

# Comparing Scorecard and NatHERS



There are a number of tools and programs available to rate the energy efficiency of a home. One of the best-known is the Nationwide House Energy Rating Scheme (NatHERS). **This document compares the similarities and differences between NatHERS and the Residential Efficiency Scorecard (Scorecard).**

## How does Scorecard work?

Scorecard is a program that provides an energy star rating for your home.

Scorecard:

- was developed for existing homes.
- provides a rating and upgrade options.
- can be used for new homes using plans.
- is voluntary and not part of the building code.

Under Scorecard, every assessed home receives a certificate. This provides information on the elements that make up the home's rating and ways to improve the rating.

Scorecard assessors provide advice on how the householder can reduce energy bills, improve the home's thermal comfort, guide renovations or make simple changes to the way the house and appliances are used.

Scorecard aims to make improving the energy performance of existing homes as straightforward as possible.

- Trained assessors walk through the house and enter data. Assessments can also be undertaken from plans if the assessor is unable to visit the home, or if it is for a new home or major renovation.
- All the data collected must be visible or verifiable, avoiding subjective assessment.

## How does NatHERS work?

NatHERS is a program that provides an energy star rating for homes that are yet to be built or are undergoing significant renovations. NatHERS ratings can be produced using several accredited simulation tools, including AccuRate, FirstRate5, BERS Pro, and Hero.

NatHERS:

- was developed for new homes and extensive renovations, providing a star rating of the home's energy performance.
- is most commonly used for regulatory purposes under the National Construction Code of Australia.
- assesses the building shell and energy consumption of major appliances minus energy generated by solar panels.
- is expanding to include ratings for existing homes from mid-2025.

Under the NatHERS program, every assessed house receives a certificate.

NatHERS assessors can provide advice on how to improve the rating, but usually interact with the architect or builder, rather than the household.

The NatHERS program aims to improve the efficiency of new homes.

- Trained assessors enter data from house plans and specifications. Any changes to house plans must be reflected in the assessment.

For more information about Scorecard, visit [www.homescorecard.gov.au](http://www.homescorecard.gov.au).

Phone: 136 186 or email: [scorecard@delwp.vic.gov.au](mailto:scorecard@delwp.vic.gov.au)

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## How do they compare?

Each program has unique features because they service different needs.

Scorecard and NatHERS treat the building shell similarly. Scorecard has been correlated against NatHERS to confirm the two tools are comparable. A home with a good NatHERS building shell rating should also rate well under the Scorecard building shell elements.

## Scorecard

### Technical details

The Scorecard star rating considers the building shell, heating and cooling appliances, hot water appliances, lighting, pools and spas, and solar photovoltaic systems.

The assessor enters details of each element based on what they can see in the home and on any available documentation, such as star ratings or model numbers of appliances.

Data is entered into zones, which are usually a room. Heaters and coolers are assumed to heat and cool the zones they are in and any other zones which cannot be isolated from the appliance.

Energy requirements are calculated using climate data for the home's location. Energy costs for each fuel are based on average prices and an annual energy value is used to calculate solar generation.

### Behaviour assumptions

Heating and cooling thermostats and usage patterns are based on an average profile. Hot water use is based on occupancy, which is

derived from the floor area of the home. Occupant behaviour is standardised to produce a consistent, comparable result.

### Outputs

Scorecard's overall star rating is from 1 to 10 stars. This represents the energy cost of running the fixed appliances.

A 10-star home would typically generate more than enough energy to cover the cost of running the major fixed appliances.

The Scorecard certificate shows the relative cost of running each fixed appliance, so it is clear what is driving the overall costs and star rating.

The hot and cold weather ratings give the home a score out of five for its performance in the absence of any mechanical heating and cooling.

The Scorecard certificate also provides efficiency ratings for each of the fixed appliances and the building shell, as well as suggested improvements for all elements.

## NatHERS

### Technical details

Accredited NatHERS tools assess the thermal shell of a home and consider energy used for heating, cooling and other major fixed appliances, minus energy generated via solar panels.

The assessor enters detailed information on all aspects of the building shell. For instance, wall insulation is entered to an accuracy of R0.1. Wall constructions are defined by describing the material and thickness of each layer, including air spaces. The position of each window relative

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to the wall is entered as well as its size, orientation and other aspects.

NatHERS tools split a home into zones, where each zone has a particular use, such as living room or bedroom. The zone type sets assumptions for each zone for thermostat settings, internal heat gains and hours of use.

Energy requirements are calculated using an hour-by-hour simulation with climatic data for the home's location. This is used to calculate the uses of energy and impacts of onsite renewables and batteries. There are no energy costs associated with a NatHERS rating. The star rating indicates how much energy is required to heat and cool the house to keep it comfortable. The rating does not aim to represent energy costs, nor consider the different fuel sources.

The Whole of Home rating out of 100 provides an assessment of energy used by major appliances minus any energy generated by solar panels.

## Behaviour assumptions

NatHERS assumes a user behaviour to model how the home will perform in all seasons. Living areas are heated and cooled during the day and evening, bedrooms are assumed to be heated and cooled in the evening and overnight.

NatHERS calculates the heating and cooling energy required to keep the home comfortable. Occupant behaviour is standardised: windows are assumed to be opened and closed, and blinds lowered and raised, when appropriate.

## Outputs

NatHERS gives the home a star rating out of 10 for its thermal performance. This shows how much energy is required per square metre of floor area

to keep the home comfortable. The energy, in megajoules, is the amount that needs to be either added, (by heating), or removed (by cooling) over the course of a year.

NatHERS also provides a whole of home rating out of 100 that rates the amount of energy used for heating and cooling, and appliances, minus energy generated from solar panels. This rating also uses several calculations to give an overall energy budget snapshot. This includes the predicted cost for the consumer, cost to the energy network and cost to the environment in greenhouse gas emissions.

While the Whole of Home rating scale ranges from 0 to 100 (where 100 is a net zero energy value home), ratings above 100 are possible. One way that a home may rate over 100 is where a home generates more energy than it uses.

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## How do the star ratings compare?

### Scorecard

The Scorecard star rating represents the annual energy cost of the home under average conditions. It covers the fixed appliances, the building shell and on-site energy generation from solar panels. These are the elements that drive energy bills, have a relatively long life, and stay with the home whoever lives there.

The Scorecard certificate also includes hot and cold weather ratings showing how the home performs in extreme conditions without cooling and heating. The certificate includes suggestions for how to improve these ratings. This important feature helps householders improve the performance of their home in both summer and winter.

Householders can use the information provided on the certificate and by the assessor to improve the comfort of their home, reduce energy bills or support other goals, such as transitioning to an all-electric home or reducing greenhouse gas emissions.

### NatHERS

The NatHERS' star rating represents the thermal building shell performance of a home.

The NatHERS tools can be used to model the building performance in weather extremes. They can also be used to test potential changes to the building shell that might lead to improvements in performance.

Builders, architects and homeowners can use NatHERS information to improve the thermal

performance of the building in both hot and cold weather.

In Melbourne, an average sized house with a 6-star NatHERS rating and market average appliances, is also likely to be rated as a 6-star house by Scorecard.

## More information

To find out more about Scorecard, visit:

<https://www.homescorecard.gov.au/>

To find out more about NatHERS visit:

<https://www.nathers.gov.au>

You can also call 136 186 or email:

[scorecard@delwp.vic.gov.au](mailto:scorecard@delwp.vic.gov.au).

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