



# Improving energy efficiency and reducing costs at your aged care facility

One of the best ways to reduce the operational cost of your aged care facility is to improve its energy efficiency.

We have all heard about the five and six-star NABERS ratings many new buildings have, but the fact is that almost 80% of the buildings we will be using in 2050 already exist today. Unless your facility was built within the past ten years, it's highly likely that making some modest updates and changes will make an enormous difference to your aged care facility's energy efficiency and pay for themselves very quickly.

## What your NABERS Energy rating means

The NABERS Energy rating for your aged care facility quantifies its energy efficiency and can identify areas for cost savings and building improvements. It can also be used to promote the environmental credentials of your residential aged care facility - helping you attract more residents and reduce vacancies.

## NABERS star rating guide

★ ★ ★ ★ ★	MAKING A START
★ ★ ★ ★ ★	OPPORTUNITIES FOR UPGRADES
★ ★ ★ ★ ★	MARKET STANDARD
★ ★ ★ ★ ★	HIGH PERFORMANCE
★ ★ ★ ★ ★	SUPERIOR PERFORMANCE
★ ★ ★ ★ ★	MARKET LEADER

The case study below is based on simulations of the performance of a typical aged care facility following implementation of a package of energy efficiency measures. The study finds that energy savings of up to **88%** are possible.



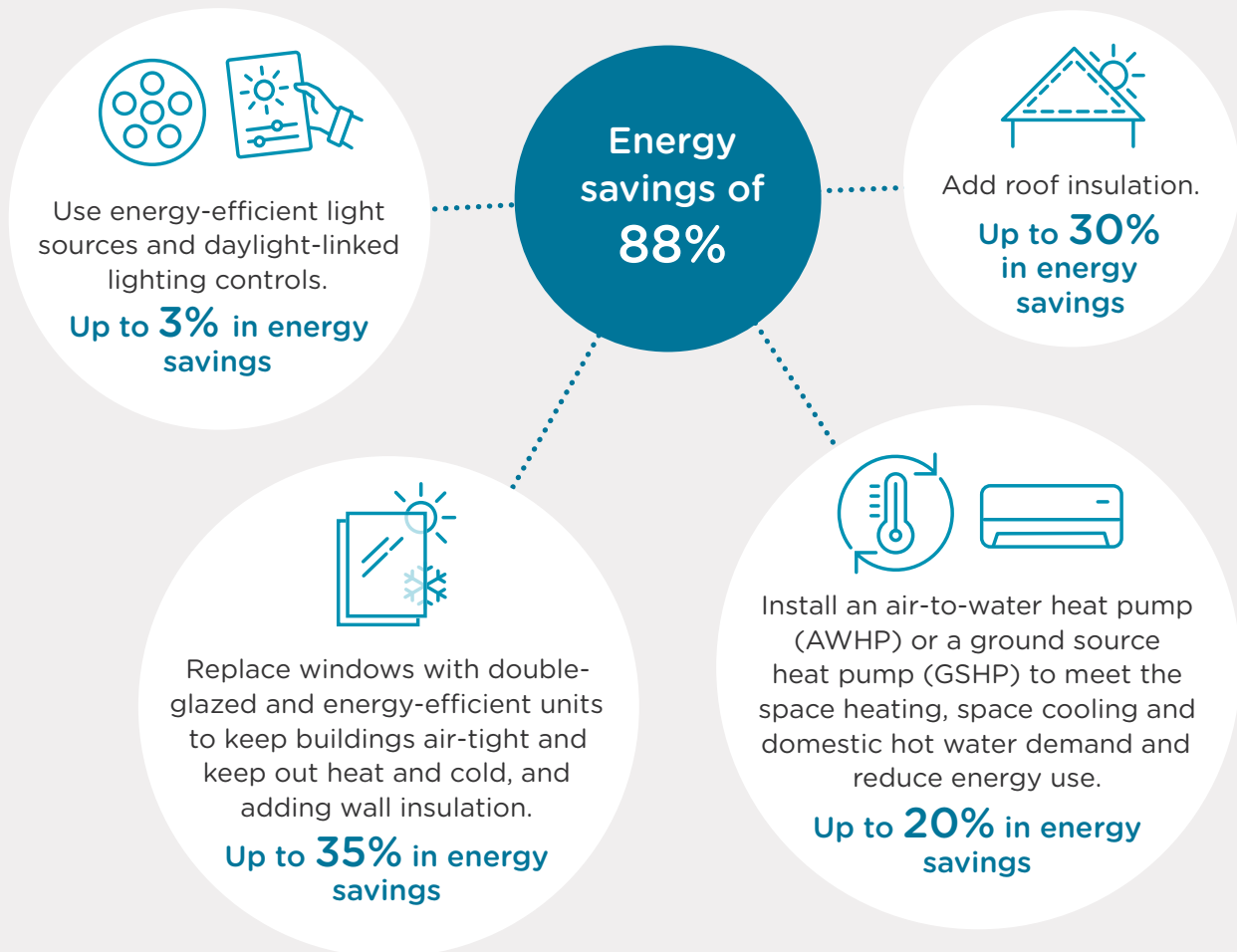


## CASE STUDY:

### Energy efficiency upgrades for an aged care centre in Canberra

The facility is a typical aged care centre built in the 1990s. The complex has eight buildings and 65 individual guest rooms plus nine extra beds.

Simulations conducted by the UNSW found that energy savings of 88% are achievable with the following package of cumulative energy efficiency upgrades:



\* The information is based on analysis of a 'typical' aged care facility in Canberra and an upgrade simulation conducted by experts at the University of New South Wales (UNSW) on behalf of Department of Climate Change, Energy, the Environment and Water (DCCEEW). Access the full energy efficiency upgrade report [here](#). A complete renovation package will lead to total energy savings of 88.2%, resulting in an energy consumption of 37.4 kWh/m<sup>2</sup>a, compared to the baseline of 316.6 kWh/m<sup>2</sup>a.

## Improving your NABERS rating

Almost 85% of energy consumed in aged care centres is used for heating, ventilation, cooling and lighting. If you want to improve your NABERS Energy rating, here are some key things to consider.

### Heating and hot water production is crucial:



The primary focus for most aged care facilities is lowering heating and hot water requirements.



Does your facility have heat pumps? Adding an air-to-water heat pump or a ground source heat pump can reduce energy consumption.

### The impact of weather and micro-climate on your building:



Are you shaded by other buildings, trees or hills or is your facility in a 'sun trap'?



What is the weather like? How much, and when, does it fluctuate across the year?

### Windows and natural lighting can make a big difference:



Are these up to contemporary standards? Do they need replacing? Double glazed windows provide a constant barrier between the outside and inside temperature, meaning they keep heat out when it's hot and in when it's not.



Consider improving natural lighting for residents' rooms and shady spaces with skylights or large windows.

### Don't forget the roof and insulation:



Insulation is a cost-effective way to save energy and improve the comfort of your residents and staff by maintaining a more constant indoor temperature.

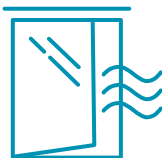


Is your roof insulated? What about your external walls? Insulation can reduce both your heating and cooling costs.

### Simple cooling solutions can have a big impact:



Ceiling fans are cost effective, and reduce the apparent temperature felt on skin by three degrees, often without the need to run air conditioners.



Opening windows at night, if that's an option, is a great way to let hot air out and cooler air in.

### Efficient lighting:



Are you using energy-efficient lighting such as LED lamps and lights?



In shared spaces and areas that are well lit during the day consider daylight linked controls. Combining this with LEDs can reduce lighting costs by up to 90%.

**Find out more about how you can improve your energy consumption:**

**Visit our website**

[nabers.gov.au/ratings/spaces-we-rate/residential-aged-care](http://nabers.gov.au/ratings/spaces-we-rate/residential-aged-care)

**Contact the NABERS team**

[nabers@environment.nsw.gov.au](mailto:nabers@environment.nsw.gov.au)