



Everyday climate choices



Sustainable Apartments Pilot

The Site

At the North Canberra site, the Pilot investigated options to replace existing gas assets with electric alternatives, including the integration of solar and electric vehicle charging infrastructure. The Pilot also included energy efficiency measures, emissions reductions, implementation plans and upgrade cost estimates.

Building Characteristics:

- Embedded network
- Built in 2022
- Medium rise, 5 buildings, 6 and 9-storey, 370 units

Gas Systems:

- Hot water, gas cooking, BBQs, swimming pool heating

The Sustainable Apartments Pilot provided pathways for the electrification of seven apartment buildings in Canberra.

Across the sites that participated, there was a variety of building typologies, age, gas infrastructure, and mixed-use aspects.



Location:
North Canberra



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Existing Equipment and Replacement Options

The study outlined a range of electric equipment options available to replace existing gas assets. Proposed options for this site



Existing Systems

- Instantaneous gas hot water
- Gas boiler pool heating
- Gas cooktops
- Gas BBQs



Electric Alternatives

- CO₂ heat pumps with storage
- Air-source heat pump
- Induction cooktops
- Electric BBQs

Additional Recommendations

- Solar Photovoltaic (PV) System
- Maximum available roof area PV system
- Electric Vehicle (EV) Charging Facilities
- Individual Level 2 chargers



Challenges



The electric replacement options proposed for this site's hot water system and pool heating system will overload the existing electrical supply. The proposed replacement system will require additional space and possibly an increased structural load.

There is limited available outdoor space in the vicinity of the pool heating plant which could result in complex and costly design solutions due to the size of the replacement system required.

The site is in a residential area, so managing noise could be an issue. Soundproofing or acoustic covers may be required for heat pumps.

The site is in a residential area, so managing noise from heat pumps could be an issue. Soundproofing or acoustic covers may be required.

Opportunities



Monitoring hot water consumption and evaluating actual demand enables the proposed heat pump system to be accurately sized to maximise efficiency.

This site offers suitable rooftop space that could accommodate a large replacement hot water system or solar installation.



Estimated Cost and Payback

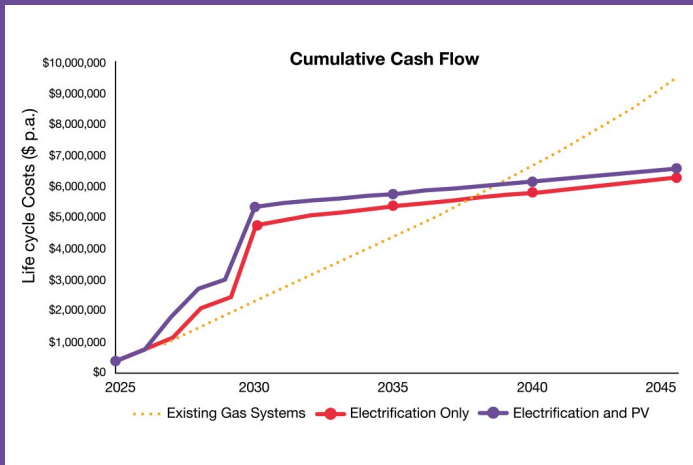


Based on the study, the cost to implement electrification at this site, including EV charging infrastructure and a solar photovoltaic system, has been estimated at \$6,120,000.

Estimated costs as at November 2025



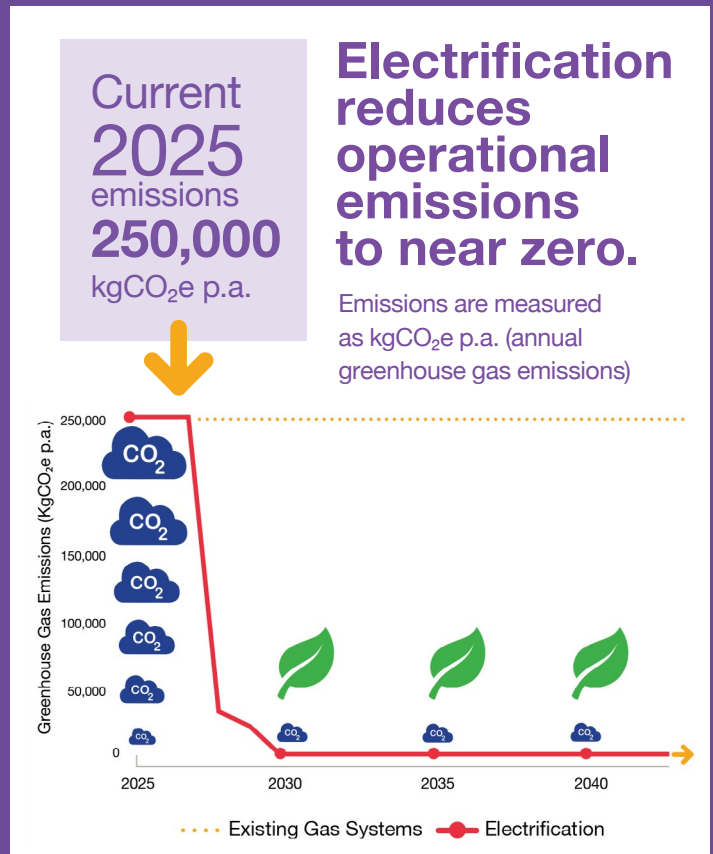
Pre-works Planning	\$33,000
Photovoltaic System	\$471,000
Hot Water Plant	\$605,000
Pool Heating Plant	\$187,000
Residential Cooktops	\$1,539,000
Decommissioning of Gas Supply	\$99,000
Electric Vehicle Chargers	\$1,261,000
Total cost including labour	\$6,120,000



The above cumulative cash flow graph presents the following two scopes:

Electrification scope only: includes space heating, hot water and cooking equipment electrification works and gas supply decommissioning.

Electrification & PV: includes all works per above with the addition of a PV system.



Energy and Emissions Outcomes

The proposed electrification works for this site are expected to provide a significant saving in energy consumption (approximate reduction of 34%).

The energy impacts on the proposed PV installation are expected to reduce energy consumption by approximately 41%.

Greenhouse gas emissions reduce significantly as part of the electrification works.





Phased Implementation Strategy

The phased approach to implementation has been developed to spread the costs over multiple years, reduce the intensity of construction impacts and prioritise works in a practical manner.

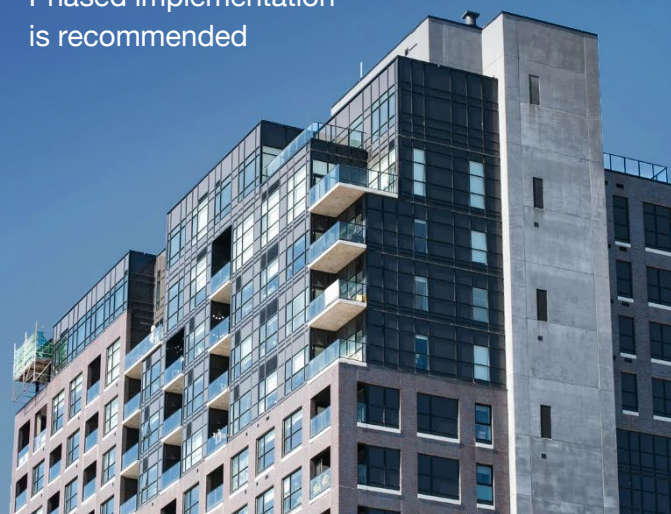
- 1 Pre-works preparation
- 2 Photovoltaic Systems
- 3 Space Heating
- 4 Cooking
- 5 Decommissioning of Gas Supply
- 6 Electric Vehicle Charging

Pre-works preparation involves consultation with your owners corporation and strata manager, understanding strata rules and regulations, monitoring energy use, engagement with engineer to provide a site specific, detailed design and electrification report.

For guidance on understanding the Unit Titles Management Act and navigating consultation with your body corporate visit: act.gov.au/housing-planning-and-property/housing/owning-a-unit

Common findings across the Pilot

- Electrification is achievable at all sites, involving replacement of gas systems, integration of solar PV, and EV charging infrastructure
- Existing gas systems are oversized — reassessing equipment size is essential to optimise and reduce energy consumption
- Electrification costs ranged from approximately \$1 to \$7 million per site
- Payback periods ranged from 2 to 22 years depending on scope
- Phased implementation is recommended



For guidance and next steps for apartments buildings in Canberra
Scan the QR code or reach us at sustainablebusiness@act.gov.au



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