



WATTBLOCK ENERGY REPORT

PREMIUM ASSESSMENT

Owners Corporation
1 Sample Street
Sydney NSW 2000

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

ENERGY: (Est.) ★★☆☆☆
WATER: (Est.) ★★☆☆☆

Common Energy: \$38,392 p.a. | Resident Energy: Est. \$127,500 p.a. | Water: Est. \$27,800 p.a.

FAST PAYBACK OPPORTUNITIES

Wattblock estimates the annual utility costs for your building can be reduced by 11% after all fast payback projects.



Note: All figures are GST inclusive.

SUSTAINABILITY ROADMAP

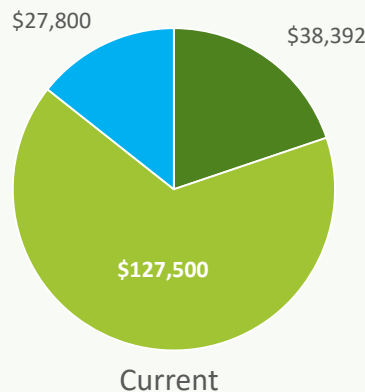
Energy efficiency upgrades (e.g. LED lighting) and renewable technologies can lower your energy bill by reducing grid usage.

Residential energy costs can be reduced through bulk billing systems.

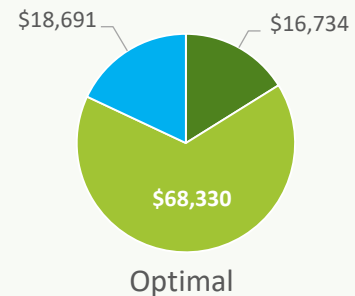
Water savings can be achieved by targeting leakages and efficiency.

Annual Utility Costs

■ Common Energy ■ Resident Energy ■ Water



46%
→
Combined Savings Potential



LOW HANGING FRUIT

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

Consider a \$0 upfront cost payment plan for all recommended projects. Contact Wattblock for further information.

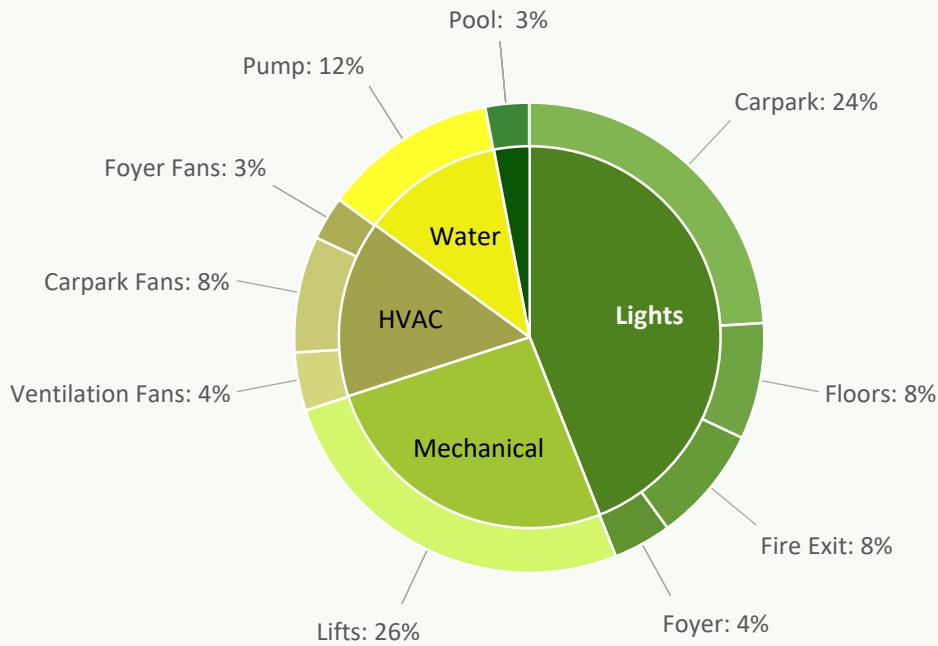
For more detailed analysis of projects see final page.

Projects	Description	Est. Savings	Est. Cost	Est. Payback	
1	Tariff Optimisation	Move onto a more favourable energy contract.	\$1,970	\$400	0.2 Years
2	Common Area Lighting	Replace common area lighting in foyers, fire escapes and garden with LED.	\$9,799	\$23,066	2.4 Years
3	Power Factor Correction	Install a power factor correction unit to improve the efficiency of power usage.	\$2,333	\$7,061	3 Years
4	Solar Energy	Install 33 kW solar system for common power supply.	\$6,450	\$48,610	6.8 Years
TOTAL			\$20,552	\$79,137	3.9 Years
> Pay By Savings		Best Plan: \$0 Upfront, 7 Year Term	\$16,561	Annual Payments	
		Est. Net Savings	\$3,991	Annual Savings	

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



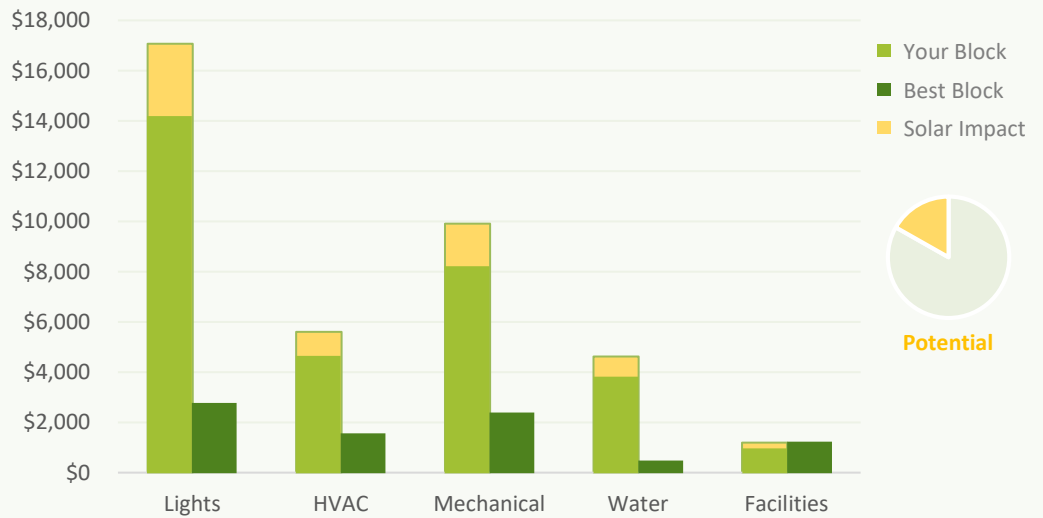
COMMON AREA ENERGY SAVINGS

Annual common energy cost of \$38,392 includes \$30,983 in energy billing and an estimated \$7,409 in light replacements.

Best Block indicates the levels required for a six star energy rating for your building. This is based on proven savings in other best-in-class buildings.

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

Annual Energy Spend

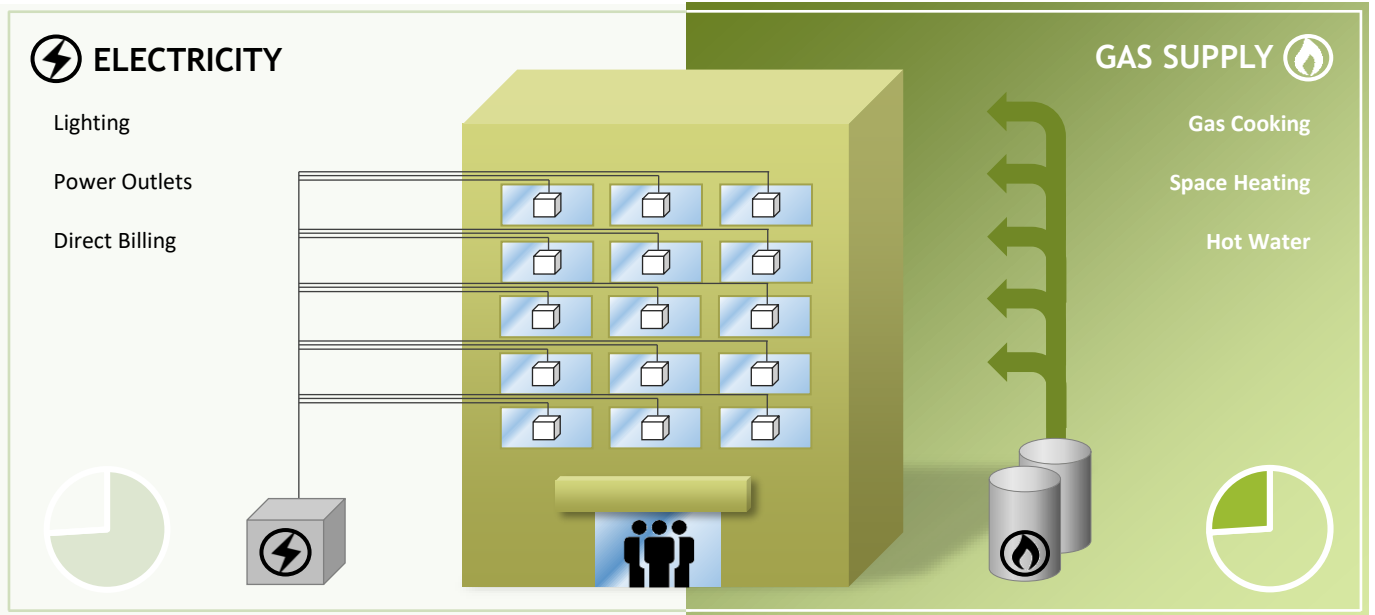


	Your Block	Best Block	Difference	
Lights	\$17,072	\$2,793	\$14,279	✓
HVAC	\$5,605	\$1,589	\$4,016	
Mechanical	\$9,903	\$2,415	\$7,488	
Water	\$4,621	\$500	\$4,121	
Facilities	\$1,190	\$1,259	-\$69	

✓ Low risk and easy upgrade opportunity

RESIDENTIAL ENERGY CONSUMPTION

Coordinating energy purchases across common areas and individual residences provides mutual benefit.

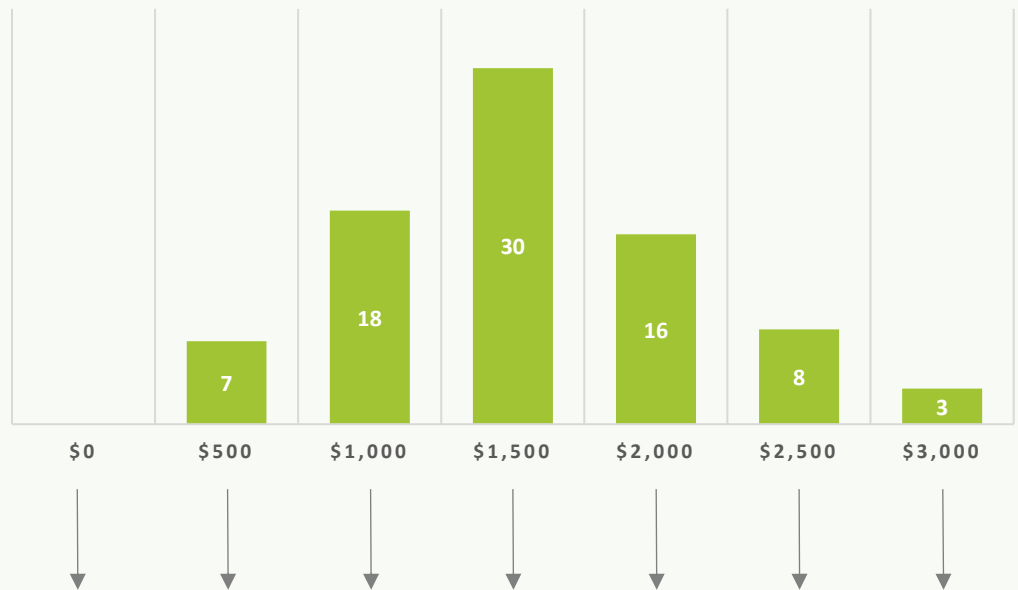


INDIVIDUAL ENERGY BILLING

Annual Energy Billing Distribution

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

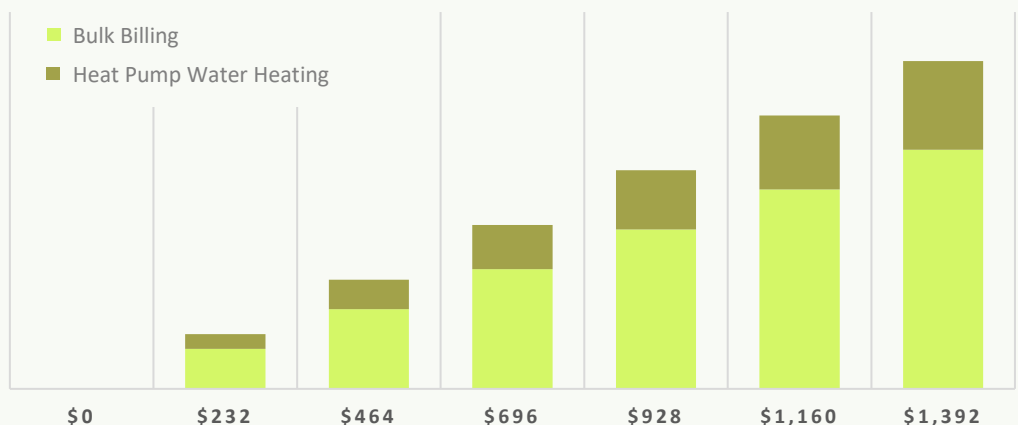
For example, it is estimated that there are 16 lots that are spending about \$2,000 per year on energy usage.



INDIVIDUAL ENERGY SAVINGS

The Owners Corporation can secure energy for residents at lower rates. Savings can be passed on to residents or provide additional income to the Owners Corporation.

Example: A lot currently spending \$2,000 p.a. could reduce their bill by \$928.





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.



Note: Excludes fixed charges.

DAILY USAGE PROFILE

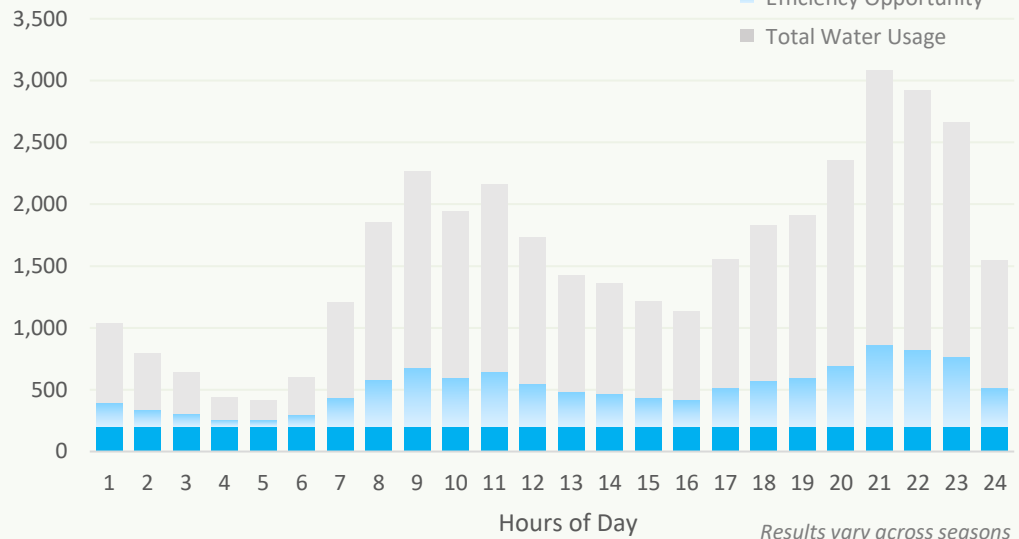
Analysis shows peaks in the morning and evening.

Total savings opportunity of \$111 per lot can be split between \$67 of water efficiency gains and \$44 of water leak fixes.



100% Central Services

Est. Average Daily Usage (L)



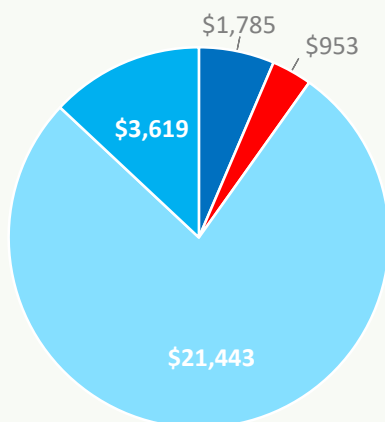
Results vary across seasons

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 individual lots with information and checklists.

Total Annual Cost Breakdown

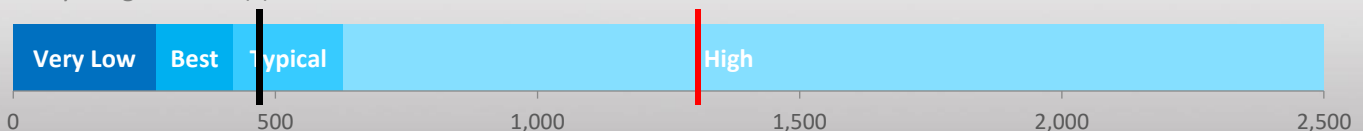


- Base Flow Leakage
- Common Areas
- Resident Usage
- Biggest Waster

Rank	Cost	kL	People*
1	\$953	476	7
2	\$667	334	5
3	\$603	302	4
4	\$508	254	3
5	\$476	238	3

*Estimated people based on usage

Daily Usage Per Lot (L)



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

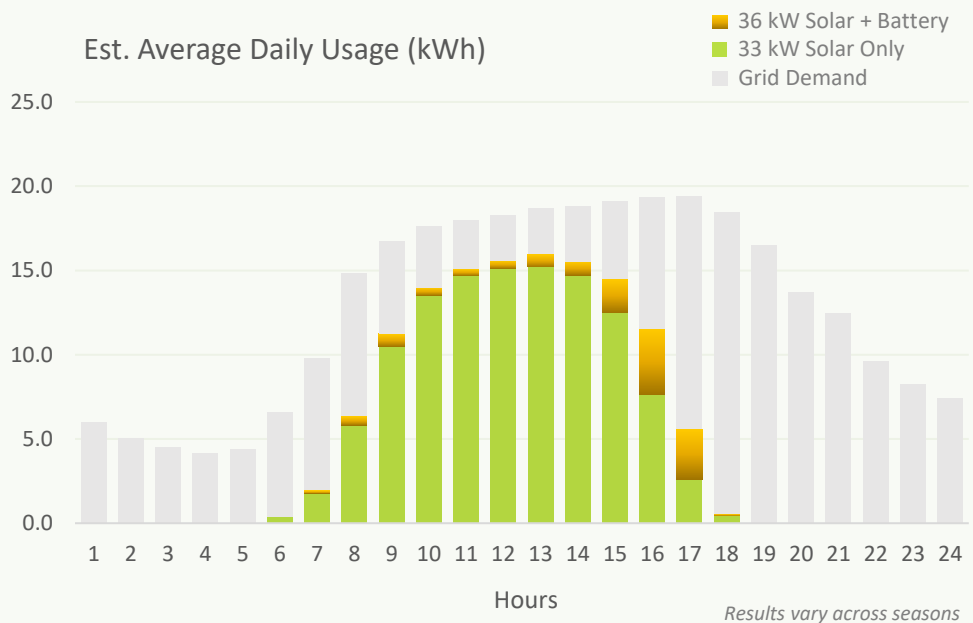
SOLAR SYSTEM SIZE	ESTIMATED ANNUAL COST SAVINGS	ESTIMATED PROJECT COSTS	ESTIMATED PAYBACK
33 kW 118 Solar Panels	\$6,450	\$48,610	6.8 Years
36 kW 129 Solar Panels	\$7,121	\$64,945	8.2 Years

Note: Contact Wattblock for alternative system configurations.

LOAD PROFILE ASSESSMENT

Taking into account the available roof space and the common area energy usage, a total 33kW solar energy system is possible.

This can be increased to a 36kW system with 13.4kWh of batteries.



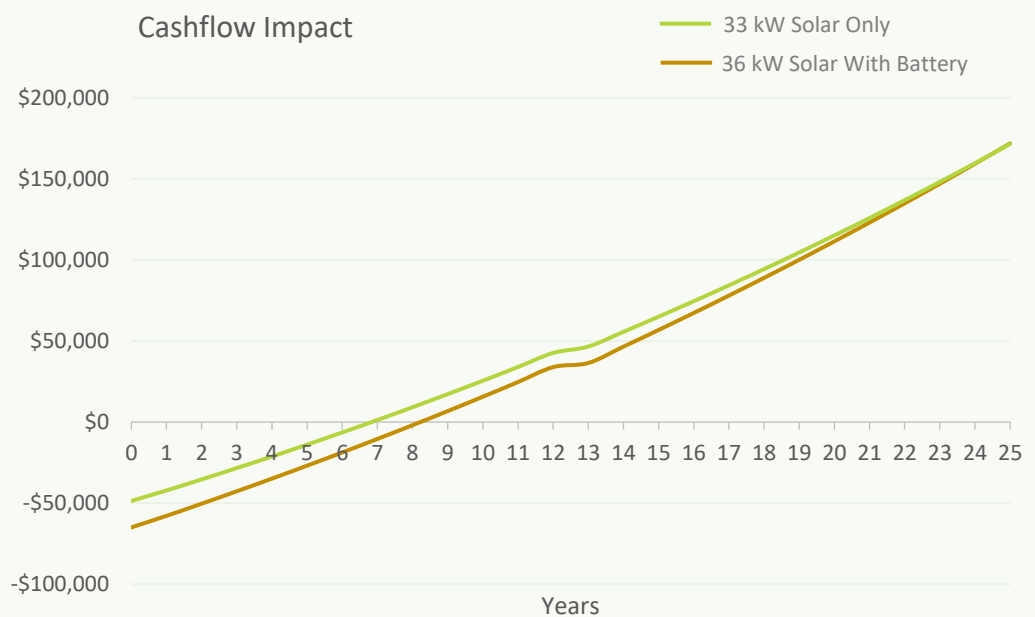
SOLAR PAYBACK ASSESSMENT

The 33kW of solar is estimated at \$48,610 with a 6.8 year payback.

36kW of solar with 13.4kWh of battery is estimated at \$64,945 with a 8.2 year payback.

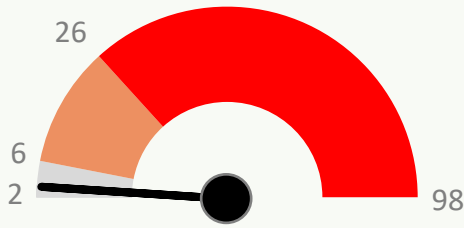
Suppliers may offer a no upfront cost installation via a power purchase agreement.

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

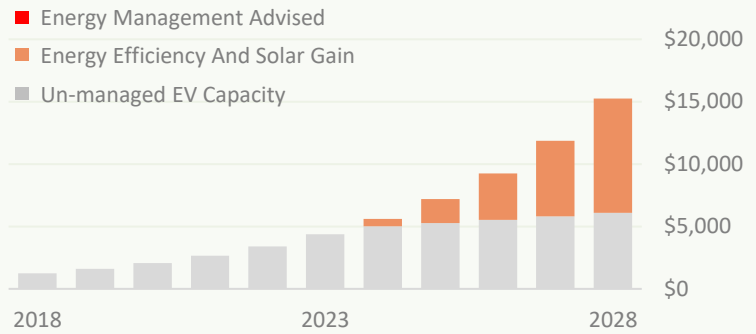


ELECTRIC VEHICLE CHARGING

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 \$15,246 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**

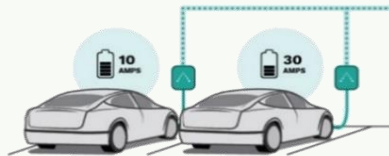
**SET-UP COST
\$0**
Per Electric Vehicle

**OPERATING COST
\$624 p.a.**
Based on 15,500 km p.a.

**COST PER 1,000 KM
\$40.27**
Electric Powered km

RECOMMENDED

SOLUTION 2 MANAGED CHARGING



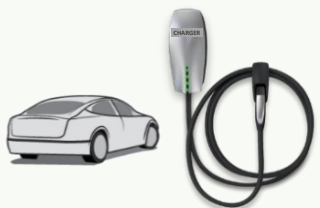
User pays sub-metering of common power for EV recharge enables lower cost and helps with power management.

**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
\$27.75**
Electric Powered km



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
\$896 p.a.**
Based on 15,500 km p.a.

**COST PER 1,000 KM
\$57.81**
Electric Powered km

NOTE: Cost per 1,000km for a typical car using petrol is approximately \$110.50 (eg Toyota Corolla)

PROJECT DETAIL COSTS AND BENEFITS

Projects can vary in the types of benefits they yield. Projects with the best financial payback may not yield the best long term value or have the best environmental impact.

Projects	Cost	Annual Savings	Payback	IRR	NPV	CO ₂ tonnes
1 Tariff Optimisation Move onto a more favourable energy contract.	\$400	\$1,970	0.2 Years	493%	\$23,276	N.A.
2 Common Area Lighting Replace common area lighting in foyers, fire escapes and garden with LED.	\$23,066	\$9,799	2.4 Years	42%	\$96,260	66.0
3 Power Factor Correction Install a power factor correction unit to improve the efficiency of power usage.	\$7,061	\$2,333	3 Years	33%	\$21,465	15.7
4 Solar Energy Install 33 kW solar system for common power supply.	\$48,610	\$6,450	6.8 Years	13%	\$32,410	43.4
TOTAL	\$79,137	\$20,552	3.9 Years	26%	\$173,411	125.1

Definitions

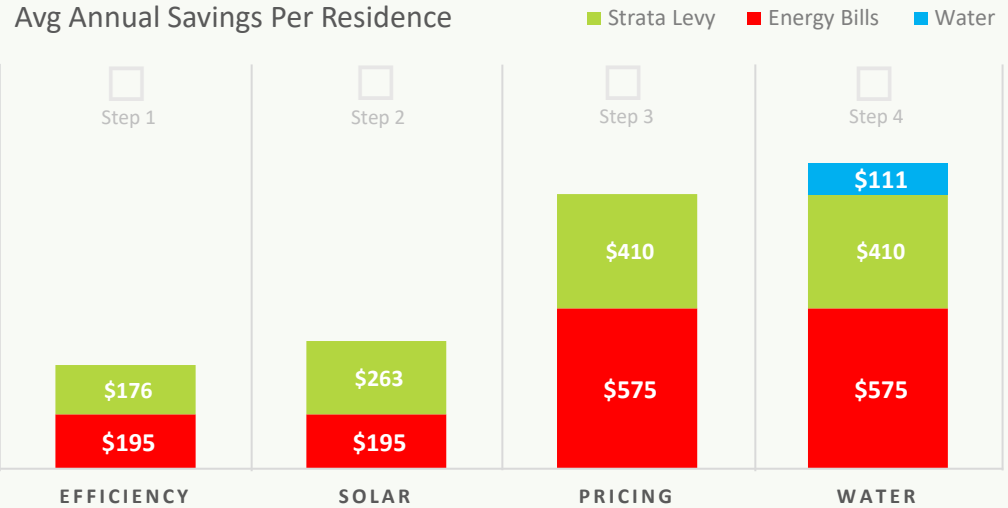
Cost	Estimated total upfront project cost including GST. Where relevant includes estimated labour for installation and commissioning.
Savings	Estimated annual savings including GST. Includes impact on usage costs and capacity demand charges where relevant. The savings also represent the cost of not doing the project. For example the cost of delaying the project by 6 months would be approximately half the annual savings.
Payback	Estimated simple payback based on the estimated cost and savings. Does not account for potential changes in the annual savings estimate due to inflation or other factors.
IRR	Internal Rate of Return indicates the percentage annual return on the estimated investment in the project. This is comparable to interest rates that could be achieved by putting the same amount of funds in a term deposit.
NPV	Imagine someone hands you a cheque for the calculated NPV amount. Executing the project is worth that much money in today's dollar value. Savings, based on energy prices, assume 0% growth. Discount rate is 8% (offsets sinking funds) with terminal value in year 10.
CO ₂ tonnes	Estimated annual carbon abatement impact of the project. This is measured in tonnes of carbon dioxide.

COST OF DELAY

\$1,713	\$5,138	\$20,552
missed if these projects are delayed by one month	missed if these projects are delayed by one quarter	missed if these projects are delayed by one year

CUMULATIVE COST REDUCTION

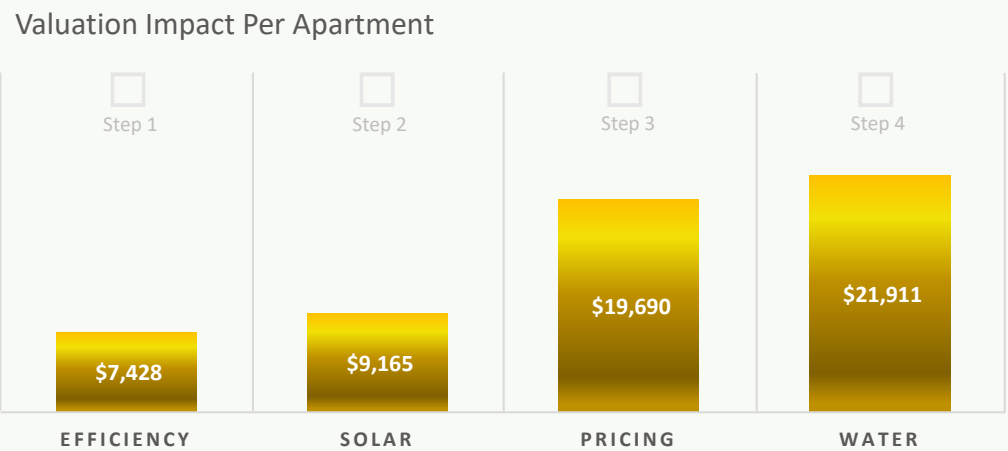
Individual residences are estimated to save \$410 p.a. on strata levies, \$575 p.a. on residential energy bills and \$111 p.a. on water bills after completing all potential initiatives.



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 \$21,911 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 PEOPLE LIVING IN THIS BLOCK TYPE	AVERAGE OCCUPANCY RATE PER RESIDENCE	NUMBER OF BLOCK RESIDENTS	ENERGY USE PER RESIDENCE (MJ / YR)
3.8%	2.1	175	23,337
CURRENT BLOCK CO ₂ EMISSIONS (TONNES/YR)	EMISSIONS SAVINGS OPPORTUNITY (TONNES/YR)	EQUIVALENT NUMBER OF TREES PLANTED	NATIONAL CO ₂ REDUCTION TARGET 2020 CONTRIBUTION
563	151	2,270	537%

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