings, your common energy supply can support an estimated 6 charge stations before energy management is advised.

Energy management regulates EV recharge to avoid excess demand charges or disrupting other facilities such as lighting and lifts. Number of electric vehicles include hybrids and is based on statistical averages unless an EV sub-metering system is in place.

Hazard Warning

SOLUTION 1
UNMETERED USERS

This solution is most common where there are power outlets in the carpark. There are no set-up costs but the strata pays for the usage.

WHO PAYS
STRATA

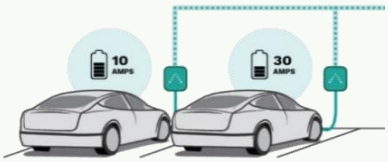
SET-UP COST
$0
Per Electric Vehicle

OPERATING COST
$922 p.a.
Based on 15,500 km p.a.

COST PER 1,000 KM
$59.47
Electric Powered km

RECOMMENDED

SOLUTION 2
MANAGED CHARGING



User pays sub-metering of common power for EV recharge enables lower cost and helps with power management.

WHO PAYS
OWNER

SET-UP COST
Est. $2,500
Excluding Charging Unit

OPERATING COST
$790 p.a.
Based on 15,500 km p.a. + billing fees

COST PER 1,000 KM
$27.74
Electric Powered km

SOLUTION 3
PRIVATE CONNECTION

Connecting an EV charger to private power still requires strata approval. This can be costly to set-up and usage costs will be higher as well.

WHO PAYS
OWNER

SET-UP COST
Est. $8,000
Excluding Charging Unit

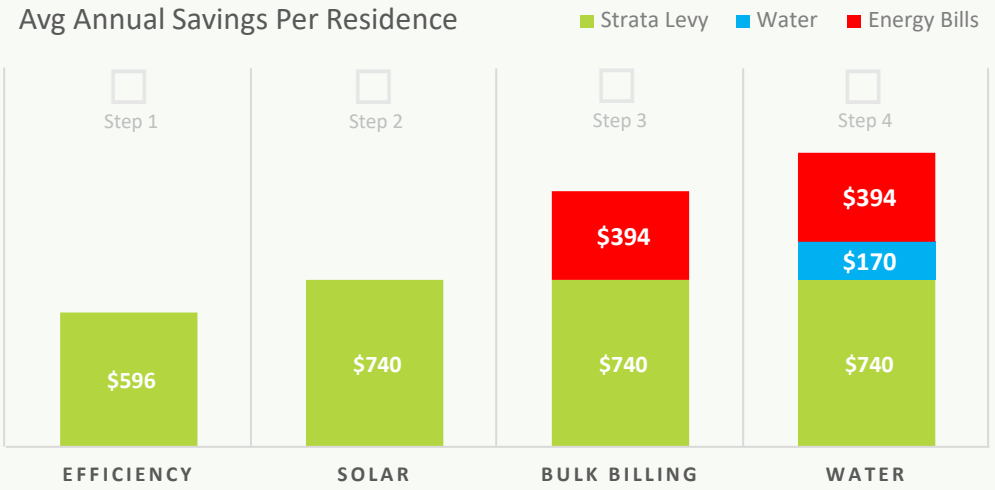
OPERATING COST
$968 p.a.
Based on 15,500 km p.a.

COST PER 1,000 KM
$62.45
Electric Powered km

*Note: For further detail about electric vehicle charging options refer to the Wattblock electric vehicle fact sheet.

CUMULATIVE COST REDUCTION

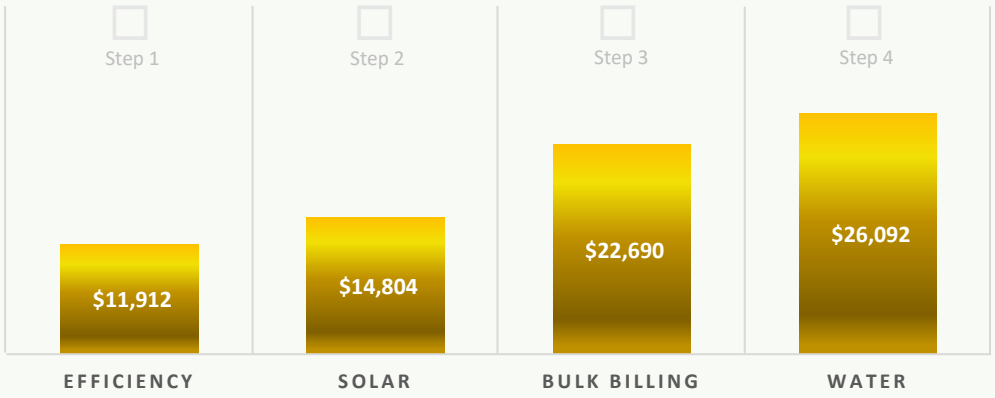
Individual residences are estimated to save $740 p.a. on strata levies, $170 p.a. on water bills and $394 p.a. on residential energy bills after implementation of all identified initiatives.



PROPERTY VALUATION IMPACT

A building with lower operating costs is worth more because net income to property owners is increased.

Total valuation increase represents an average of $26,092 per apartment.



Note: Valuation impact is based on 20x multiple of cash flow.

ENVIRONMENTAL ACHIEVEMENT

Following sustainability initiatives your block will exceed the national carbon reduction target of 5% set for 2020. If every block did this, we would be well on our way to exceeding the target.

PROPORTION OF POPULATION LIVING IN THIS BLOCK TYPE 3.8%	AVERAGE OCCUPANCY RATE PER RESIDENCE 2.1	NUMBER OF BLOCK RESIDENTS 175	ENERGY USE PER RESIDENCE (MJ / YR) 23,337
CURRENT BLOCK CO_2 EMISSIONS (TONNES/YR) 563	EMISSIONS SAVINGS OPPORTUNITY (TONNES/YR) 114	EQUIVALENT NUMBER OF TREES PLANTED 1,708	NATIONAL CO_2 REDUCTION TARGET 2020 CONTRIBUTION 404%

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