



WATTBLOCK ENERGY REPORT

PREMIUM ASSESSMENT

Genesis
133-137 Bowden St
Meadowbank NSW 2114

Block Type: Mid Rise
Total Floors: 5 + 3 Parking
Total Units: 58
Age of Block: 0 - 10 Years



WATTBLOCK 5-STAR ENERGY RATING*

Common Energy: \$35,303 p.a. | Residential Energy: Est. \$90,500 p.a. | Water: Est. \$21,092 p.a.

DEVELOPMENT OPPORTUNITIES

Wattblock estimates the utility costs for all residents can be reduced by 44% after additional project investments in comparison to a standard building in the market.



Note: All figures are GST inclusive.

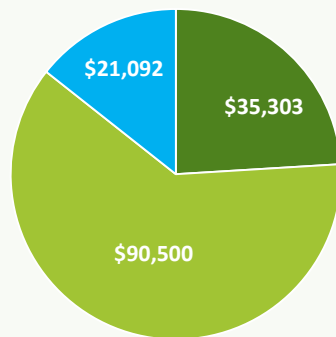
SUSTAINABILITY ROADMAP

Energy efficiency upgrades (e.g. smart choices on motion-sensored LED lighting) and renewable technologies can lower your energy bill by reducing grid usage.

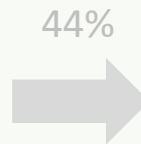
Residential energy costs can be reduced through an embedded electricity network system.

Annual Utility Costs

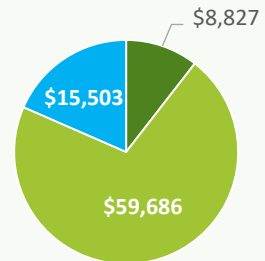
■ Common Energy ■ Residential Energy ■ Water



Current



44%
Combined Savings Potential



Optimal

PROJECT RECOMMENDATION

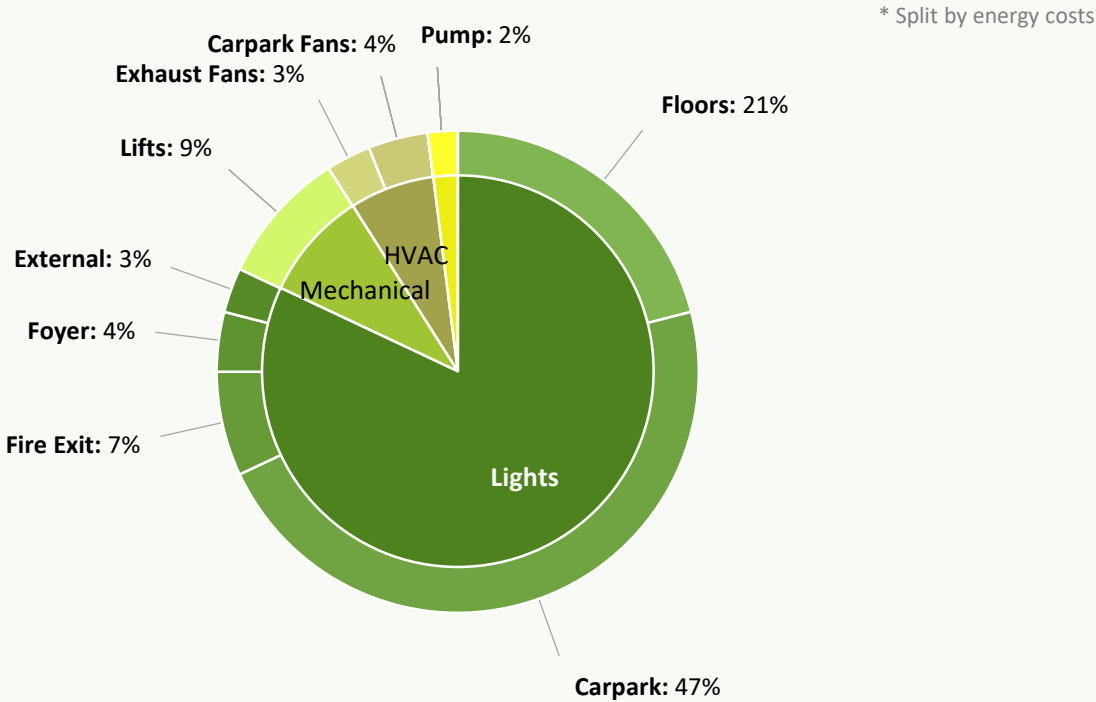
Wattblock identifies the top projects for the developer to invest in the building.

*The Wattblock 5-star energy rating can be achieved after the implementation of projects 1 to 3.

Projects	Description	Est. Savings	Est. Cost	Est. Payback
1 Lighting Sensors	Use motion sensed LED lighting for common areas.	\$26,005	\$53,479	2.1 Years
2 Embedded Electricity Network	Owners Corporation bulk buys energy for all residents and obtains cheaper electricity inside individual apartments.	\$19,568	\$57,840	3 Years
3 Solar Energy	Install a 50 kW solar energy system to lower electricity costs in individual apartments and lower carbon emissions.	\$13,867	\$58,750	4 Years
4 Efficient Showerheads	Install WELS 3-star rated showerheads for all bathrooms.	\$5,589	\$7,040	1.3 Years
5 Electric Vehicle Charging	Capability for electric vehicle charging at individual car spaces.	N.A.	N.A.	N.A.

COMMON AREA ENERGY CONSUMPTION

The following is a projection of the likely contributors to the block's common area energy consumption based upon a review of plans.



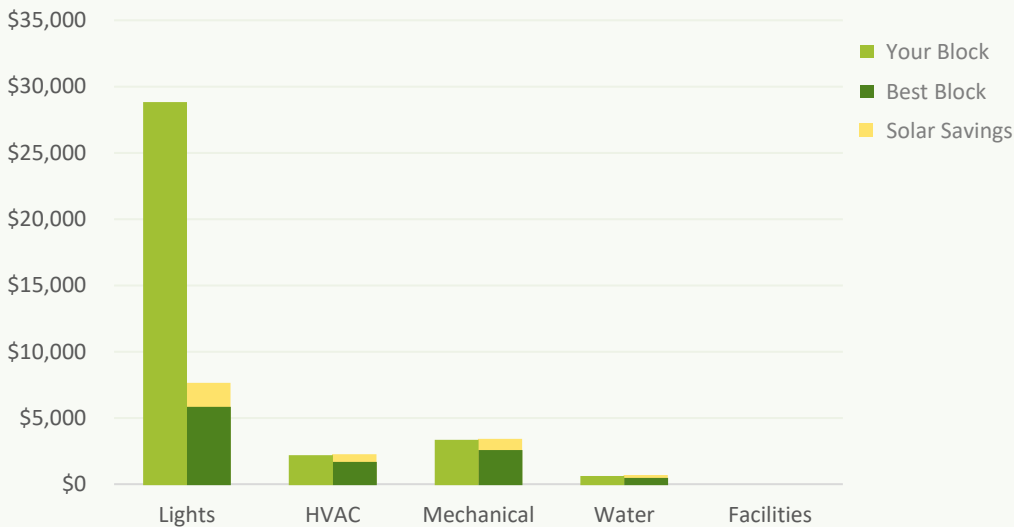
COMMON AREA ENERGY SAVINGS

Total annual common energy cost of \$35,303 includes \$30,809 in energy billing and \$4,494 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.

Annual Energy Spend

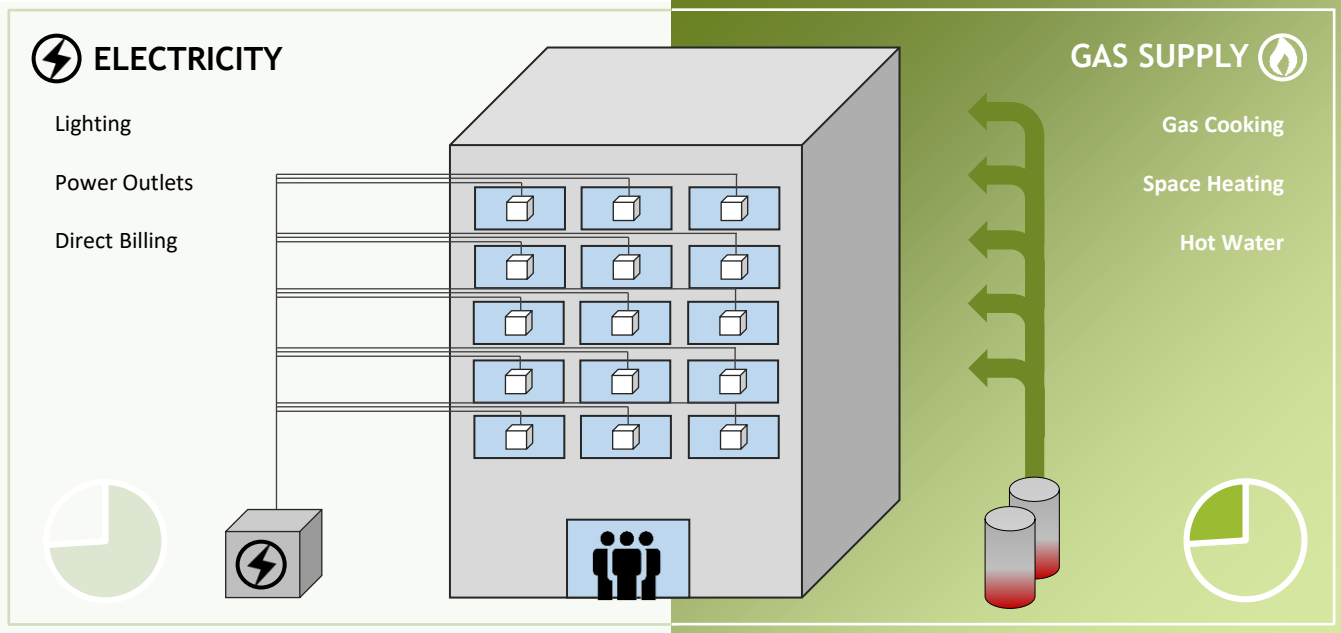


	Your Block	Best Block	Difference	
Lights	\$28,910	\$5,923	\$22,987	✓
HVAC	\$2,263	\$1,754	\$509	
Mechanical	\$3,431	\$2,659	\$772	
Water	\$699	\$542	\$157	
Facilities	\$0	\$0	\$0	

✓ Low risk and easy upgrade opportunity

RESIDENTIAL ENERGY CONSUMPTION

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



RESIDENTIAL ENERGY BILLING

Annual Energy Billing Distribution

Wattblock estimates the energy cost for all residents will be \$90,500 per annum. This cost will be distributed among 58 residences as follows.

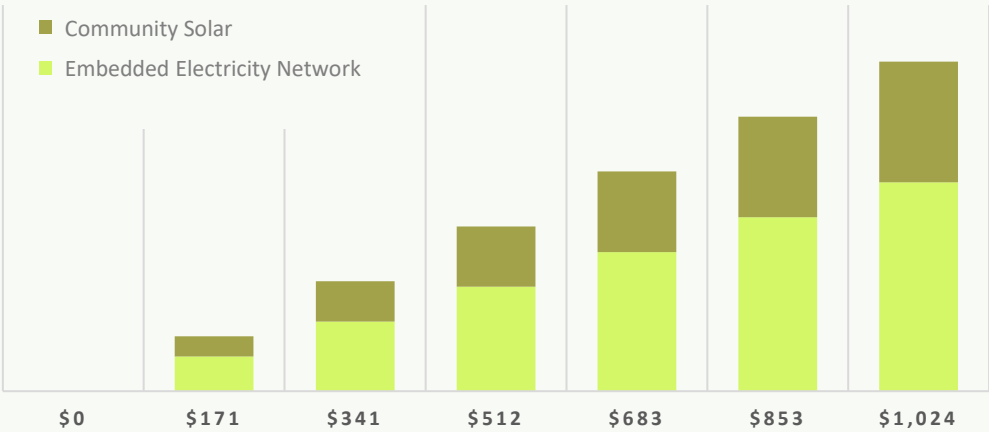
For example, it is estimated that there will be 12 residences that will spend about \$2,000 per year on energy usage.



RESIDENTIAL 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.

For example, a residence normally spending \$2,000 p.a. could reduce their bill by \$683.





WATER USAGE ASSESSMENT

Average water usage is compared against benchmark data to provide an indication of potential water savings opportunities.

WATER SAVINGS OPPORTUNITY

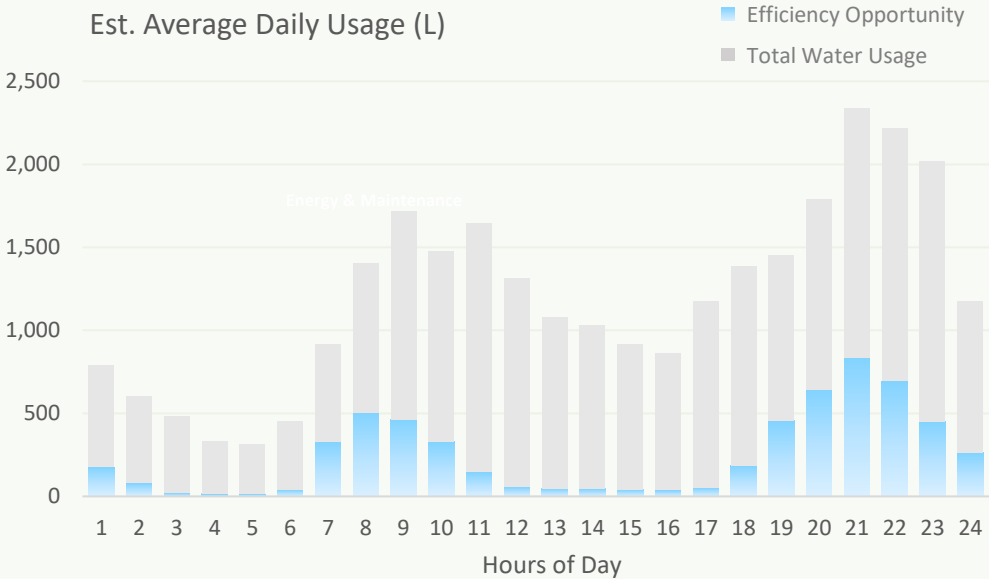
Estimated cost saving opportunity includes water efficiency measures.

DAILY WATER USAGE PER RESIDENCE 498 L <small>Typical Usage Range</small>	ESTIMATED ANNUAL COSTS PER RESIDENCE \$364 <small>Avg 2 Bedrooms</small>	ESTIMATED ANNUAL SAVINGS OPPORTUNITY \$96	PERCENTAGE SAVINGS OPPORTUNITY 26%
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Note: Excludes fixed charges.

DAILY USAGE PROFILE

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



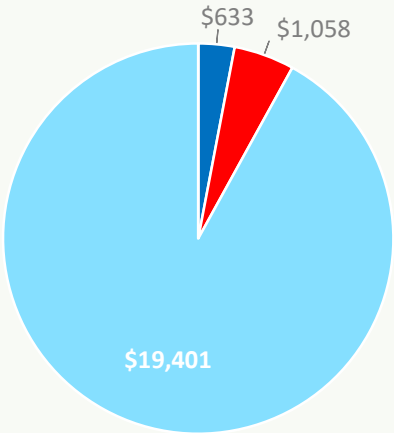
Note: Results vary across seasons.

TOTAL COST BREAKDOWN

Water savings in residential apartments can be achieved through the use of efficient showerheads.

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

Total Annual Cost Breakdown



- Common Areas
- Residential Usage
- Biggest Waster

Rank	Cost	kL	People*
1	\$1,058	529	7
2	\$741	370	5
3	\$670	335	5
4	\$564	282	4
5	\$529	265	4

*Estimated people based on usage

Daily Usage Per Residence (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.

ENERGY SAVINGS OPPORTUNITY

Solar energy reduces the electricity costs for both the common areas and individual apartments

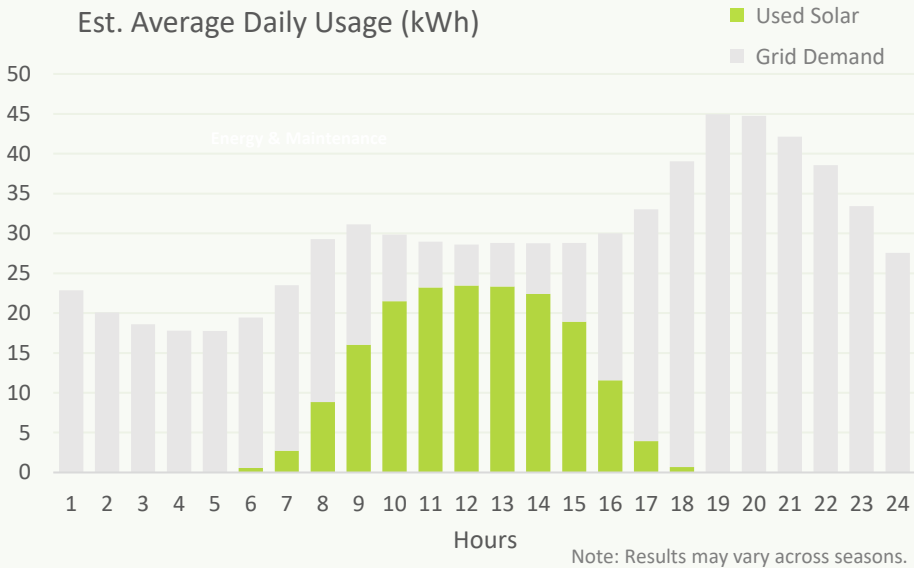
Based on Tesla Powerwall



Note: Contact Wattblock for alternative system configurations.

LOAD PROFILE ASSESSMENT

Taking into account the available roof space and projected common area and individual apartment energy usage, a 50 kW solar energy system is possible.

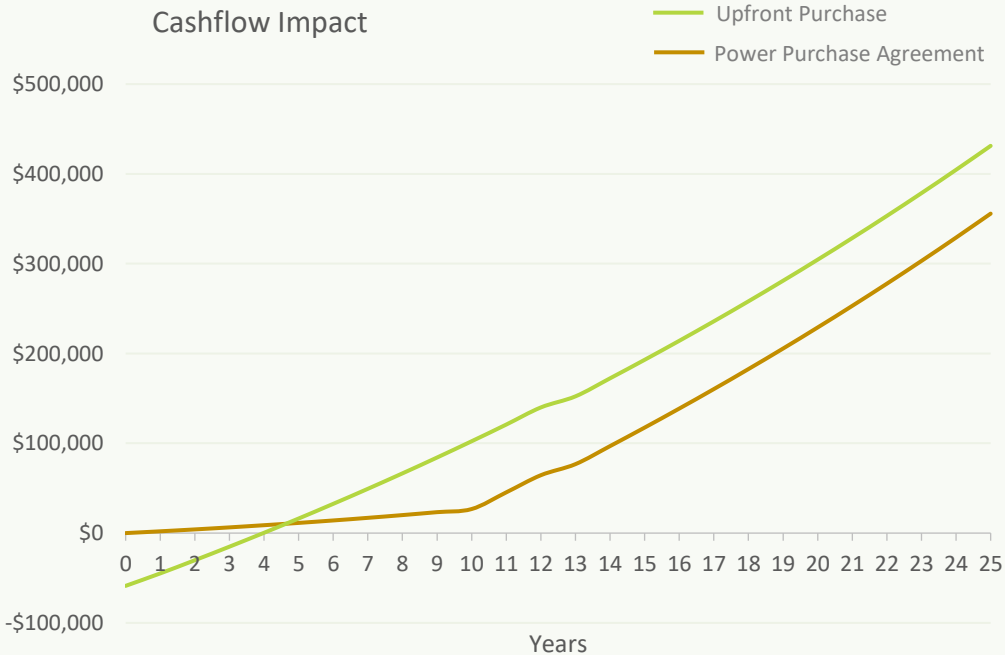


SOLAR PAYBACK ASSESSMENT

Upfront purchase of the 50 kW solar energy system is estimated to cost \$58,750 with a 4 year payback.

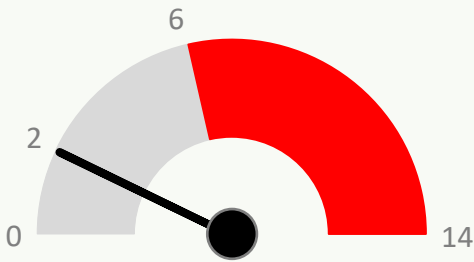
Solar energy suppliers may also offer a no upfront cost installation via a Power Purchase Agreement.

Note: Analysis includes inverter replacement in year 12.

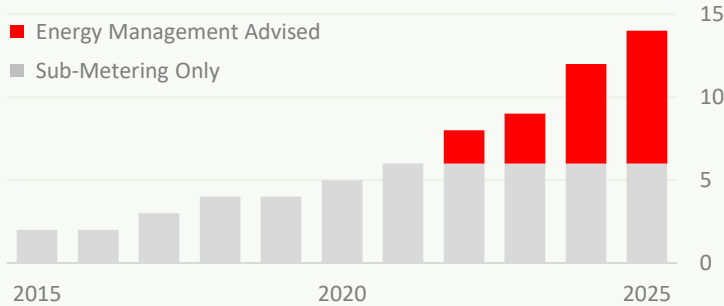


ELECTRIC VEHICLE CHARGING

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



Electric Vehicle Count



Electric Vehicle Projection

Wattblock estimates that your building will have 2 electric vehicles initially and will grow to 14 by the year 2025. Your common area energy supply can support 6 electric vehicle recharge stations before an energy management system will be needed.

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 CHARGING



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

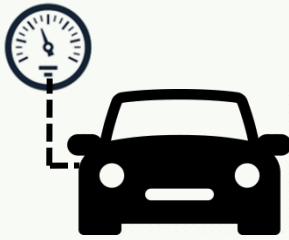
SET-UP COST \$0
Per Electric Vehicle

OPERATING COST \$858 p.a.
Based on 15,500 km p.a.

COST PER 1,000 KM \$55.35
Electric Powered km

RECOMMENDED

SOLUTION 2 METERED CHARGING



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

WHO PAYS OWNER

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

OPERATING COST \$1,218 p.a.
Based on 15,500 km p.a.

COST PER 1,000 KM \$55.35
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

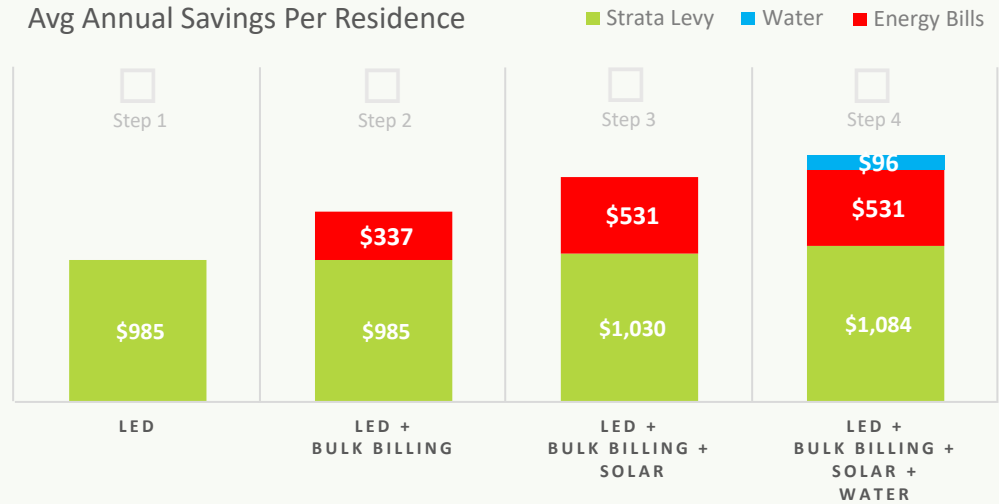
OPERATING COST \$901 p.a.
Based on 15,500 km p.a.

COST PER 1,000 KM \$58.12
Electric Powered km

CUMULATIVE COST REDUCTION

Individual residences are estimated to save \$1,084 p.a. on strata levies, \$96 p.a. on water bills and \$531 p.a. on residential energy bills after implementation of all identified initiatives.

Avg Annual Savings Per Residence



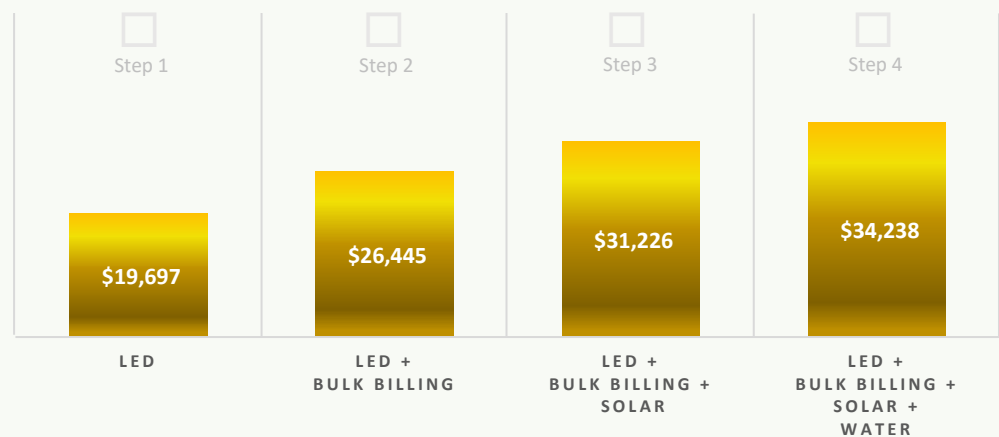
PROPERTY VALUATION IMPACT

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

Total valuation increase represents an average of \$34,238 per apartment.

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

Valuation Impact Per Residence



ENVIRONMENTAL ACHIEVEMENT

Following improvements 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	AVERAGE OCCUPANCY RATE PER RESIDENCE	NUMBER OF BLOCK RESIDENTS	ENERGY USE PER RESIDENCE (MJ / YR)
3.8%	2.2	116	23,719
UNIMPROVED BLOCK CO ₂ EMISSIONS (TONNES/YR)	IMPROVED EMISSIONS SAVINGS (TONNES/YR)	EQUIVALENT NUMBER OF TREES PLANTED	NATIONAL CO ₂ REDUCTION TARGET 2020 CONTRIBUTION
405	145	2,176	716%

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