Expanding the Nationwide House Energy Rating Scheme

Enabling delivery of energy performance assessments and ratings for all Australian homes

Consultation Paper

2024

Australian Government
Department of Climate Change, Energy, the Environment and Water

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Department of Climate Change, Energy, the Environment and Water
GPO Box 3090 Canberra ACT 2601
Telephone 1800 920 528
Web dcceew.gov.au

Acknowledgement of Country

We acknowledge the Traditional Owners of Country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

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1. Purpose

Building on decades of success in providing an evidence-based and data-driven way to assess the energy performance of new homes, the Nationwide House Energy Rating Scheme (NatHERS) is now expanding to include energy performance assessments and ratings for existing homes.

We are seeking your feedback on the proposed changes for the expansion. Your input will help us better understand industry and consumer needs, shape the final design and contribute to the successful launch of a national energy rating scheme for existing homes.

NatHERS for existing homes will help drive improvements to the energy performance of Australian homes, lower greenhouse gas emissions, improve the comfort and resilience of households, reduce energy costs and lower pressures on the energy system.

The expansion leverages recent updates to NatHERS to measure the energy performance of the whole home. NatHERS provides ratings based on a home's design, materials and construction and takes into account fixed appliances and on-site energy generation and storage.

Energy ratings for new homes are not in scope for this consultation. The proposed changes to NatHERS for existing homes will not change the NatHERS for new homes program design. Current market participants, such as accredited software tool providers and Assessor Accrediting Organisations (AAOs), will still support new home assessments and ratings. The use of NatHERS by building industry participants to demonstrate compliance with the National Construction Code (NCC) will remain unchanged.

1.1. Providing feedback

Written submissions are welcome in response to the content and questions presented throughout this paper. A summary of all questions is available at **Appendix D – Consultation questions**.

Submissions can be made before midnight **Friday, 30 August 2024** via the Department of Climate Change, Energy, the Environment and Water (DCCEEW) Consultation Hub.

We welcome submissions from all interested parties. The primary audience is expected to be stakeholders who participate in NatHERS advisory groups including the NatHERS Technical Advisory Committee (TAC), the NatHERS Stakeholder Consultative Group (SCG) and the Residential Energy Efficiency Disclosure Initiative Governance Forum (REEDI GF). Members of these groups represent various industries including building, architecture, design, appliance manufacturing and supply, banking and finance, real estate, social housing, community engagement, academia and state and territory governments. Other stakeholders who are not members of these groups are also welcome to provide a submission.

2. Opportunities for engagement

The approach to engagement has been broken into 3 steps, see Figure 1.

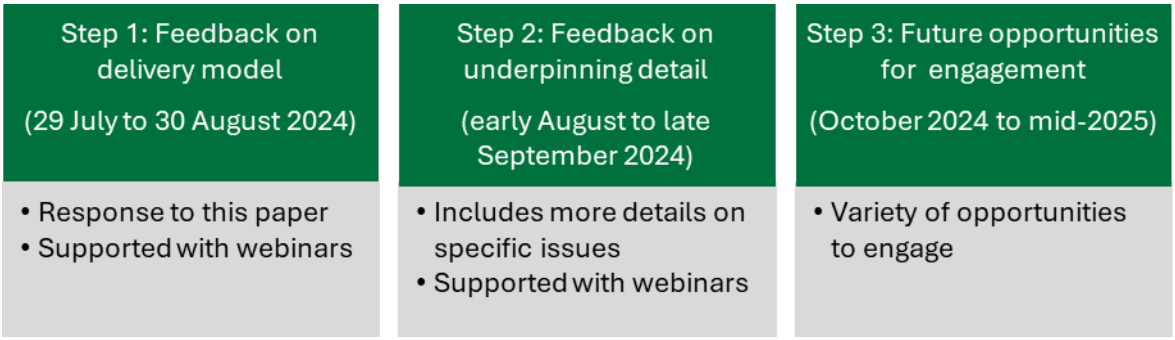
Step 1 seeks feedback on this paper. The paper has been prepared for interested stakeholders to provide feedback on the development of home energy ratings for existing homes.

Step 2 will provide stakeholders with an opportunity to provide feedback on the detail underpinning the delivery model. For example, NatHERS strategies or guidelines such as the specific requirements for accredited assessors or the skills and training strategy. Steps 1 and 2 will be supported with a series of webinars. The live webinars will go into more detail on specific elements of NatHERS, including:

- the consumer experience
- assessor services
- energy rating tools.

Step 3 will provide further opportunities for engagement and collaboration on design and implementation ahead of launch in mid-2025. Full detail of the consultation plan is available at Appendix A – Consultation plan summary.

Figure 1. Consultation approach



Text alternative for "Consultation approach" graphically displaying three steps.

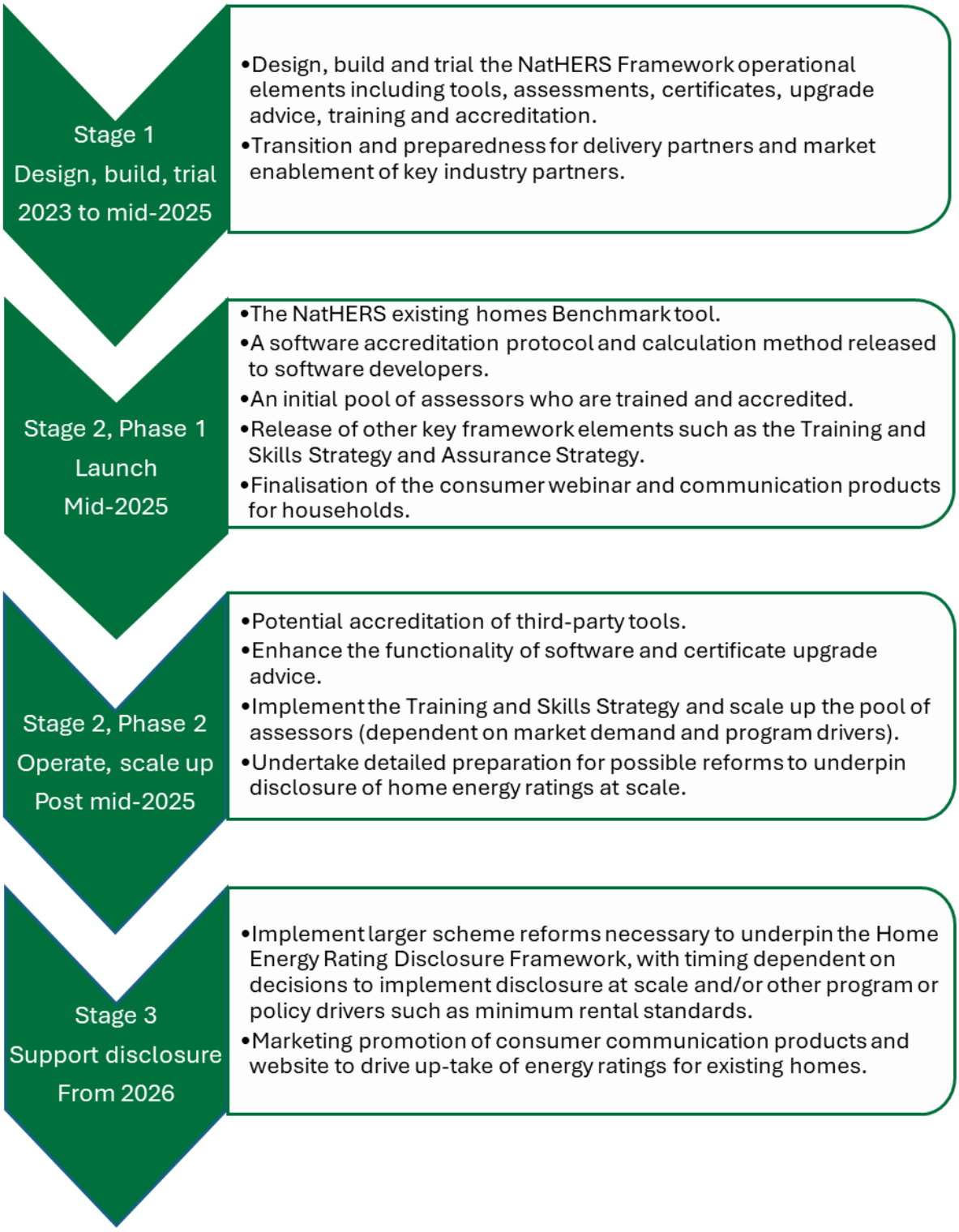
2.1. Project stages

The expansion of NatHERS to existing homes will take a staged approach, see Figure 2. The first stage of design, build and trial of the operational elements of NatHERS is underway with this consultation being key to ensuring its success.

Following consultation and further field trials, a refined delivery model will be presented to Energy Ministers for endorsement in the first half of 2025. After that, the expanded NatHERS for existing homes will launch in mid-2025. The key elements we are seeking feedback on before launching the expanded program in mid-2025 include:

- Program design: the program objectives and design principles and the preferred high-level delivery model for NatHERS for existing homes
- The consumer experience: Home Energy Rating Certificate and upgrade advice
- Assessor services: assessor training, assessor accreditation and audit processes
- Energy rating tools: software development and accreditation processes.

Figure 2. Stages of NatHERS for existing homes development



Text alternative for "Stages of NatHERS for existing homes development" graphically representing the staged approach with descriptions of each stage.

3. Background

The Australian Government committed $36.7 million over 4 years in the 2023–24 Budget for a range of enabling work in energy efficiency, which included funding to accelerate the expansion of NatHERS to offer energy ratings for existing homes.

The 2021 draft *National Framework for Disclosure of Residential Energy Efficiency Information* committed to use NatHERS as the underpinning rating and assessment method for the disclosure of energy ratings for single dwellings. This approach was agreed to in Version 1 of the *Home Energy Rating Disclosure Framework* (the Disclosure Framework) by the Energy and Climate Change Ministerial Council (ECMC).

For apartment buildings, it is proposed in Version 2 of the Disclosure Framework that NatHERS would be the rating and assessment method for disclosure of energy ratings for individual apartments. The NatHERS ratings would be complemented with the National Australian Built Environment Rating System (NABERS) ratings to account for the energy performance of apartment base building common areas.

A development pathway for expanding NatHERS to existing homes (as shown in Figure 2) was also agreed by the ECMC in November 2023. This included the key settings and deliverables required for a mid-2025 launch and scope for enhancements in later stages.

The launch of NatHERS for existing homes will, at a minimum, consist of:

- The NatHERS existing homes Benchmark Tool
- a software accreditation protocol and calculation method for tool developers
- an initial pool of trained and accredited assessors
- the release of other key elements such as the Training and Skills Strategy and Assurance Strategy.

Following the launch for existing homes, efforts will then be focused on:

- potential accreditation of third-party user interface tools
- increasing the functionality of energy rating tools
- implementing the Training and Skills Strategy
- scaling up the pool of assessors
- enhancing functionality and accessibility to increase program scale to support potential disclosure schemes.

3.1. Opportunities to improve the existing housing stock

There is a significant opportunity to upgrade the performance of Australia's housing stock. Most Australian homes were built without consideration of Australian climates and most were built before the introduction of minimum energy performance requirements.

Improving the energy performance of homes is integral to Australia reaching net zero emissions by 2050. Residential buildings are responsible for approximately a quarter of electricity use and more than 10% of emissions in Australia.

The average existing home in Australia has an estimated NatHERS thermal performance rating of less than 3 out of 10 stars (P Rajagopalan, et al, 2023). Improving a home from a 3-star to a 5-star rating could reduce the amount of energy needed for heating and cooling by around 40% according to DCCEEW's NatHERS 2022 Starbands.

Improving home energy performance will reduce household energy bills and improve the health and comfort of households, while making a meaningful contribution to Australia's national emissions reduction target. In homes with poor thermal performance and inefficient appliances, householders require a lot of artificial heating and cooling to stay comfortable, causing them to use more energy and spend more money to keep their homes at a comfortable and healthy temperature.

Recent research by Climateworks Centre (*Climate-ready homes: Building the case for a renovation wave in Australia*, 2023) identified that thermal upgrades plus full electrification of appliances and solar PV could save households an average of between $1,690 and $2,002 each year. This equates to an average saving of 43–51% on household energy bills and abatement of up to 2.3 tonnes of carbon emissions per home.

Thermal upgrades plus electrification include ceiling insulation, draught sealing, curtains and pelmets, external roller shutters, reverse cycle heating/cooling, heat pump hot water, induction cooktop, solar PV, wall and floor insulation, additional draught proofing, double glazing and heat recovery ventilation. Investing in all upgrades (thermal, electrification of appliances and rooftop solar) can deliver net savings from the first year, including on loan repayments.

Ratings for existing homes will help Australian households better understand their home's energy performance, identify cost-effective upgrades to improve the comfort of their home and reduce their energy bills.

The ratings will also:

- enable disclosure (mandatory and voluntary) of home energy ratings and information
- enable financial products to accelerate investment in upgrades for homes, by helping households find saving opportunities, incentivising banks to lend more capital to Australians to make their homes more energy efficient and helping these loans be verified as green investments
- enable targeted grant programs to support households without the means to upgrade their homes
- enable the provision of high-quality end-user data for consumers, industry and government to support the targeted improvement of home energy performance
- support other standards, such as minimum rental standards.

3.2. Disclosure Framework

The Disclosure Framework is a collaborative project of the Australian, state and territory governments. It delivers on the 2019 commitment by Australian Energy Ministers to establish a national framework for residential energy efficiency disclosure. The Disclosure Framework sets out a national approach to assessing the energy performance of homes and providing energy performance certificates to consumers. It outlines policy parameters for adaptation and implementation by governments and gives guidance on development of a supportive market environment.

All Energy Ministers agreed version 1 of the Disclosure Framework that was released in July 2024. The introduction of any mandatory disclosure requirements during the sale or lease process will be a matter for state and territory governments to determine and legislate.

Disclosure refers to the point at which information about the energy performance of a dwelling is displayed or exchanged by the owner of the information with an external party (e.g. real estate sales agents).

Under the Disclosure Framework, disclosure can be triggered whenever a property is advertised for sale or lease. Disclosure at this time guarantees that buyers and renters will receive energy performance information when a home is advertised for sale or rent. The exact point of any mandatory disclosure requirements during the sale or lease process will be determined under relevant state and territory government legislation. The aim is to use energy ratings and certificates to provide consumers with consistent home energy performance information. This information encourages and enables improvements to Australia's residential building stock, driving action that reduces household energy usage, bills and emissions while increasing health and comfort.

The preferred delivery model for expansion of NatHERS to existing homes has been developed to align with specified objectives (see section 4.1. for more detail) and design principles (see section 4.2. for more detail). This includes making NatHERS for existing homes fit for purpose so that assessments and ratings can be used for a range of purposes and programs. The principles emphasise that designing to support the Disclosure Framework will take precedence. This may be necessary where there are multiple or conflicting design options or to inform funding and resource allocation decisions.

The specifics of how NatHERS ratings will be used for disclosure programs, such as validity periods for ratings or triggers for requiring a new assessment, are being considered under the Disclosure Framework and are not within the scope of this paper.

3.2.1. NatHERS for new homes delivery model

Currently assessor training for NatHERS for new homes is delivered by Registered Training Organisations (RTOs) under the Vocational Education and Training (VET) sector. Assessor accreditation is undertaken by NatHERS AAOs as self-funded businesses managed under the protocol for AAOs and quality assurance is undertaken and self-funded by AAOs under general guidance from the NatHERS Administrator. The software accreditation process is undertaken by government staff, based on the NatHERS Software Accreditation Protocol (SAP). Under the current processes, tool developers need to duplicate some functions in their tools to align with the NatHERS specifications.

4. Objectives and principles

4.1. Objectives

New objectives have been drafted to guide the expansion of NatHERS to existing homes and inform program decision making. During development of the next NatHERS Strategic Plan the new objectives will be considered alongside the previous new homes-focused objectives.

- Improve the energy performance of homes.
- Reduce greenhouse gas emissions from energy use over the lifetime of homes.
- Improve health, comfort and resilience of households.
- Reduce running costs of homes.
- Reduce pressures on the energy system.

The proposed objectives align with language used in related policy agreements, such as the priorities of the ECMC, the Disclosure Framework and the Trajectory for Low Energy Buildings.

4.2. Design principles

The proposed design principles for the expansion of NatHERS to existing homes will guide the development and consideration of policy options and inform the administration of NatHERS. They will also increase transparency on how decisions are made. The purpose of the design principles is to provide criteria to test different policy and technical options to ensure the final decisions align with the different needs of NatHERS for existing homes.

The proposed design principles are as follows:

- **Support program objectives –** see section 4.1. for more detail
- **Fit for purpose** – assessments and ratings will be used for a range of purposes and programs, including (but not limited to):
  - incentivising energy performance upgrades through mandatory home energy rating disclosure schemes
  - helping Australian households better understand their home's energy performance
  - providing high-quality aggregated data for industry and governments
  - enabling financial products, incentives, subsidies and grants for energy performance upgrades
  - supporting other standards such as minimum rental standards.

  Where there is a conflict between these uses, designing for mandatory disclosure programs will take precedence.
- **Assessments and ratings are:**
  - consistent and comparable – between new and existing homes
  - accurate – assumptions underpinning assessments and ratings are based on the best available science and represent average occupant behaviour where evidence is available
  - reliable – repeatable between assessors, supported by robust assurance and accreditation processes
  - tested – across climate zones and house types
  - clear and actionable – should provide understandable and useful information.

- **Time and cost of assessments are kept to a minimum through:**
  - limiting tool data inputs – the number of required data inputs should be limited to the minimum possible to ensure a reliable rating and useful upgrade advice
  - simplifying on-site data collection – minimise on-site requirements for assessors, with consideration of whether steps can be supported by evidence for audit purposes.
- **Avoid unintended outcomes** – avoid settings that would allow for manipulation or conflict with the program objectives, e.g. avoiding overly generous defaults or incentivising inefficient upgrades.
- **Support scalability** – options must demonstrate the potential to be deployed at scale, including delivery to regional and remote areas and accessibility to diverse communities (including culturally and linguistically diverse (CALD) people, people with disabilities and other groups).
- **Risk-informed** – options should be informed by risk assessment and risks mitigated where possible.
- **Timely** – assessments will be tested and available in the market by mid-2025, at least as a minimum viable product, with additional features appropriately scheduled for future updates.
- **Efficient and sustainable administration** – design decisions must enable cost-effective resourcing, a sustainable funding model and robust and effective governance and administration for governments and delivery partners.

These design principles are largely based on the criteria for assessment processes contained within the Disclosure Framework. Although key to the expansion of NatHERS to existing homes, the Disclosure Framework criteria have been expanded to address NatHERS-specific stakeholder needs and been informed by a review of learnings from other relevant programs.

Chapter 4. Objectives and principles consultation questions

4.1. Objectives

1. What other objectives could guide the expansion of NatHERS for existing homes?

4.2. Design principles

2. Will the proposed design principles support informed decisions related to the expansion of NatHERS?
3. Is anything missing or should any elements be removed from the design principles?

5. Preferred delivery model

Three options were considered for the delivery model for NatHERS for existing homes. These are:

- Procurement and licensing
- Enhanced business as usual
- Government only.

The preferred delivery model is the procurement and licensing option as it supports the implementation of the most critical elements of a successful national launch: an energy rating tool and assessor services. It has been developed with a focus on delivering reliable, consistent and comparable ratings at the lowest cost, while managing risk and minimising administrative burden and complexity.

NatHERS ratings for existing homes will require assessors to enter homes, collect data, input data into an energy rating tool, produce a rating and generate a Home Energy Rating Certificate. This approach is a significant change from the current NatHERS for new homes process, which is a desktop process completed by assessors using detailed plans and specifications. The on-site assessment in existing homes introduces new opportunities and risks to NatHERS.

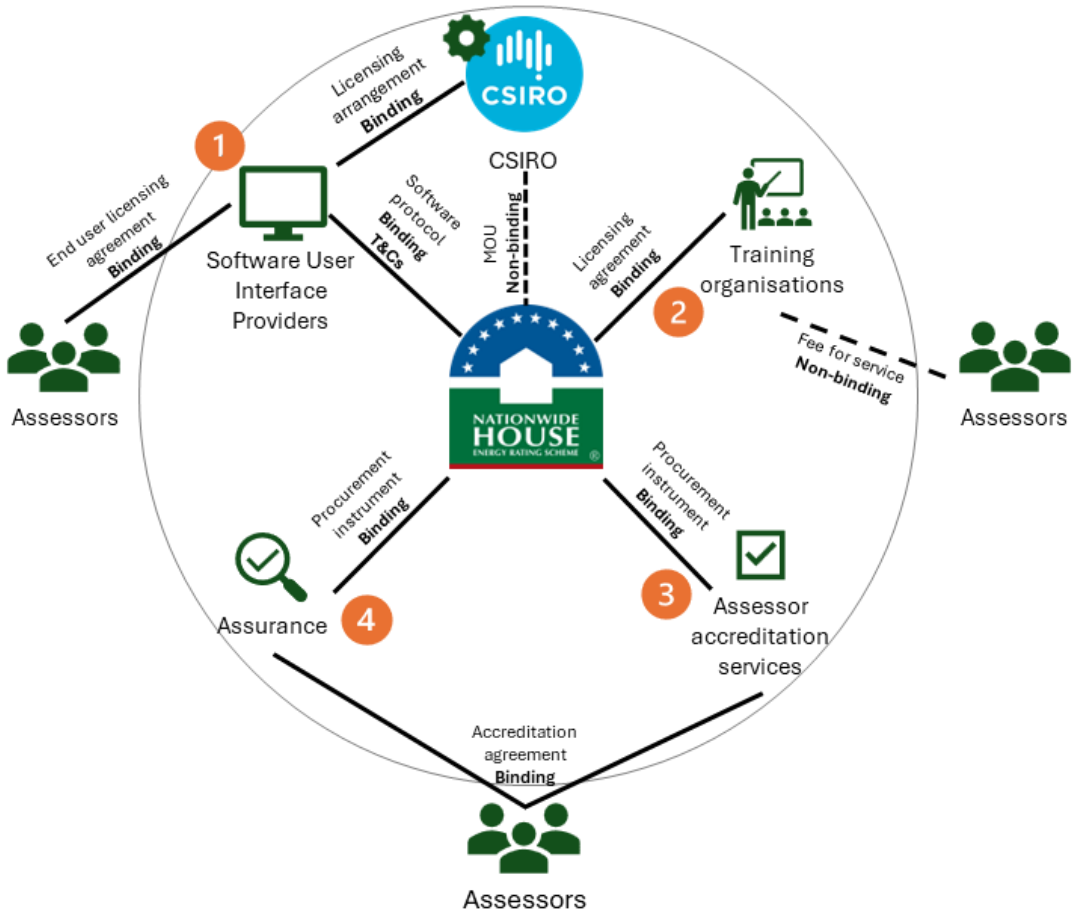
The expansion to existing homes provides the opportunity to implement lessons and improvements from:

- reviews of the current NatHERS for new homes
- feedback from stakeholders
- recent experiences with updates to the NCC and the development of Whole of Home ratings.

Key enhancements for existing homes under the preferred delivery model are:

- **Assessor services** proposed to be underpinned by strong risk management and controls through direct contractual arrangements between the NatHERS Administrator and third parties to deliver assessor training (see section 8.2. for more detail), accreditation services (see section 8.3. for more detail) and assurance processes (see section 8.4. for more detail). See Figure 3 labels 2, 3 and 4.
- **Energy rating tools** proposed to only include user interface tools using a single cloud-based energy rating tool for calculations and certificate generation (see section 9.4. for more detail). In practice this means a ‘single core tool’ while allowing for multiple user interface tools. See Figure 3, label 1.

Figure 3. Preferred delivery model for NatHERS for existing homes



Text alternative for "Preferred NatHERS for existing homes delivery model" providing linkages between the various parties involved in delivery.

Assessor service

Establishing strong contracts for assessor services, initially underpinned by funding from the NatHERS Administrator (pending budget decisions), will allow more direct monitoring and active management of any quality and training issues if/when they arise. There will likely be a relatively small initial pool of assessors, so this will also enable robust and consistent processes to be established to support the industry as it scales. Robust and consistent processes will ensure confidence in the quality of assessments and will allow strong management of potential conflicts of interest (see section 8. for more detail on the proposed approach to assessor services).

Energy rating tools

Centralising the calculations for ratings supports consistency and comparability of ratings for all homes. Allowing the development of third-party user interface tools will enable market innovation in data collection, value-add analysis and customer interactions. Centralised calculations are expected to minimise administration time, cost and the potential for delays associated with software accreditation for both the NatHERS Administrator and third-party tool developers, compared to the new homes processes. Centralised calculations will eliminate the need for all third-party interface tool developers to duplicate calculations into their tools while still providing the opportunity to incorporate innovative data collection approaches into user interfaces (see section 9.4. for more detail on the proposed approach to software accreditation).

The proposed changes to NatHERS for existing homes will not change the NatHERS for new homes program design. The NatHERS Administrator is committed to continual improvement and any changes to NatHERS for new homes will follow existing processes including consultation with affected parties. Current market participants for new homes, such as accredited software tool providers and AAOs, will still support new home assessments and ratings. The use of NatHERS by building industry participants to demonstrate compliance with the NCC will remain unchanged.

Further details of the preferred delivery model are presented throughout this paper with targeted questions for feedback, questions are also available at **Appendix D – Consultation questions**.

5.1. Other options considered

In determining how to deliver NatHERS for existing homes, 2 alternative delivery options were considered:

1. Business as usual with minor improvements – the approach used for new homes with minor reforms to improve operability.
2. Central control – with functions undertaken by government.

An assessment of advantages and disadvantages, risks and indicative resource impacts was undertaken for each option alongside the preferred delivery model. The preferred delivery model sits between the 2 alternatives in that it proposes stronger legal arrangements with delivery partners and greater control of core NatHERS elements while still facilitating market innovation and delivery. The assessment drew upon previous reviews of NatHERS, many years of NatHERS for new homes implementation, targeted consultations and assessments of similar domestic and international programs.

5.1.1. Business as usual with minor improvements option

The assessment of the 'Business as usual with minor improvements' option would allow for some previous review recommendations on assessor training, accreditation and assurance to be actioned, such as establishing stronger agreements with AAOs. However, known challenges with the current system would remain. For example, under the current new homes delivery model quality checks are funded by the AAOs who receive member fees. The risk for the existing homes model, at least initially, is that there may be only a relatively small assessor market which would limit the amount of member fees AAOs receive and may limit their ability to fund and deliver assessor services effectively.

While these challenges are being actively managed for new homes, there is an opportunity to reduce the burden going forward. In addition, the new work health safety (WHS) risks involved with assessors accessing private homes require different oversight than for assessments of new homes and may require different skills from an accreditation provider.

Assessment of this option for energy rating tool accreditation found that while it may allow the development of automated checking of software tool outputs for software accreditation purposes, the process would remain labour intensive, complex and lengthy for any software tool changes (for both the NatHERS Administrator and any third-party tool developers).

5.1.2. Central control option

Under the option of centralising functions under government control, all training, accreditation and audit functions would be delivered by government. Centralising control of assessor services could disconnect assessors from industry association groups, hinder cost recovery and require higher ongoing government investment and program staffing levels. Under a centralised model, the NatHERS Administrator may not have access to the required skills, expertise or capacity to conduct all required assessor services, particularly regarding assessor training.

In this scenario a single government-managed energy rating tool would be established and third-party tools would not be allowed for existing homes. The assessment found that limiting the market for tools could hinder innovation in data collection, assessor choice and consumer engagement.

5.2. The Residential Efficiency Scorecard

The Residential Efficiency Scorecard (Scorecard) is a national energy rating program for existing homes, providing an energy rating tool and framework for training and accrediting assessors. Scorecard was developed to provide assessments without the need for plans or specifications because plans are not available for many Australian homes. Trained and accredited Scorecard assessors visit homes to assess the home's energy performance and comfort, and provide a star rating certificate, with tailored advice for owners on opportunities for improvement.

Scorecard was developed by the Victorian Government and received national support under a joint government initiative.

Scorecard provides an assessment tool and consistent assessor training, accreditation and quality assurance, administered by the Victorian Government Department of Energy, Environment and Climate Action (DEECA).

While the Scorecard tool is endorsed under NatHERS it is not currently accredited under NatHERS and cannot currently provide a NatHERS rating or certificate. To be accredited under NatHERS, the Scorecard tool, like all other tools, will need to meet the accreditation requirements. The proposed approach for accreditation is outlined in section 9.4.

5.2.1. Transition arrangements

Scorecard has played a significant role in the development of the existing home energy rating ecosystem. The investment from all Australian governments is ensuring continuity in the availability of ratings and advice for consumers who are seeking to improve their home's energy efficiency while NatHERS for existing homes is developed and trialled.

NatHERS for existing homes is leveraging the relevant procedures and policies developed for Scorecard. By working together across NatHERS and the Scorecard initiative, governments are applying real-world experience in home energy ratings and achieving efficiencies. The experience of trained Scorecard assessors providing real-world data to refine the method of assessing the energy performance of existing homes has assisted in developing and testing technical settings.

Scorecard is currently enabling programs that support home energy efficiency upgrades, including the Victorian Energy Upgrades Program. A well-managed transition between Scorecard functions and

NatHERS functions is essential to ensuring consumers can continuously receive advice to improve their homes. The NatHERS Administrator is working closely with DEECA to develop a transition plan and to prepare to scale up the industry to support the full suite of programs and measures.

The need for Scorecard assessors, NatHERS new building assessors and current ACT Energy Efficiency Rating (EER) assessors have all been taken into consideration in planning, designing and building NatHERS for existing homes. A streamlined workforce transition pathway is outlined in section 8.2.3. This recognises the robust training and accreditation process and demonstrated experience of these home assessor cohorts. A streamlined workforce transition pathway for Scorecard also leverages the historic investment in market capacity building under Scorecard.

5.3. NatHERS trials

NatHERS for existing homes energy rating and data collection tools and processes need to be trialled ahead of launch in mid-2025. This will ensure they are effective and can be delivered at scale. A planned field trial will be delivered in partnership with CSIRO.

The project objectives for the trials are to test, identify and rectify issues where possible before launch to ensure NatHERS is fit for purpose, and to compare different approaches between the Core and Scale streams as outlined below. This includes trialling:

- energy rating and data collection tools and processes
- training and the assessor workforce
- the household experience and upgrade advice
- data and workflows
- assurance and audit elements
- participation and needs of the banking and valuer sectors.

There are two streams of existing homes energy performance assessment planned for the trial:

- **Core stream** – trial assessors complete all elements of the assessment, including on-site data collection and the use of the trial energy rating tool to produce a rating and provide upgrade advice to trial households. The trial assessors from the Core stream will become the initial pool of NatHERS assessors for existing homes at launch.
- **Scale stream** – property valuers perform on-site data collection and NatHERS accredited assessors (for new homes) complete the assessment off-site and produce a rating. No upgrade advice will be provided. This stream will test a possible approach to delivering ratings for mandatory disclosure fast, at scale and at low cost while still ensuring reliability and consistency of results.

Trial assessors and property valuers will use magicplan™ as a data collection tool in homes across a range of climate zones and building typologies. magicplan™ is a proprietary tool which uses LiDAR (a method for determining ranges by targeting an object or a surface with a laser) to create a 3D plan of the home. This technology is available in recent models of iPhones.

Trial assessors and NatHERS accredited assessors will conduct assessments from the collected data using the trial energy rating tool (see section 9.1. for more detail) to create a rating. A version of AccuRate Enterprise (existing homes mode) was developed specifically to support NatHERS trials. This is the CSIRO tool that is expected to be the Benchmark Tool for NatHERS for existing homes.

Trial assessors in the Core stream participating in the training delivery pilot and the field trial will be drawn from various backgrounds and grouped into these proposed training cohorts:

1. **Existing energy assessor:** those with building energy performance knowledge, such as Scorecard, ACT EER, NABERS and NatHERS for new homes assessors.
2. **Existing property, building or construction sector:** those with experience of building, construction and property but not energy efficiency or building energy performance, including pest and building inspectors, valuers, property managers and former tradespeople.
3. **New to sector:** those with no assumed prior knowledge.

The field trial will be used to assess the suitability of the training content and delivery, identify cohort specific training needs and identify training refinements required. More on assessor training can be found in section 8.2. The field trial will also inform decision making on training requirements and delivery approaches, assessor accreditation requirements, energy rating (AccuRate Enterprise (existing homes mode)) and data collection tools (magicplan™), additional assessment approaches and assessor classes or types after the launch of NatHERS for existing homes in mid-2025.

The start of trial activities within each stream may be staged as assessor workforce capacity, trial assessor eligibility criteria and processes, tool functionality, communication materials, household recruitment and other prerequisites become available.

The training element of the trial will develop, pilot and improve the training content and delivery for trial assessors. The NatHERS Administrator is procuring a service provider to define the NatHERS-specific training module inclusions, develop training content and conduct a training delivery pilot. Tool training is separately being procured by CSIRO for the field trial.

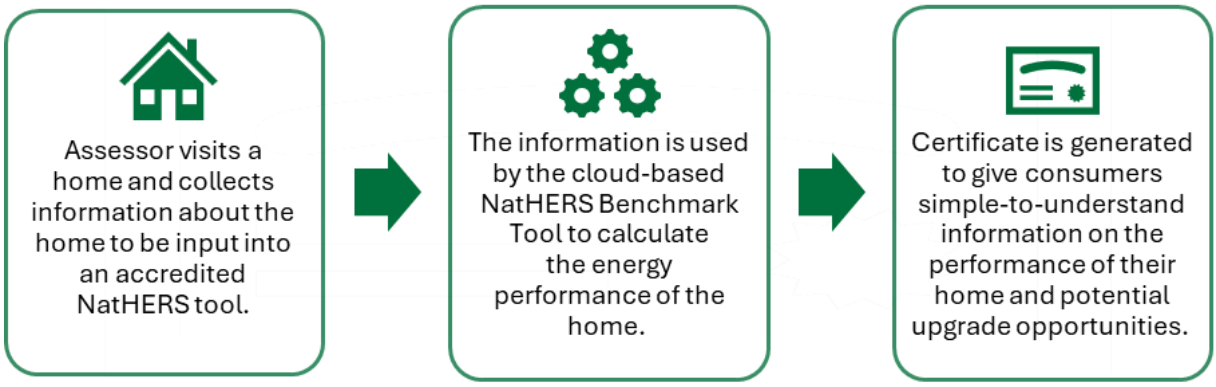
Chapter 5. Preferred delivery model consultation questions

4. Are you supportive of the proposed delivery model?
5. Should elements of the alternative options or other successful programs (including Scorecard, NatHERS for new homes and international programs) be integrated into the preferred delivery model to enhance design or for future enhancement?
6. How can we stimulate the market for assessor services and software?

6. Consumer experience

NatHERS assessments for new homes rarely have consumer involvement as the assessment is typically completed on behalf of a builder, building designer or architect to meet energy efficiency standards in the NCC. The addition of on-site data collection and interaction with consumers represents an opportunity to better inform consumers about the benefits of improved energy performance in their home. The Home Energy Rating Certificate and upgrade advice will be the key elements consumers will engage with. Figure 4 outlines the intended process for an existing home assessment.

Figure 4. How NatHERS for existing homes energy ratings work



Text alternative for "How NatHERS for existing homes energy ratings work" from assessor visiting the home to certificate being given to consumers.

6.1. Home Energy Rating Certificate

The NatHERS Certificate for new homes and major renovations (NatHERS Certificate) provides important information about home energy assessments. The NatHERS Certificate can be used to demonstrate that the design of the home meets or exceeds the minimum energy efficiency requirements included in the NCC. They can also be used to compare the efficiency of home designs and identify how the performance of the home could be improved. NatHERS Certificates are also being used by financial institutions to verify the energy efficiency performance of customers' building projects, to support access to green loan products.

With the expansion of NatHERS to existing homes, a Home Energy Rating Certificate will be the key touchpoint with households to help them understand and improve their homes energy performance. It will need to be focussed on communicating effectively with all Australian households, including culturally and linguistically diverse communities. It will need to have the capacity to underpin residential energy performance programs including the Disclosure Framework (see section 3.2. for more detail) and financial initiatives such as green loans and government rebates.

The draft Home Energy Rating Certificate for ratings of existing homes is currently under development. Two options are presented for consultation at Appendix B – Draft Home Energy Rating Certificate. The explanatory guide is annotated providing more information on each element of the certificate and its inclusions.

The draft Home Energy Rating Certificate has been informed by:

- market research and stakeholder consultation
- research reports and international best practice energy rating programs
- technical feasibility, available data and tool capability to deliver for launch in mid-2025
- preferred objectives for NatHERS for existing homes (see section 4.1. for more detail), including comparability to current new home ratings
- consumer and industry needs
- advice on readability, language and terminology.

The certificate will be further improved after the launch and based on research and testing, insight from trials and additional tool and data functionality as it becomes available.

6.1.1. Ratings

A NatHERS for existing homes assessment will produce two ratings: a Whole of Home energy performance rating and a thermal performance rating. These ratings will use the same metrics and calculations as the current ratings for new home assessments.

Consistent ratings across new and existing homes will reduce confusion in the market and enable homeowners, buyers and tenants to better compare, value and act on improving the energy performance of an existing home.

6.2. Upgrade advice

Upgrade advice will be provided under NatHERS and will be delivered as part of the certificate. This advice will be many Australians' first contact with energy performance upgrade information.

The approach to upgrade advice has been developed to align with the NatHERS for existing homes objectives (see section 4.1. for more detail) to empower households to act and reduce their energy use, bills and emissions, improve comfort and health, and increase resiliency to temperature extremes. To achieve this, upgrade advice will be realistic, measurable, impactful, cost-effective and accurate.

The suggested upgrade advice content (currently in development) is being informed by research reports such as the Climateworks Centre Renovation Pathways project, insights from international best practice, and other programs such as Scorecard (see section 5.2. for more detail).

At launch in mid-2025, upgrade advice will be generated using information collected by the assessor during the assessment. This includes the home's construction, appliances and other characteristics including location and climate zone. It is anticipated the upgrade advice will include:

- **general information and guidance** – for example, advice on rebates and accessing key resources
- **energy saving tips** – for example, advice on occupant behaviour on how to keep cool in summer and warm in winter appropriate to climate (may include curtain use, zoning, air-conditioner temperature)
- **thermal and appliance upgrades** – with highlighted quick wins to improve the thermal performance of the home and suggested appliance upgrades appropriate to climate.

More complex upgrade advice is being considered for thermal upgrades. This will be based on the archetypes outlined by the Climateworks Centre Renovation Pathways analysis and will allow the tool to use information captured during the assessment and automatically apply a simple decision tree based on typology for floor, wall and roof construction. This will ensure the suggested advice is realistic and feasible. For example, it will suggest different underfloor insulation options for suspended timber and suspended slab constructions, and a no underfloor insulation option if the floor is a concrete slab on ground.

After launch in 2025, it is anticipated that enhanced, more sophisticated upgrade advice will be developed that supports a broader range of decision tree complexity. This will improve the customisation of upgrade advice provided for the home.

It will be critical for the delivery of upgrade advice to be supported by:

1. **The assessor** – to build on the tool-provided advice. For example, assistance on prioritisation of upgrades based on client budget.
2. **Communications and consumer education** – to align with the Existing Homes and Disclosure Communications Strategy (see section 6.3. for more detail). For example, the development of supporting guidance information, state, territory and local council resources and outreach, and industry engagement.

There will be an opportunity to walk through the draft approach to upgrade advice in a detailed deep dive webinar in August 2024 to better understand the expected content and provide feedback in greater detail.

6.3. Communications strategy and delivery

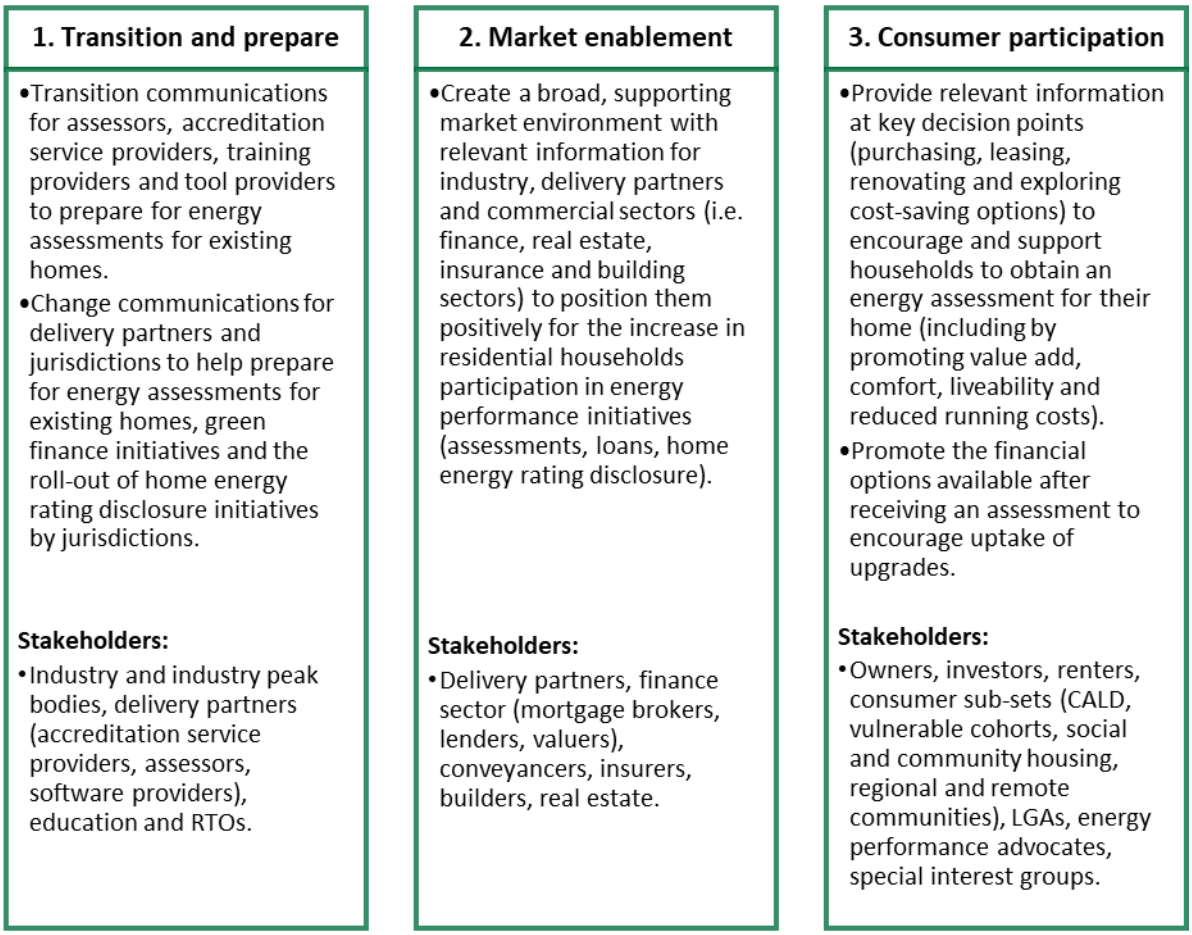
The expansion of NatHERS to existing homes represents an opportunity to directly engage with Australian households and new opportunities for the private sector to participate in new and emerging markets. Effective communication and delivery of the strategy will support Australians to make improvements to their home's energy performance, which can deliver energy bill savings and improved health and comfort of building occupants and reduce peak demand on the energy networks.

An Existing Homes and Disclosure Communications Strategy is being developed, detailing the engagement and communication approach and activities to prepare the market for the introduction of energy assessments for existing homes. It will support the launch of home energy ratings for existing homes and build appetite for increased participation in energy rating and disclosure schemes. Engagement with households will be supported by activities to enhance capacity in the commercial sector to support households to get assessments and undertake upgrades.

A NatHERS website review and redevelopment process is underway to support consumer engagement and industry participation (due for delivery in mid-2025).

The NatHERS Administrator is also exploring options to enhance consumer engagement with existing home ratings by developing a relatable consumer-facing name and messaging (with potential extension to design elements and trademarks). Further details will be provided through the Existing Homes and Disclosure Communications Strategy and the NatHERS website redevelopment project.

Figure 5. Primary functions of the stakeholder engagement and communications strategy



Text alternative for "Primary functions of the stakeholder engagement and community strategy" includes three phases of engagement and details on each phase.

6.4. Data

Active management of data for NatHERS for existing homes is critical for effective implementation, to support disclosure of home energy ratings and to underpin sustainable finance initiatives.

The proposed use of a single energy rating tool for core calculations and certificate generation (see section 9.4. for more detail) creates a central data repository for every house rated. Combined with data from new home ratings created to show compliance with the NCC, this will become a valuable resource of existing building stock information over time.

Data on NatHERS ratings from 2016 onwards is currently publicly available through the Australian Housing Data portal, managed by the CSIRO at Australian Housing Data. The portal contains several dashboards to help those involved in the residential building industry to get greater understanding of how Australia's housing stock is progressing in moving towards higher energy efficiency and lower emissions. Including data for existing buildings on the portal will help grow this resource.

Governments will be able to leverage the information to underpin home energy rating disclosure initiatives, improve regional housing analysis and planning, or better target policies because dwelling details like materials used, appliances installed and current energy efficiency features will be

collected. Central collection of rating results will also enhance energy consumption and greenhouse gas emission modelling.

The finance sector and holders of large housing portfolios (such as superannuation funds) are seeking credible pathways for quantifying and reporting the carbon intensity of their mortgage portfolios and are interested in ratings to enable them to do so. NatHERS ratings will support this. The aggregation of housing portfolio energy and greenhouse gas data could also support companies' corporate reporting on net zero commitments.

More than just reporting on the current state of play in their housing portfolio, NatHERS ratings can be used to inform and support initiatives by portfolio owners to contribute to reducing emissions including through sustainable finance initiatives at the individual home and national levels.

The initial focus for data is on identifying priority improvements for the launch of NatHERS for existing homes and exploring longer-term enhancements needed to support mandatory home energy rating disclosure. All NatHERS data types and stakeholder use cases will be covered. Data types include data and processes used for home ratings, assessor management, assurance, training and administration of NatHERS. Stakeholder groups include the NatHERS Administrator, jurisdictions, partners (such as assessor accreditation service providers), third parties (such as assessors and financial institutions) and the public (individual households and broader public).

Also covered will be data infrastructure issues such as ensuring adherence to privacy laws and establishing strong cyber-security protections.

A NatHERS monitoring, evaluation, reporting and improvement (MERI) plan and program logic will be developed to help capture performance insights, increase public availability of data and identify opportunities for improvement over time. The MERI plan will also describe methodologies for evaluating NatHERS' impacts against its objectives, as described in section 4.1.

Chapter 6. Consumer experience consultation questions

6.1. Home Energy Rating Certificate (see Appendix B)

7. What elements of each certificate do you believe are most effective for communicating with consumers?
8. Do you support the concept of combining the presentation of the thermal and Whole of Home rating into one graphic on the certificate (noting this does not combine the calculation method)?
9. What guidance information should be created to help consumers understand their Home Energy Rating Certificate?

6.2. Upgrade advice

10. What support do you think can be provided to consumers at the time of assessment to drive behaviour change? How might this be best communicated?
11. What information is important to include in guidance materials to support consumers to understand upgrade advice?

6.3. Communications strategy and delivery

12. What communication materials and media (e.g. websites, pamphlets, videos, webinars, paid advertising) would be most effective to communicate NatHERS for existing homes and home energy rating disclosure requirements to consumers?
13. What sources of information do you believe are the most trusted by consumers in the residential buildings space?

6.4. Data

14. What data do you want NatHERS to collect and how could it be used to benefit households?

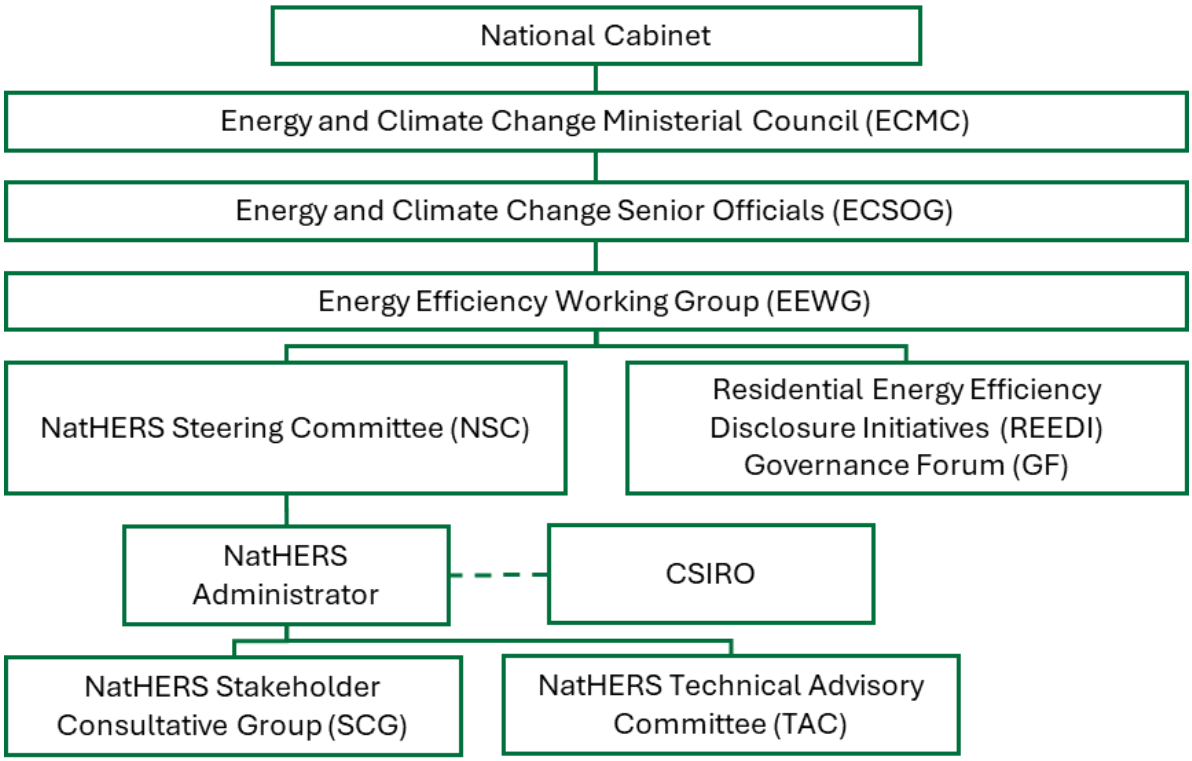
7. Governance and administration

7.1. Governance arrangements

The development of NatHERS for existing homes is being overseen within the current NatHERS governance arrangements, outlined in Figure 6. The ECMC has final decision-making power over the policy direction of NatHERS. Decisions on administrative matters and approval of operational documents is the responsibility of the Energy Efficiency Working Group (EEWG). Australian, state and territory governments provide advice on NatHERS and the Disclosure Framework through the NatHERS Steering Committee (NSC) and the REEDI GF, noting the REEDI GF is made up of government (voting members) and industry and consumer group stakeholders (non-voting members).

The day-to-day management of NatHERS is overseen by the Australian Government on behalf of state and territory governments. DCCEEW acts in the role of the NatHERS Administrator with responsibility for working with delivery partners. Delivery partners for new homes include third-party software providers, AAOs and CSIRO – the owner of all versions of the Benchmark Tool (AccuRate). Specific delivery partners for assessor services and third-party tools for existing homes have not yet been decided, although CSIRO will continue to have a role as owner of the planned existing homes Benchmark Tool.

Figure 6. NatHERS governance structure



Text alternative for "NatHERS governance structure" includes the committees and working groups and lines of approval up to National Cabinet.

7.2. Strategic Plan

The current NatHERS Strategic Plan 2018–2022 covers a 4 year period to align with the NCC cycle. The NatHERS Strategic Plan is developed in consultation with stakeholders through the NatHERS SCG.

Work is underway to update the Strategic Plan in consultation with stakeholders through the NatHERS SCG to ensure NatHERS can support future targeted residential building policies, support decision making and prioritise activities under NatHERS from now until 2030. It is intended that the updated Strategic Plan will provide overarching guidance on each of the NatHERS streams, including new and existing homes and future design decisions.

7.3. Risk management

Risk management processes are under development for NatHERS for existing homes to provide clear guidance on how risks will be managed. This reflects the different risks associated with assessors visiting homes to collect information to inform assessments. Stakeholders will be invited to contribute to the risk assessment later in the year through a focused workshop.

Chapter 7. Governance and administration consultation questions

7.1. Governance arrangements

15. Do you think the current NatHERS governance arrangements are suitable for existing homes? Why / Why not?

8. Assessor services

The success of NatHERS is contingent upon accurate, consistent and reliable ratings achieved through the correct use of NatHERS energy ratings tools. Assessors need to work within a quality assurance framework that encourages and maintains a high standard of ratings.

High-quality training, accreditation and audit are vital to building community confidence in NatHERS ratings for existing homes.

Assessor training and accreditation helps ensure assessors meet appropriate standards of skill and integrity, while audit identifies and addresses skill gaps, errors, and wrongdoing.

The preferred delivery model is to deliver assessor training, accreditation services and audit via contracts between the NatHERS Administrator and third-party delivery partners. This is considered the most effective and efficient way to deliver high-quality assessments and manage identified risks.

8.1. Assessor guidance

Assessors will be provided a NatHERS Technical and Guidance Note for existing homes, which will outline the requirements for existing home assessments to ensure accuracy and consistency. It will provide the information and rules that must be followed when undertaking a NatHERS for existing homes assessment. It will also provide guidance for assumptions that can be made for elements of an assessment that cannot be easily or safely performed by an assessor.

In addition to the current requirements in the NatHERS Technical Note for new homes, the NatHERS Technical and Guidance Note for existing homes will include:

- information regarding risk and safety, conflict of interest and other considerations unique to existing home assessments
- techniques for collecting data and information, including estimations and assumptions regarding the age of the home, insulation, air leakage, shading, windows and existing appliances where documentation does not exist
- evidence requirements, which rely on photographs where documentation does not exist
- guidance regarding data points that may be assumed to be defaults within tools, rather than collected.

The Technical and Guidance Note for existing homes will be tested as part of the trials of existing home assessments, which are planned to commence from mid-2024 (see section 5.3. for more detail). A final version will be available to support launch in mid-2025.

A NatHERS Assessor Handbook for existing homes will be developed following the launch of NatHERS for existing homes in mid-2025 and will be ready for use between late 2025 and early 2026. It will incorporate and supersede guidance elements from the Technical and Guidance Note and will provide best-practice guidance for assessors and further explanations and clarifications to the Technical Note rules. Learnings from the implementation of NCC 2022 updates found that an assessor handbook should only be developed once all key elements of the expansion have been developed and tested. To help the development of guidance for assessors, information will be captured during the trials for existing homes about what types of questions and issues assessors face in the field.

To support assessors between the mid-2024 trials and when the Assessor Handbook for existing homes is published, other guidance will be provided.

8.2. Assessor training

NatHERS assessors for existing homes will be required to have the skills and knowledge needed to undertake existing home assessments to a high standard.

All current NatHERS accredited assessors for new homes must hold a Certificate IV in Home Energy Efficiency and Sustainability (CPP41119), delivered by an RTO approved by the Australian Skills Quality Authority. Given the level of complexity of NatHERS new home energy rating tools, it is important that those who use the energy rating tools to assess the thermal performance of buildings are adequately trained in their use. They must have a minimum level of understanding of building construction, building thermal performance and the applicable building regulations. Once the Certificate IV has been achieved the assessor must then seek accreditation by an AAO.

While some NatHERS accredited assessors for new homes may seek to become accredited to deliver existing home assessments, it is anticipated that most NatHERS assessors for existing homes will come from a range of professional backgrounds, including Scorecard assessors, ACT EER assessors, valuers and building inspectors, as well as those entirely new to the sector.

8.2.1. Training requirements

The training requirements for NatHERS for existing homes will include 7 units of competency from the Certificate IV in Home Energy Efficiency and Sustainability, plus an eighth unit specific to NatHERS for existing homes training, as well as separate tool-specific training.

The 8 units, shown in Figure 7, target a broad audience and were agreed by all Australian governments in 2022 following consultation with an expert advisory group comprising RTOs, AAOs, Scorecard administrators, Scorecard tool trainers, NatHERS assessors, Scorecard assessors and all governments.
Content and resources for the 8 units of training and the tool training are currently under development by the NatHERS Administrator. A training delivery pilot will commence from mid-2024.

The eighth module will ensure assessors have training on areas relevant to existing home assessments, such as home setting, communication, the assessment process, WHS and awareness of vulnerable groups such as the elderly or CALD. CSIRO are developing tool-specific training for delivery after the 8 units and prior to the commencement of trial assessments. The outcomes of the training delivery pilot and field trials will inform the development of the Skills and Training Strategy, which will be consulted on later in 2024.

Figure 7. Units of competency required for NatHERS existing home assessors

Text alternative for "Units of competency required for NatHERS existing home assessors" includes the names and unit codes for the 8 units of competency.

8.2.2. Approach to skills and training

Training for existing home assessors is currently provided by Scorecard on behalf of all Australian governments, while NatHERS processes are being developed.

The NatHERS Administrator is developing training pathways for assessors from different professional backgrounds and varying levels of experience with building energy performance, such as 'new to sector', 'some property, building or construction sector experience', and 'experienced assessors of other building energy performance schemes' (see section 8.2.3. for more detail). Existing recognition of prior learning processes are expected to be utilised by RTOs to guide training pathway alignment and allocation.

The NatHERS Administrator will develop clear roles and responsibilities for RTOs, such as requirements for using NatHERS Administrator-supplied training content and resources, and processes around updates to training content as directed by the NatHERS Administrator or resulting from updates to units of competency. The approach to training will be implemented incrementally to support scaling up of the assessor workforce nationally.

The specific training requirements (including whether there would be different requirements for those who just collect data on-site and those completing full assessments) are still under consideration and will be considered by EEWG.

8.2.3. Workforce transition

Currently there are similar schemes with an established workforce of energy assessors delivering home energy ratings for Australian households. These include the national Scorecard and the ACT EER Disclosure Scheme, which has been in operation since 1997.

A streamlined transition pathway is proposed for Scorecard, ACT EER and NatHERS new building assessors, recognising the robust training and accreditation processes, and demonstrated experience of these groups of assessors. Having a streamlined transition pathway will ensure industry stability and a suitably qualified workforce for home energy ratings at launch.

Approximately half of current Scorecard assessors have completed some formal training and all have undergone the Scorecard tool and in-home assessor training program. Scorecard assessors also need to pass a stringent exam, deliver marked practice assessments and are audited.

It is proposed that Scorecard, NatHERS or ACT EER assessors can apply for accreditation as a NatHERS existing home assessor once they successfully complete the following bridging training:

- NatHERS existing homes-specific training module.
- Energy rating tool training.

Additional WHS training may also be required, depending on the specific units previously completed by individual assessors.

Scorecard, NatHERS and ACT EER accredited assessors deemed eligible for exemptions under the NatHERS for existing home training requirements would need to apply for and successfully complete the NatHERS for existing homes accreditation process (see section 8.3.1. for more detail). This may include an assessor exam, fit and proper person checks and insurance requirements. Any competency, skill or performance gaps identified through accreditation or ongoing quality assurance could be addressed through continuing professional development (CPD) as prescribed as part of performance improvement actions under NatHERS.

It is essential that when NatHERS existing homes is launched, qualified assessors are ready to rate homes. A national pilot to validate and test the training and accreditation of national Scorecard assessors in all states and territories in Australia was completed in 2019 and further trialled in 2021. Evaluation of the field trials indicate the assessors are delivering quality assessments (A report on the National Scorecard evaluation 2021, April 2022).

Specific grandfathering provisions will be developed for NatHERS existing home assessors. These arrangements may include a defined period during which national Scorecard, ACT EER and NatHERS assessors can transfer to be NatHERS for existing homes assessors.

8.2.4. How training will be provided

Under the preferred delivery model, training for NatHERS for existing homes would be initially provided by specific training providers under direct contract with the NatHERS Administrator. Over time this arrangement may transition to the VET sector.

Under the arrangements for new homes, the NatHERS Administrator has no formal relationship with the RTOs who deliver the Certificate IV. Recent efforts to establish a network between the NatHERS

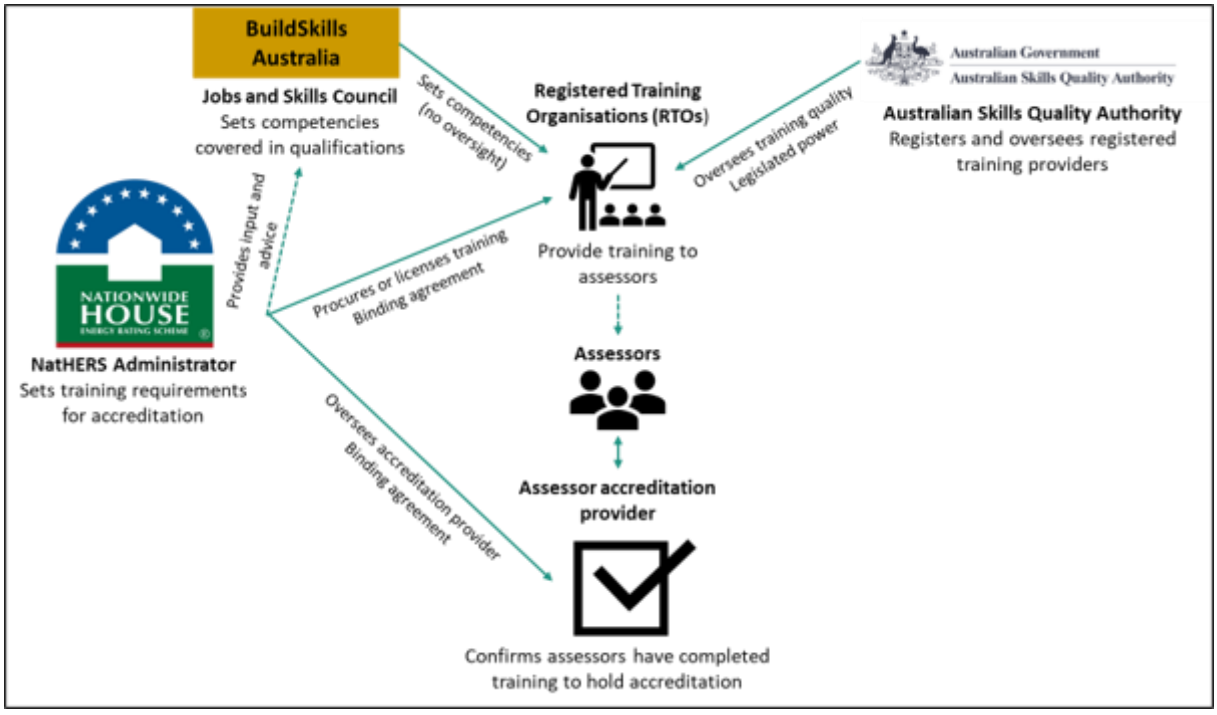
Administrator and RTOs are aimed at driving quality in training delivery and building a level of consistency in the outputs of assessors.

The preferred approach to training, detailed in Figure 8, could provide the NatHERS Administrator an improved ability to manage emerging training issues and update required training where necessary. As NatHERS ratings for existing homes is a new product and a fledgling industry, training will need to be created and a market for the product developed. This is particularly important as NatHERS for existing homes will be voluntary initially and is expected to start with a small pool of assessors. The aim is to build NatHERS to support the adoption of mandatory home energy rating disclosure at point of sale. Close control over training will allow quick changes to be made if needed.

This approach would also ensure that training and an initial pool of assessors will be available at launch in mid-2025. Close oversight of training initially aims to verify that the foundational assessors are well positioned to support new assessors as they join the industry, either through informal arrangements or by taking more formal roles as trainers or in assessor accreditation. Once the industry is established, the plan is to assess transitioning training to the VET sector, potentially after major policies such as home energy ratings disclosure are implemented.

The training covered by this approach focuses on the 8 units specified in Figure 7 and not training in specific NatHERS energy rating tools. Tool-specific training will initially be developed by CSIRO for the field trial and then further be considered when other tools are available (or close to available), including identifying which parties are best placed to deliver the tool training.

Figure 8. Preferred training arrangement approach



Text alternative for "Preferred training arrangement approach" provides the linkages of the various parties involved in training arrangements.

8.3. Assessor accreditation

8.3.1. Accreditation requirements

Energy performance assessments of existing homes can be complicated and come with some level of risk to both the householder and assessor. It is essential all those involved in an assessment have demonstrated their ability to complete an assessment accurately, safely and ethically.

As such, all assessors for existing homes will need to be accredited, regardless of whether they are collecting data on-site, completing off-site modelling or both. This means no unaccredited person would be able to undertake any part of the assessment process.

The specific requirements for accreditation will be outlined in the proposed NatHERS for Existing Homes Assessor Accreditation Requirements, which will be provided for consultation later in 2024. It is expected that, at launch, the requirements for those who just collect data on-site and those completing full assessments will be the same. For launch, the core requirements for assessor accreditation for existing homes are expected to include:

- completion of units of competency or equivalent (see section 8.2.1. for more detail)
- undergoing fit and proper person checks
- holding appropriate insurances
- having appropriate risk management policies (e.g. privacy)
- passing an accreditation exam
- agreement to follow an Assessor Code of Practice.

Completion of CPD units is proposed to be required to maintain accreditation, along with renewed insurances.

8.3.2. How assessor accreditation will be provided

Under the preferred delivery model, assessor accreditation would initially be provided by procurement of one or more third-party assessor accreditation service providers, who will operate under contract with the NatHERS Administrator.

Compared to a licensing model where assessor accreditation service providers are self-funded through the collection of accreditation fees, the procurement of assessor accreditation service providers gives the NatHERS Administrator a greater ability to oversee the performance of providers and take action to ensure they are meeting their obligations. This would ensure confidence in NatHERS for existing homes while it is being established.

With initial demand expected to be low at launch, a procurement model would also provide funding to help overcome start-up costs and incentivise providers to enter the market. Applicants could be any organisation that demonstrates its capability to deliver the services required, including current assessor accreditation service providers for NatHERS for new homes or state and territory agencies.

This arrangement would be reviewed as demand increases, which would include consideration of whether accreditation services should become a self-funded licensing arrangement.

8.3.3. Role of the assessor accreditation service provider

The assessor accreditation service provider would be responsible for ensuring assessors have met all requirements for accreditation. It is proposed that they will maintain a register of accredited assessors and accreditation details, oversee assessor compliance with requirements to maintain accreditation, and provide ongoing assessor services (which may include continuing professional development programs, mentoring and assessment advice).

It is also anticipated that assessor accreditation service providers would deliver assurance functions that ensure assessors conduct assessments in a professional and ethical manner. This is expected to involve responsibility for assessor complaints management, conflict of interest management and customer feedback.

The proposed requirements for assessor accreditation service providers will be set out in detail in the NatHERS for Existing Homes Assessor Accreditation Service Provider Policy, which will be consulted on later in 2024.

8.4. Audit services

8.4.1. How audit services will be provided

Impartial and thorough quality assurance ensures householders can be confident in their NatHERS rating that assessors are appropriately supported to improve knowledge and skill gaps, and that wrongdoing can be identified and addressed.

The preferred delivery model proposes that audits of assessments be undertaken by independent experts procured by the NatHERS Administrator.

This approach is designed to address feedback from stakeholders and independent reviews about how the quality, volume and consistency of audit processes for NatHERS could be improved, and how potential conflicts of interest can be most effectively managed. Separating audit functions from assessor accreditation services ensures there will be confidence in the independence of the auditors, and procuring the service would provide direct funding to ensure the number of audits is sufficient.

The independent auditors would be responsible for:

- reviewing assessments against standard procedures and the collected evidence
- providing the assessor and assessor accreditation service provider with an audit report and recommended performance improvement actions
- providing information to assessor accreditation service providers, software tool providers and the NatHERS Administrator for assurance and audit purposes.

8.4.2. Evidence collection

A key part of the quality assurance process is the ability to verify an energy performance rating.

To ensure assessments are accurate, it is proposed that assessors will need to collect evidence of assessment inputs, particularly where the input has a significant impact on the energy performance rating. Evidence would be expected to take the form of documents (e.g. a floor plan or an invoice) or photos (e.g. a photo of a heating or cooling appliance).

To manage privacy risk to householders, assessors would be trained and instructed to avoid the capture of personal information. The Assessor Code of Practice would require assessors to comply with stringent requirements in relation to the collection, use and sharing of personal or sensitive information. Assessors would also be required to obtain householder privacy consent for every assessment, to share information for quality assurance purposes.

The approach assessed as lowest risk is for all evidence to be uploaded through the NatHERS accredited software tool as part of the assessment and stored in a secure central database. This would ensure all evidence is stored securely to minimise the risk of breach. It also reduces the burden on individual assessors to store, manage and provide the evidence from their assessments. An evidence database would require some initial development time and is unlikely to be available at launch in 2025. Who is best placed to host and manage it will also need to be determined in consultation with key stakeholders.

Interim evidence storage and collection arrangements will be developed in the meantime. This could involve an interim evidence upload process or assessors keeping the evidence from their assessments and providing it as part of an audit.

8.4.3. Responding to non-compliance

Establishing an appropriate range of actions to address non-compliance is needed to ensure confidence in NatHERS.

The NatHERS Administrator, in consultation with states, territories, industry and stakeholders, will establish a range of actions that may be applied in response to inaccurate assessments or other non-compliance. Depending on the risk of the non-compliance, this may include repeating or revising the assessment, suspending or terminating accreditation, requiring the assessor to undertake further (formal or informal) training, additional scrutiny of subsequent assessments, additional education and guidance or referral to regulatory or law enforcement agencies.

Under the preferred delivery model, required actions would be assigned either by the independent auditor or the assessor accreditation service provider. The assessor accreditation service provider would be responsible for ensuring assessors complete the recommended performance improvement actions and taking risk-based action (which may include suspending or terminating accreditation) if assessors fail to complete them.

NatHERS assessments for existing homes will not be supported by Commonwealth legislation, which means that the NatHERS Administrator will not have formal compliance powers such as investigations, penalties or injunctions. Where Australian, state or territory governments establish schemes that rely on NatHERS for existing homes and that may have a risk of serious non-compliance (such as mandatory disclosure schemes, green loan programs or grant schemes), they would need to establish sufficient powers to respond to serious non-compliance. The NatHERS Administrator will work closely with the REEDI GF during the development of the Disclosure Framework regarding compliance matters. The Administrator will also work with relevant Australian, state and territory agencies regarding how suspected compliance issues for other schemes might be referred.

Further details of the proposed quality assurance approach, including audit, evidence collection and actions to address non-compliance, will be included in the NatHERS for Existing Homes Audit and Evidence Policy, which will be consulted on in late 2024.

Chapter 8. Assessor services consultation questions

8.1. Assessor guidance

16. Are there other areas where assessors will need guidance?

8.2. Assessor

17. Are there considerations for the workforce transition that have not been captured?

8.3. Text alternative for "Preferred training arrangement approach" provides the linkages of the various parties involved in training arrangements.

Assessor accreditation

18. Are there any considerations for assessor accreditation not reflected in the preferred approach?

8.4. Audit services

19. Do you support the separation of audit responsibilities from the assessor accreditation service provider?
20. Do you support a requirement for evidence to be collected so that assessments can be verified?
21. Do you support evidence being required to be uploaded as part of an assessment and stored in a secure, central database?

9. Energy rating tools

Energy rating tools are a key element of NatHERS as they ensure that information about a home is uniformly treated to create ratings and certificates. The energy rating tools provide a 'measuring tape' for rating the energy performance of Australian homes.

Before outlining the preferred approach to energy rating tools for the launch of NatHERS for existing homes, this section provides background on the NatHERS energy rating tools and the approach currently used for new home ratings. It also describes recent work to modernise the CSIRO-managed Benchmark Tool, AccuRate, into a cloud-based system.

9.1. Benchmark Tool background

The NatHERS Benchmark Tool is the tool against which other NatHERS tools are assessed for accreditation. There have been several versions of the Benchmark Tool since the inception of NatHERS in 1993. The current version, AccuRate Home, is used by the NatHERS Administrator to measure the accuracy of software tools seeking NatHERS accreditation for new home assessments and ratings. The Benchmark Tool is a key concept in NatHERS, with the tool managed by CSIRO and leveraging over 50 years of building modelling research and experience.

The NatHERS Administrator oversees all NatHERS software tools to ensure consistency through a public-facing SAP and calculation method document. The calculation method shows how ratings for NatHERS Whole of Home are calculated. The SAP sets out the requirements for any tool to be accredited, including accuracy requirements. It ensures that outputs (ratings and certificates) are consistent across all NatHERS tools and align with the Benchmark Tool.

9.1.1. Chenath engine

Chenath is the endorsed calculation engine used by all versions of the NatHERS Benchmark Tool and all currently accredited NatHERS tools to model thermal flows within residential buildings (meaning the way heat and cold move between rooms in a home). This engine is the culmination of decades of research on the way buildings operate in Australian conditions. It uses climate data and standardised user behaviour assumptions, among other factors, to predict annual totals of hourly heating and cooling energy requirements for residential dwellings. More information on the Chenath engine calculations and assumptions can be found in the Chenath repository.

CSIRO owns the intellectual property to Chenath and provides a royalty-free licence to all Australian governments. It licences Chenath on commercial terms to third-party software developers for their use. The Chenath engine underpins all currently accredited NatHERS tools. The Chenath engine was validated in 2004 against the international standard ANSI/ASHRAE 140-2001. Results produced by the Chenath engine were compared against the results from a set of international reference programs and were found to meet the standard.

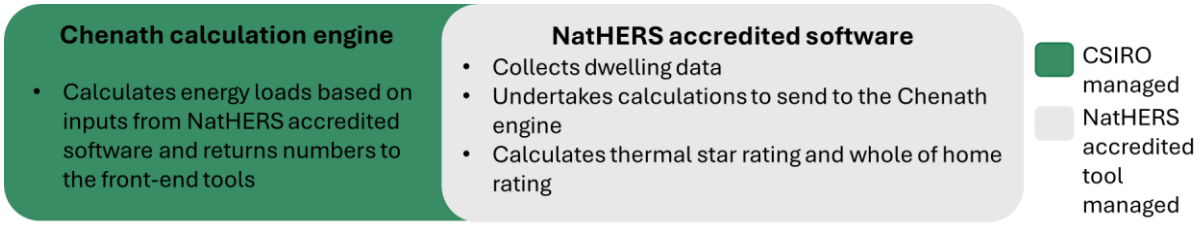
9.1.2. New homes energy rating tools and accreditation approach

The Benchmark Tool for new home assessments, AccuRate Home, uses Chenath as its core calculation engine. It is a desktop tool that can be downloaded and used on a computer without an internet connection, although certificates are generated online.

As noted above, Chenath and the settings for AccuRate Home are based on the best available data and research. The settings were developed and agreed through comprehensive processes over several years under the Energy Ministers and Building Ministers governance arrangements.

The evolution of the new homes energy rating tool has led to third-party software developers needing to use some calculations from CSIRO's Chenath engine and build other calculations into their tools (see Figure 9). This includes elements such as area correction factors and Whole of Home calculations, which estimate appliance energy use and on-site power generation.

Figure 9. Current NatHERS for new homes approach



Text alternative for "Current NatHERS for new homes approach" includes what is managed by CSIRO and what is managed by NatHERS accredited software.

While working effectively and supporting compliance under the NCC for decades, the current approach has limitations in several areas.

For example, the current approach involves a duplication of effort across developers who must each individually develop many of the same elements in accordance with strict specifications. It also involves an accreditation process that requires detailed testing of some individual calculation elements as well as the accuracy of overall rating results. The SAP testing process involves checking multiple house designs in multiple climate zones to ensure consistency with the Benchmark Tool. The accreditation process is resource intensive for developers and the NatHERS Administrator.

The current approach also makes it challenging for some aspects of NatHERS administration. For example, it is difficult to ensure all assessments are uploaded to the Australian Housing Database and hence maximise the completeness of this important Australian data set. It is also challenging to control access to energy rating tools in the case of assurance and accreditation issues.

9.2. Evolution to the cloud

To ensure the Benchmark Tool and NatHERS can continually improve and take advantage of technological innovation, in 2019 the Australian Government invested substantial funds, with the backing of the states and territories, in the development of a cloud-based version of AccuRate, named AccuRate Enterprise.

AccuRate Enterprise provides new opportunities for how tools can be developed and operate. Being a cloud-based tool means it is available to developers to carry out calculations on a central server using the internet, avoiding the need for developers to re-build the same calculations. The preferred delivery model for existing homes rating tools seeks to take advantage of this opportunity.

AccuRate Enterprise for new homes is currently undergoing accreditation following detailed prototyping and testing and will be available to assessors as an accredited tool soon.

9.3. Existing homes Benchmark Tool development

The existing homes Benchmark Tool will be AccuRate Enterprise (existing homes mode), following completion of future field trials, final testing and committee approvals. The Benchmark Tool will be available for use by NatHERS accredited assessors to voluntarily rate homes upon launch of NatHERS for existing homes in mid-2025. It will have a user interface and will generate NatHERS existing home certificates with upgrade advice.

The existing homes tool is being built using the same core software as the cloud-based AccuRate Enterprise (new homes mode). It will use the same science-backed thermal and appliance energy modelling calculations as the new homes tool. The existing homes tool requires some adjustments to assumptions and data fields to capture the differences with existing homes – recognising the differences in historical building practices and the challenges inherent with data collection in existing homes.

A proof-of-concept existing homes desktop tool was completed in April 2024. This tool is not intended for release but demonstrates that the settings generated acceptable initial results so that conversion to the cloud-based approach could commence. This followed the agreement to technical settings suitable for existing homes by the NatHERS Steering Committee in March 2024. The agreement was informed by a detailed review and analysis conducted by specialised technical working groups into the 64 discrete settings identified to be specific to existing homes.

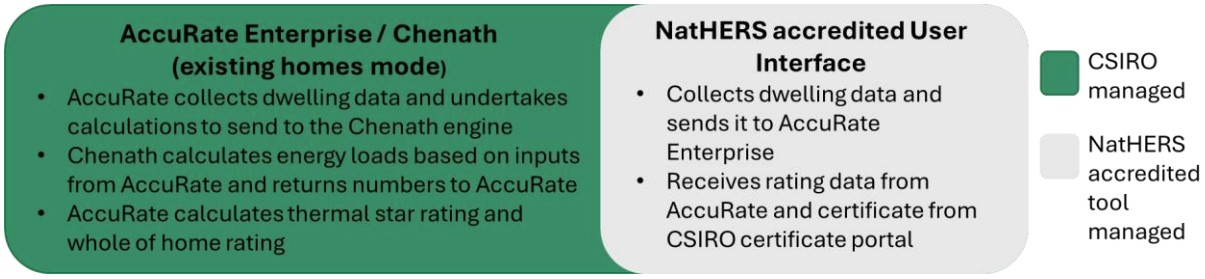
A beta version of AccuRate Enterprise (existing homes mode) was made available to the NatHERS Administrator for testing in July 2024 and will be available to interested stakeholder upon request. It will then be trialled and refined before final testing and committee approvals, to establish it as the NatHERS existing homes Benchmark Tool.

To speed up the data collection process, CSIRO is trialling use of a third-party tool, magicplan™. magicplan™ uses LiDAR, a method for determining ranges by targeting an object or a surface with a laser. CSIRO has customised magicplan™ so that its results can automatically be exported into AccuRate Enterprise and then be checked before the ratings and certificate are generated. magicplan™ has already been trialled in combination with AccuRate Enterprise (new homes mode) with positive results and will be further trialled with AccuRate Enterprise (existing homes mode). Further detail on the trials is available at section 5.3.

9.4. Software accreditation process for existing homes

The proposed approach for existing homes energy rating tools is to limit third-party tools accreditation to only user interfaces, with all calculations undertaken by AccuRate Enterprise (existing homes mode). Third-party tool developers would be able to code user interfaces that connect to AccuRate Enterprise (existing homes mode) for ratings calculations and certificate generation, including upgrade advice (see Figure 10).

Figure 10. Preferred existing home software accreditation approach



Text alternative for "Preferred existing home software accreditation approach" includes what is CSIRO managed and what is managed by NatHERS accredited user interface.

Although the preferred approach varies from the current approach to new homes, it will not change how NatHERS for new homes is delivered. Current market participants for new homes such as accredited software tool providers and AAOs, will still support new home assessments and ratings. The NatHERS Administrator is committed to continual improvement. Any changes to NatHERS for new homes will follow established processes including consultation. The use of NatHERS by building industry participants to demonstrate compliance with the NCC will remain unchanged.

Facilitation of market-developed user interfaces is an important element in the preferred delivery model for existing homes. This aims to support the proposed NatHERS design principles, facilitate market innovation and improve NatHERS administration. The approach does the following:

- Aligns with the proposed objectives and design principles:
  - Ensuring ratings are consistent and comparable between existing homes and with NatHERS for new homes ratings.
  - Prepares for disclosure initiatives including through creating a centralised platform for home ratings across Australia.
  - Enables governments to incorporate the latest science or policy settings into energy rating tools directly – for example, changes to climate or emissions data.
  - Allows enhanced data provision to other end users such as financial institutions or government grant programs.
- Facilitates market innovation to:
  - Develop new data collection methods such as using mobile device technologies like magicplan™, to minimise the time needed on-site while still delivering reliable ratings.
  - Offer enhanced client services such as additional modelling of upgrade advice options and the costs and benefits of those options.
  - Allow potential integration with modern building industry software and emerging trends such as Building Information Management systems.
- Improves NatHERS administration by:
  - Streamlining software accreditation and update processes, reducing the testing burden for both the NatHERS Administrator and software developers.
  - Providing opportunities for automated error checking.
  - Improving audit and assurance approaches.
  - Enhancing back-end data collection, statistical analysis and policy insights.

9.4.1. User Interface Software Accreditation Protocol development

A draft User Interface Software Accreditation Protocol (UI Protocol) is under development. The UI Protocol and related processes will detail:

- mandatory inputs and outputs required to meet accreditation standards
- testing methods and materials
- other relevant NatHERS terms and conditions.

User interfaces will still need to have their accuracy tested against standardised house plans. However, the existing homes UI Protocol is expected to be streamlined compared to the current NatHERS for new homes SAP as it will not require re-testing of each energy rating tool's core calculations (as they will be calculated by the Benchmark Tool).

Terms and conditions contained in the UI Protocol and related processes will help ensure the integrity of NatHERS and protect consumers. These are expected to cover issues such as the appropriate use of home energy rating certificates, evidence collection rules, conditions on use of trademarks and logos, user access management controls and quality assurance and monitoring conditions.

Further development and targeted consultations on the UI Protocol will be undertaken over coming months, as detailed in Appendix A – Consultation plan summary.

9.4.2. Resources to support third-party tool development

Aligning with the development pathway agreed by Energy and Climate Change Ministers in 2023, official accreditation of user interfaces is not expected until after launch in mid-2025. However, the initial development of third--party tools can commence now.

Resources available now include:

- Beta version of AccuRate Enterprise (new homes mode) is available upon request from CSIRO for software developers in a 'sandbox' version. AccuRate Enterprise (existing homes mode) will have similar input requirements to the new homes' mode, so 'sandbox' access allows software providers to prototype initial development of a front-end user interface.
- Programming methodologies for how to connect with AccuRate Enterprise (new homes mode) through Application Programming Interfaces (API) are available from CSIRO.
- For a small fee, third--party developers can also join the existing CSIRO user group for magicplan™. This user group allows access to customisations specific to AccuRate Enterprise to speed up data collection. This user interface does not automatically run the simulations in AccuRate, nor does it generate a certificate. This needs to be done in AccuRate Enterprise.
- Alpha version of AccuRate Enterprise (existing homes mode) with the ability for assessors to enter and review data, for NatHERS Administrator testing.

Resources to become available to stakeholders over the second half of 2024 include:

- magicplan™ customisations to collect data from existing homes and speed up entry.
- Beta version of AccuRate Enterprise (existing homes mode) as well as the draft API requirements for software providers.

- Draft Technical and Guidance Note setting out how an assessment should be completed on-site.
- Draft user interface SAP.

These draft resources and beta tool will be field tested in trials (see section 5.3. for more detail). They will also support consultation with the NatHERS TAC and NSC before finalisation ahead of launch in mid-2025.

9.4.3. Existing homes software tool development: post launch

NatHERS is committed to ongoing improvement, including further preparations for the possible implementation of mandatory home energy rating disclosure. The post launch development pathway for NatHERS for existing homes software will need to be further determined. This will depend on consultation, NatHERS committee discussions, jurisdictional positions on disclosure and initial experience with launch in mid-2025.

The additional software development work might include additional data and ICT infrastructure assessments and enhancements. This will improve access and availability of ratings when deployed at scale under a mandatory disclosure requirement. The assurance systems may also need to be considered for improvements to fully support a mandatory disclosure system – for example, how disclosure initiative risks or issues can trigger NatHERS audit processes, or how to minimise possible misuse of assessments through use of false evidence.

Chapter 9. Energy rating tools consultation questions

9.3. Existing homes Benchmark Tool development

22. Are there concerns we need to consider with the adoption of the cloud tool?

9.4. Software accreditation process for existing homes

23. Do you support the preferred approach of having front-end user interfaces delivered via third parties?
24. Are there specific resources required to better facilitate third-party tool or user interface development?

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Appendix A – Consultation plan summary

Purpose

The NatHERS Administrator is committed to working closely with stakeholders on the design of NatHERS for existing homes. With the goal of giving greater visibility of engagement opportunities to stakeholders, the NatHERS Administrator has developed a 3-step consultation plan. This plan outlines the approach to targeted consultation on the proposed delivery of NatHERS for existing homes and the development of supporting documents and processes.

Objectives

This targeted consultation will seek feedback from stakeholders on the preferred delivery model for NatHERS for existing homes. Consultation outcomes will inform the final design of the delivery model for consideration by ECMC in first half of 2025.

Stakeholders

The planned consultation will be with existing advisory groups including TAC, SCG and REEDI GF.

Consultation schedule

Consultation step 1: Feedback on delivery model – late July to late August 2024
Step 1 seeks feedback on the preferred delivery model for NatHERS for existing homes. Written submissions are encouraged in response to the content and questions outlined in this consultation paper. Additionally, live webinars will be available to facilitate engagement, covering both the delivery model and providing in-depth discussion on specific issues.

Consultation step 2: Feedback on underpinning detail – early August to late Sept 2024
Step 2 will invite comment on the detail underpinning certain elements of the delivery model. Additional detail on the certificate, approach to upgrade advice and Assurance Strategy will be provided as an element of webinars. Feedback on these will be sought, with the specific feedback approach and deadlines to be provided at or before the webinars.

Consultation step 3: Future opportunities for engagement – there are several technical documents and processes needed to underpin energy ratings for existing homes. Each of these documents will invite different levels of stakeholder engagement ahead of launch in mid-2025. Details on consultation scope is available in the List of future opportunities for engagement below.

Ongoing engagement

NatHERS is committed to ongoing improvement. Any improvements identified for post launch will be developed and consulted on through existing NatHERS governance and advisory groups where appropriate.

Webinars

Three webinars are planned for August 2024 to support steps 1 and 2. The scope of the planned webinars is available in Table A-1below.

Table A-1 – Detail on webinars

#	Session	Scope
1	**Consumer experience**	• Assessment approach • Certificate design • Upgrade advice • Role of assessors • Communications activities
2	**Assessor services**	• Approach to assessor training • Approach to auditing and evidence • Approach to accreditation services: - Accreditation process - Accreditation requirements, including assessor code of practice - Complaints policy
3	**Energy rating tools and accreditation**	• Approach to software accreditation • Overview of technical settings • Terms and conditions for software providers • Demonstration of NatHERS software

List of future opportunities for engagement

Table A-2 – Chapter 4: Objectives and principles

Element	How can stakeholders get involved?
Proposed objectives	Provide submission in response to this consultation document.
Proposed design principles	Provide submission in response to this consultation document.

Table A-3 – Chapter 5: Preferred delivery model outline

Element	How can stakeholders get involved?
Approach to delivering NatHERS for existing homes	Provide submission in response to this consultation document.

Table A-4 – Chapter 6: Consumer experience

Element	How can stakeholders get involved?
Home Energy Rating Certificate (launch product)	Attend the 'Consumer experience' webinar.
Upgrade advice (launch product)	Attend the 'Consumer experience' webinar.
Exploring development of a relatable consumer-facing name and messaging	This item will be added to the scheduled meetings for discussion and decision (as appropriate).
Home Energy Rating Certificate post-launch improvements	Engagement will be sought through existing SCG/REEDI GF meetings.
Upgrade advice post-launch improvements	Engagement will be sought through existing SCG/REEDI GF meetings.
Communications Strategy	Strategy will be circulated to relevant committees in late 2024.

Table A-5 – Chapter 7: Governance and administration

Element	How can stakeholders get involved?
Risk assessment and management	TAC, SCG and REEDI GF members will be invited to attend a focused workshop on risk.

Table A-6 – Chapter 8: Assessor services

Element	How can stakeholders get involved?
Approach to providing assessor services	Attend the 'Assessor services' webinar.
Assurance Strategy	Attend the 'Assessor services' webinar to learn more. Will be provided to the TAC/SCG for written feedback.
Accreditation requirements, including assessor code of conduct	Attend the 'Assessor services' webinar to learn more and provide feedback on the proposed accreditation requirements and process.
Training content development and training delivery pilot	A Training Advisory Group has been established. Some interested stakeholders have already contacted NatHERS to participate. If vacancies exist there may still be opportunities to participate.
Audit and evidence requirements	Audit methodology: TAC members will be able to volunteer to participate in a dedicated working group on the audit methodology. Audit and Evidence policy: Will be provided to the TAC/SCG for written feedback.

Table A-7 – Chapter 8: Assessor services (continued)

Element	How can stakeholders get involved?
Detail on specific requirements for the Assessor Accreditation Service Provider	Will be provided to the TAC/SCG for written feedback.
NatHERS Technical and Guidance Note	Working groups from the TAC and SCG will be formed to discuss specific issues.
Assurance and Accreditation Policies	Will be provided to the TAC/SCG for written feedback.
Requirements for Assessor Accreditation Service Providers	Will be provided to the TAC/SCG for written feedback.
Training and Skills Strategy	Will be provided to the TAC/SCG for written feedback.
NatHERS Assessor Handbook	TBA.

Table A-8 – Chapter 8: Energy rating tools

Element	How can stakeholders get involved?
Approach to software accreditation	Attend the 'Energy rating tools and accreditation' webinar.
NatHERS software accreditation process	TAC members will be asked for comment.
AccuRate Enterprise (existing homes mode) – the future Benchmark Tool for existing homes	Beta version to be available to support trials and will be accessible on request from CSIRO.
NatHERS software accreditation protocol	TAC members will be asked for comment.

Table A-9 – Other related consultation

Element	How can stakeholders get involved?
Disclosure Framework Version 2	REEDI GF, Apartment Working Group members and other stakeholders who have indicated an interest in disclosure or identified by REEDI GF, will be invited to attend sessions. These will include a general session and sessions with a particular focus (for example communications, data and tools).
NatHERS Strategic Plan (new and existing homes)	SCG, TAC and REEDI GF members will be engaged through meetings.

Appendix B – Draft Home Energy Rating Certificate and Explanatory Guide

Figure 11 Draft Home Energy Rating Certificate for existing homes – Design 1

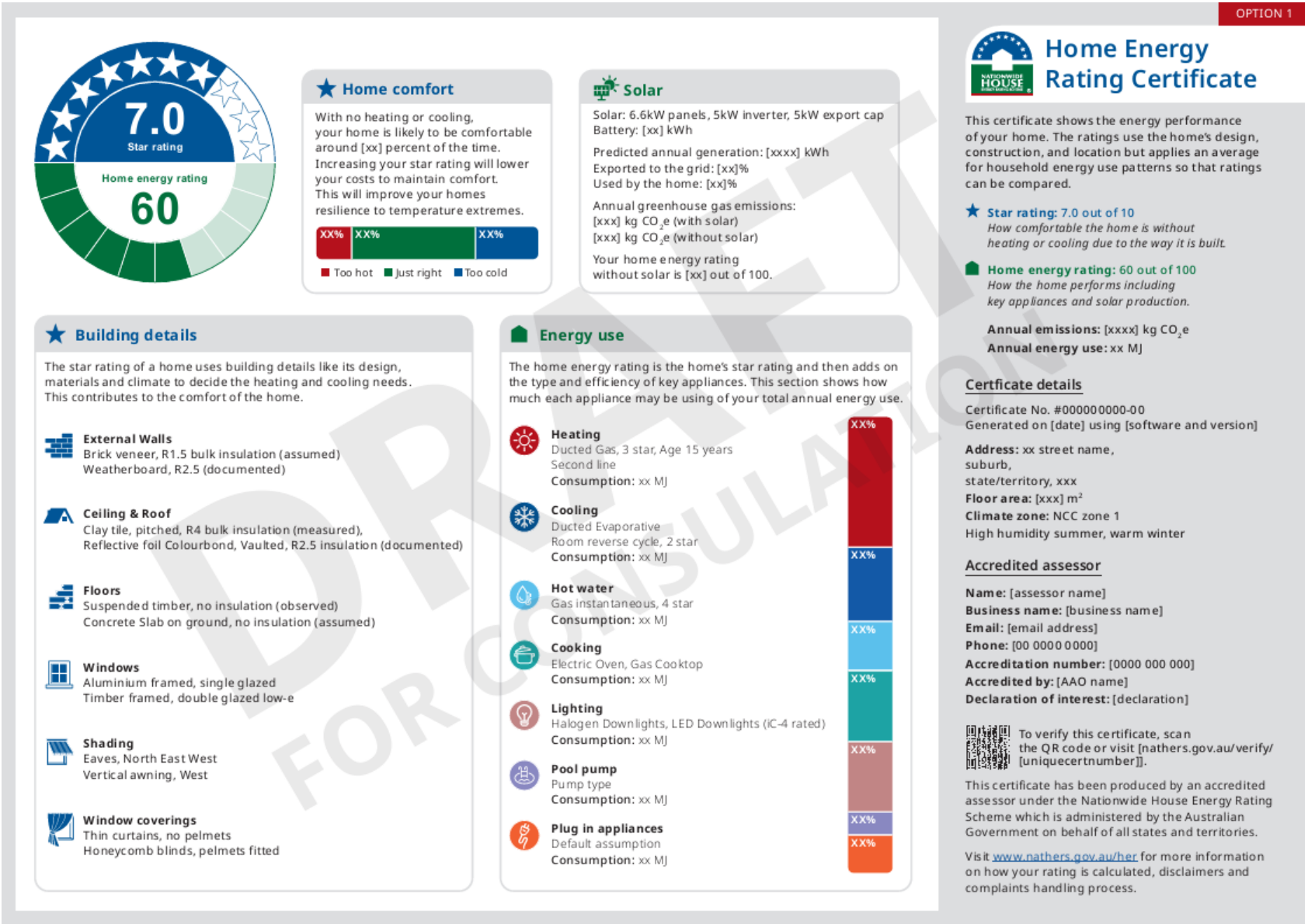


Figure 12 Draft Home Energy Rating Certificate for existing homes – Design 2

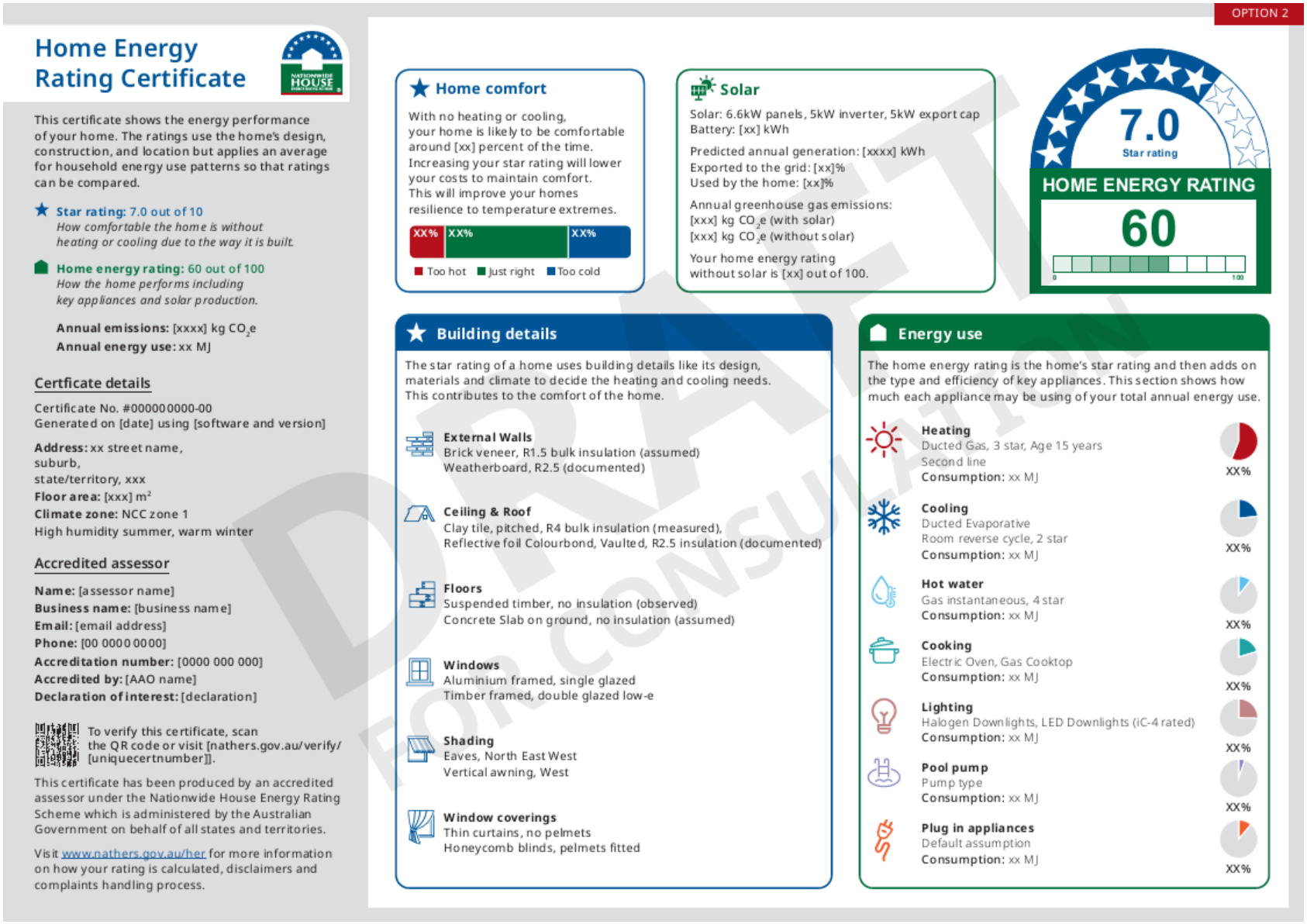


Figure 13 Draft Home Energy Rating Certificate Explanatory Guide – Page 1

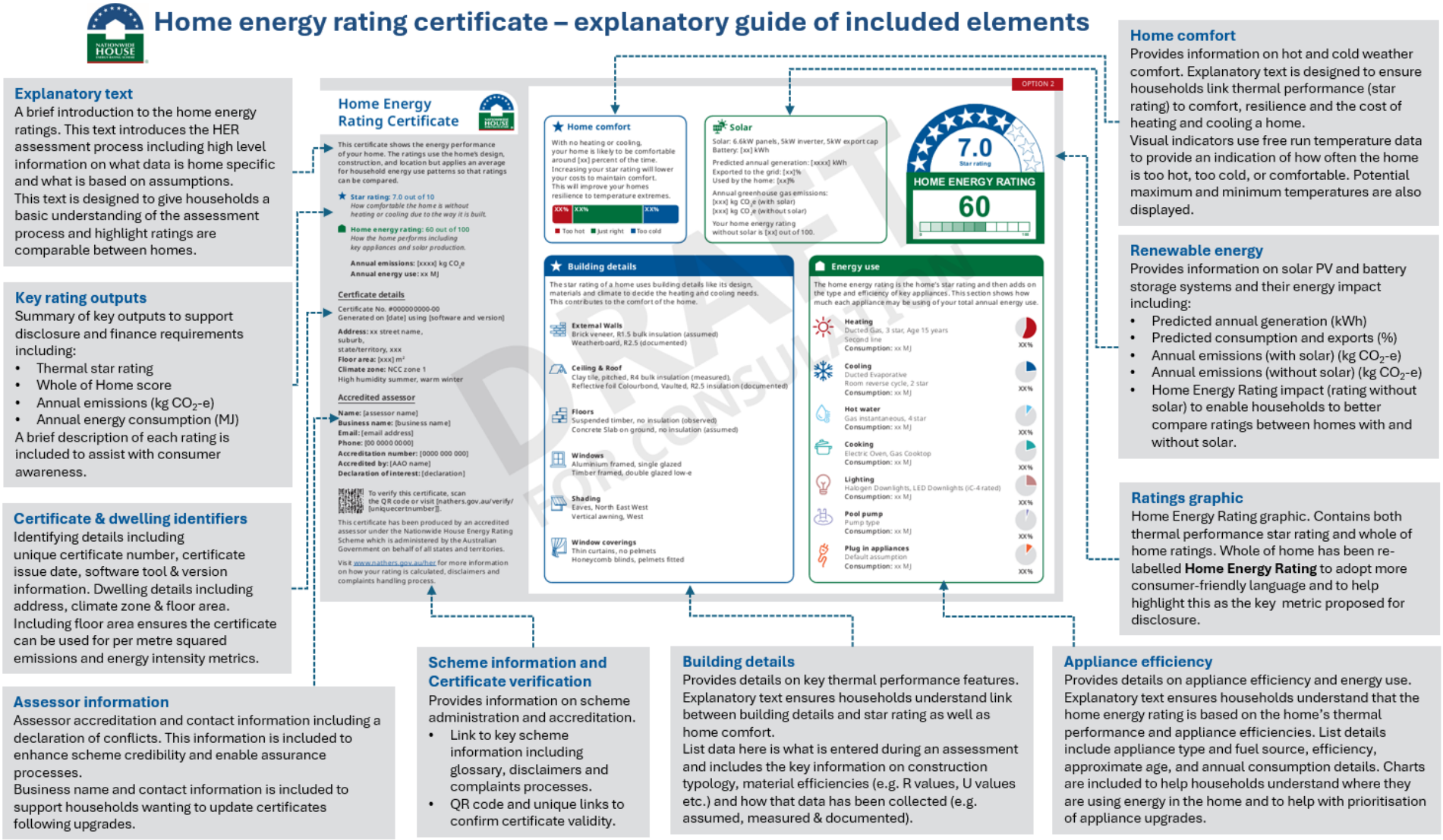
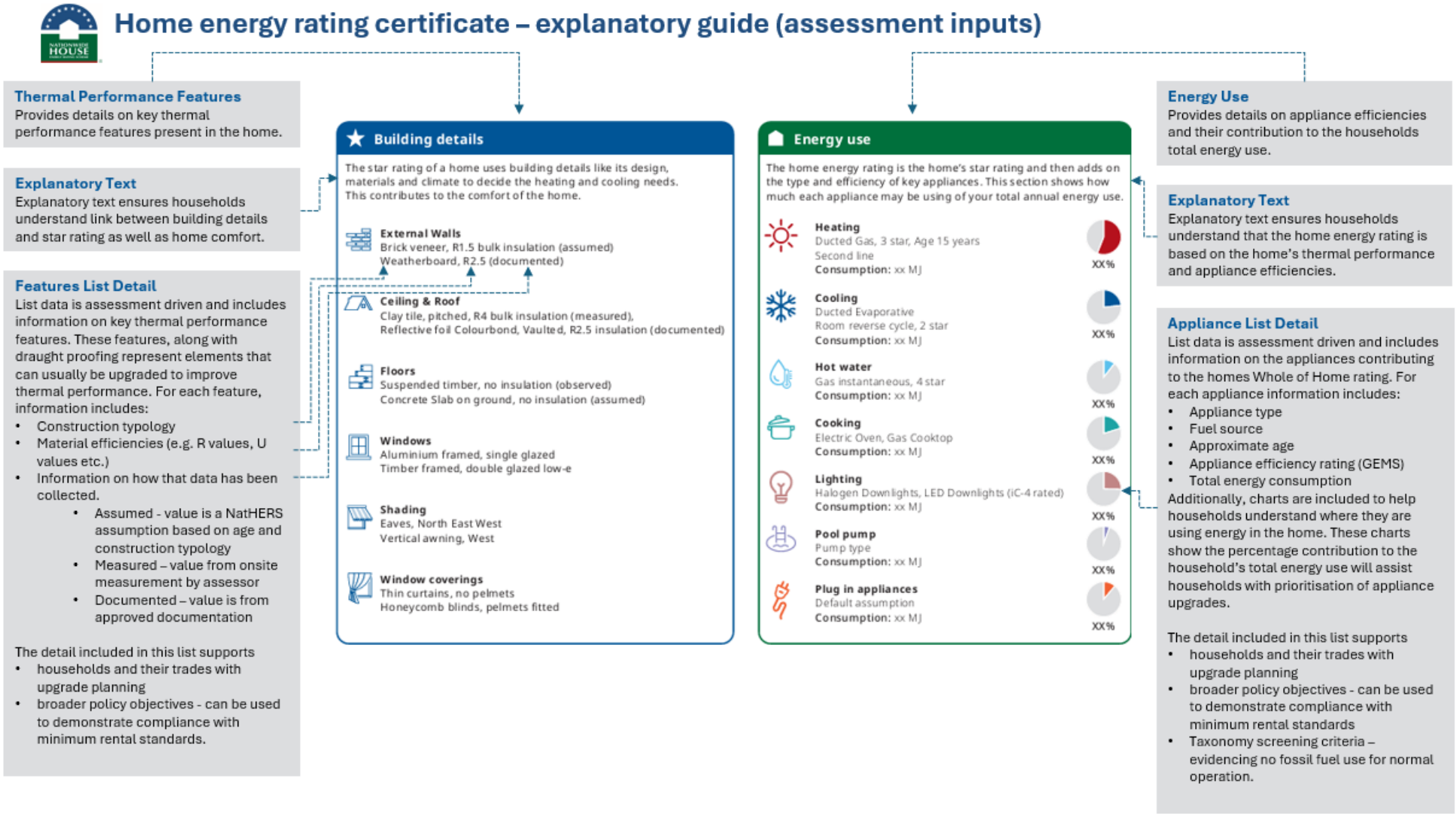


Figure 14 Draft Home Energy Rating Certificate Explanatory Guide – Page 2



Appendix C – Glossary

Term	Definition
AAO	Assessor Accrediting Organisation. AAOs are the organisations, accredited by the NatHERS Administrator, that in turn accredit NatHERS assessors for assessments of new homes.
AAO Protocol	NatHERS AAO Protocol outlines the requirements suitably qualified organisations must meet and maintain to be accredited under NatHERS to be AAOs, and to then accredit NatHERS assessors.
API	An API, or application programming interface, is a set of rules or protocols that enables software applications to communicate with each other to exchange data, features and functionality.
Benchmark Tool	The NatHERS Benchmark Tool is the term given to the tool against which other NatHERS tools are assessed for accreditation, as defined in the Software Accreditation Protocol. The Benchmark Tool for new home assessments and ratings is AccuRate Home. The Benchmark Tool for existing homes assessments and ratings will be AccuRate Enterprise (existing homes mode).
Data collection tools	A data collection tool is used by assessors on site to collect data for an assessment, this may include apps like magicplan™ (defined below), or tools like laser measures and rules.
Disclosure Framework	The Home Energy Ratings Disclosure Framework. The Disclosure Framework is a collaborative project of the Australian, state and territory governments. It delivers on the 2019 commitment by Australian Energy Ministers to establish a national framework for home energy ratings disclosure.
ECMC	Energy and Climate Change Ministerial Council. The ECMC is a forum for the Australia, state and territory, and New Zealand governments to work together on priority issues of national significance and key reforms in the energy and climate change sectors. ECMC is chaired by the Minister for Climate Change and Energy, the Hon Chris Bowen MP. The ECMC replaced the former Energy National Cabinet Reform Committee, which was preceded by the COAG Energy Council.
EEWG	Energy Efficiency Working Group. EEWG reports through to the ECMC. The ECMC has delegated decision-making powers on the NatHERS administrative matters and operational documents to the EEWG. The EEWG replaced the former Energy Efficiency Advisory Team (EEAT).
Energy rating tools	Software tools used to interpret design or dwelling data to produce energy ratings and certificates. This includes both desktop and cloud-based tools, third-party accredited tools.
Energy performance	Energy performance includes: • energy efficiency – using less energy to do the same thing • demand flexibility – varying when and how energy is used • electrification or fuel switching – swapping to electricity-powered technologies or other cleaner sources of energy.
Home Energy Rating Certificate	The Certificate that will be generated by NatHERS energy rating tools for an **existing home** assessment and rating.
NatHERS	Nationwide House Energy Rating Scheme

Term	Definition
NatHERS Administrator	NatHERS is administered by the Australian Government on behalf of all states and territories. The role of NatHERS Administrator sits with the Australian Government DCCEEW. The primary responsibilities of the National Administrator are: • scheme management, including managing updates to the NatHERS Benchmark Tool • software accreditation • assessor accreditation • scheme communications. The NatHERS Administrator reports to the NatHERS Steering Committee.
NatHERS Certificate	The certificate that is generated by NatHERS energy rating tools for a **new home** assessment and rating and primarily used to show compliance with the NCC.
NatHERS Steering Committee (NSC)	The NatHERS Steering Committee oversees NatHERS. The NatHERS Steering Committee provides strategic advice about NatHERS activities and makes decisions in relation to NatHERS operational activities. The NatHERS Steering Committee consists of representatives from the Australian Government and all state and territory governments.
NCC	National Construction Code. The National Construction Code is Australia's primary set of technical design and construction provisions for buildings.
Residential Efficiency Scorecard	The Residential Efficiency Scorecard is funded by all Australian governments and delivered on their behalf by the Victorian government. The program provides energy star ratings for existing homes based on the average energy cost to run your home over a year.
SAP	Software Accreditation Protocol. All energy rating software tools used to produce NatHERS energy ratings must be accredited in accordance with the relevant NatHERS SAP. The SAP outlines the requirements and processes for the accreditation of new software tools and for updates to new versions of previously accredited tools. This ensures that software tools meet standard requirements and produce consistent results when assessing and rating dwellings
TAC	Technical Advisory Committee. The TAC provides expert advice to the NatHERS Steering Committee via the NatHERS Administrator about NatHERS software and modelling issues.
Tool	For this document, tool is defined as any tool used by an assessor to complete a rating, this includes data collection tools and energy rating tools.
Thermal performance rating	A thermal performance rating refers to the NatHERS star rating. The NatHERS star rating provides information about the thermal performance (heating and cooling needs) of a home. A star rating is out of 10 and considers a home's design, orientation, construction materials, as well as the local climate.
Trial tools	Include energy rating tools and data collection tools. The trial energy rating tool is AccuRate Enterprise (existing homes mode), the trial data collection tool is magicplan™.
Third-party tool developers	A party which is developing a tool or in the process of applying for accreditation.
Third-party tool provider	A party who is responsible for a tool accredited under the NatHERS SAP.

Term	Definition
User interface tools	The user interface (UI) is the point of human-computer interaction and communication in a device. For this document, a user interface tool is a 'front-end' tool used to input data into the AccuRate Enterprise 'back-end' (in any mode) and will facilitate the way a person can collect and enter the data. Calculations to generate the ratings and certificates will be completed by AccuRate Enterprise and sent back to the UI.
UI Protocol	All user interface tools used to produce NatHERS energy ratings will need to be accredited in accordance with the UI Protocol (currently under development). The UI Protocol will outline requirements and processes to ensure all user interface tools are consistent and trustworthy when assessing and rating dwellings.
Whole of Home rating	The NatHERS Whole of Home rating assesses the energy requirements of a home, including: • hot water, heating and cooling systems • pool and spa equipment • lighting and plug in appliances • solar energy generated onsite and battery storage. The Whole of Home rating is out of 100.

Appendix D – Consultation questions

Chapter 4. Objectives and principles

4.1. Objectives

1. What other objective could guide the expansion of NatHERS for existing homes?

Error! Reference source not found.**Design principles**

2. Will the proposed design principles support informed decisions related to the expansion of NatHERS?
3. Is anything missing or should any elements be removed from the design principles?

Chapter 5. Preferred delivery model

4. Are you supportive of the proposed delivery model?
5. Should elements of the alternative options or other successful programs (including Scorecard, NatHERS for new homes and international programs) be integrated into the preferred delivery model to enhance design or for future enhancement?
6. How can we stimulate the market for assessor services and software?

Chapter 6. Consumer experience

6.1. Home Energy Rating Certificate (see Appendix B)

7. What elements of each certificate do you believe are most effective for communicating with consumers?
8. Do you support the concept of combining the presentation of the thermal and Whole of Home rating into one graphic on the certificate (noting this does not combine the calculation method)?
9. What guidance information should be created to help consumers understand their Home Energy Rating Certificate?

6.2. Upgrade advice

10. What support do you think can be provided to consumers at the time of assessment to drive behaviour change? How might this be best communicated?
11. What information is important to include in guidance materials to support consumers to understand upgrade advice?

6.3. Communications strategy and delivery

12. What communication materials and media (e.g. websites, pamphlets, videos, webinars, paid advertising) would be most effective to communicate NatHERS for existing homes and home energy rating disclosure requirements to consumers?
13. What sources of information do you believe are the most trusted by consumers in the residential buildings space?

6.4. Data

14. What data do you want NatHERS to collect and how could it be used to benefit households?

Chapter 7. Governance and administration

7.1. Governance arrangements

15. Do you think the current NatHERS governance arrangements are suitable for existing homes? Why / Why not?

Chapter 8. Assessor services

8.1. Assessor guidance

16. Are there any other areas where assessors will need guidance?

8.2. Assessor

17. Are there considerations for the workforce transition that have not been captured?

8.3. Text alternative for “Preferred training arrangement approach” provides the linkages of the various parties involved in training arrangements.

Assessor accreditation

18. Are there considerations for assessor accreditation not reflected in the preferred approach?

8.4. Audit services

19. Do you support the separation of audit responsibilities from the assessor accreditation service provider?
20. Do you support a requirement for evidence to be collected so that assessments can be verified?
21. Do you support evidence being required to be uploaded as part of an assessment and stored in a secure, central database?

Chapter 9. Energy rating tools

9.3. Existing homes Benchmark Tool development

22. Are there concerns we need to consider with the adoption of the cloud tool?

9.4. Software accreditation process for existing homes

23. Do you support the preferred approach of having front-end user interfaces delivered via third-parties?
24. Are there specific resources required to better facilitate third-party tool or user interface development?

General feedback

25. Do you have any other feedback on the consultation paper?

Appendix E – Text Alternatives for figures

Figure 1. Consultation approach

Step 1: Feedback on delivery model (29 July to 30 August 2024)

- Response to this paper
- Supported with webinars.

Step 2: Feedback on underpinning detail (from early August to late September 2024)

- Includes more details on specific elements
- Supported with webinars.

Step 3: Future opportunities for engagement (from October 2024 to mid-2025)

- Variety of opportunities to engage.

Return to 2.1 Project stages.

Figure 2. Stages of NatHERS for existing homes development

Stage 1: Design, build, trial, 2023 to mid-2025

- Design, build and trial the NatHERS Framework operational elements including tools, assessments, certificates, upgrade advice, training and accreditation.
- Transition and preparedness for delivery partners and market enablement of key industry partners.

Stage 2, Phase 1: Launch, mid-2025

- An accredited benchmark energy rating tool.
- A software accreditation protocol and calculation method released to software developers.
- An initial pool of assessors who are trained and accredited.
- Release of other key framework elements such as the Training and Skills Strategy and Assurance Strategy.
- Finalisation of the consumer website and communication products for households.

Stage 2, Phase 2: Operate, scale up, post mid-2025

- Potential accreditation of third-party tools.
- Enhance the functionality of software and certificate upgrade advice.
- Implement the Training and Skills Strategy and scale up the pool of assessors (dependent on market demand and program drivers).
- Undertake detailed preparations for possible reforms to underpin disclosure of home energy ratings at scale.

Stage 3: Support Disclosure, from 2026

- Implement larger scheme reforms necessary to underpin the Home Energy Ratings Disclosure Framework, with timing dependent on decisions to implement disclosure at scale and/or other program or policy drivers (such as minimum rental standards).
- Marketing promotion of consumer communication products and website to drive up-take of energy ratings for existing homes.

Return to section 3. Background.

Figure 3 Preferred NatHERS for existing homes delivery model

The figure shows how services may be delivered for NatHERS for existing homes under the proposed delivery model.

Element one shows that software user interface providers will agree to a Software Protocol with binding terms and conditions with the NatHERS Administrator, a binding licensing arrangement with the CSIRO and a binding end user licence agreement with assessors.

Element 2 shows that training organisation will agree to a binding licensing agreement with the NatHERS Administrator and a non-binding fee for service arrangement with assessors.

Element 3 shows that assessor accreditation services will agree a binding contract with the NatHERS Administrator and a binding accreditation agreement with assessors.

Element 4 shows that assurance providers will agree a binding contract with the NatHERS Administrator and an accreditation agreement with assessors.

The figure also shows that the NatHERS Administrator will have a non-binding memorandum of understanding with the CSIRO.

Return to section 8. Assessor service

Figure 4. How NatHERS for existing homes energy ratings work

- **Step 1:** Assessor visits a home and collects information about the home and inputs it into an accredited NatHERS tool.
- **Step 2:** The information is used by the cloud-based NatHERS Benchmark Tool to calculate the energy performance of the home.
- **Step 3:** Certificate and rating are generated to give consumers simple-to-understand information they can use to action upgrades.

Return to section 6.1 Home Energy Rating Certificate

Figure 5. Primary functions of the stakeholder engagement and communications strategy

1. **Transition and prepare**
   - Transition communications for assessors, accreditation service providers and tool providers to prepare for energy assessments for existing homes.
   - Change communications for delivery partners and jurisdictions to help prepare for energy assessments for existing homes, green finance initiatives and the roll-out of home energy rating disclosure initiatives by jurisdictions.

Stakeholders: Industry and industry peak bodies, delivery partners (accreditation service providers, assessors, software providers), education and RTOs.

2. **Market enablement**
   - Create a broad, supporting market environment with relevant information for industry, delivery partners and commercial sectors (i.e. finance, real estate, insurance and building sectors) to position them positively for the increase in residential households' participation in energy performance initiatives (assessments, loans, home energy rating disclosure).

Stakeholders: Delivery partners, finance sector (mortgage brokers, lenders, valuers), conveyancers, insurers, builders, real estate.

3. **Consumer participation**
    - Provide relevant information at key decision points (purchasing, leasing, renovating and exploring cost-saving options) to encourage and support households to obtain an energy assessment for their home (including by promoting value add, comfort, liveability and reduced running costs).
    - Promote the financial options available after receiving an assessment to encourage uptake of upgrades.

Stakeholders: Owners, investors, renters, consumer sub-sets (CALD, vulnerable cohorts, social and community housing, regional and remote communities), LGAs, energy performance advocates, special interest groups.

Return to 6.4 Data

Figure 6. NatHERS governance structure

A hierarchy diagram showing how the development of NatHERS for existing homes is being overseen within the current NatHERS governance arrangements and how it fits into the Australian Government structure. The diagram shows that the NatHERS Administrator (working in partnership with CSIRO) reports directly to the NatHERS Steering Committee (in consultation with the Residential Energy Efficiency Disclosure Initiative Governance Forum), then in order up the governance chain to the Energy Efficiency Working Group, the Energy and Climate Change Senior Officials Group, the Energy and Climate Change Ministerial Council and finally National Cabinet. The hierarchy diagram also displays the two committees who provide advice to the NatHERS Administrator – the NatHERS Technical Advisory Committee and the NatHERS Stakeholder Consultative Group.

Return to 7.2 Strategic Plan

Figure 7. Units of competency required for NatHERS existing home assessors

- Manages own work, professional development and ethical behaviour (CPPCOM4001)
- Research and assess impact of building elements on thermal performance of residential buildings (CPPHES4001)
- Advise clients on thermal performance of residential buildings (CPPHES4002)
- Implement safe work practices in the property industry (CPPCOM4002)
- Assess household energy use and efficiency improvements (CPPHES4005)
- Assess thermal performance of existing buildings (CPPHES4007)
- Promote adoption of home sustainability practices (CPPHES4009)
- NatHERS for existing homes-specific training (under development)

Return to 8.2.2. Approach to skills and training

Figure 8. Preferred training arrangement approach

The figure shows how training may be delivered for NatHERS for existing homes under the proposed delivery model.

BuildSkills Australia is the Jobs and Skills Council and sets the competencies covered in qualifications.

The NatHERS Administrator sets the training requirements for accreditation. It provides input and advice to the Jobs and Skills Council, oversees the accreditation provider and procures or licences training through a binding agreement with RTOs.

The Australian Skills Quality Authority register and oversee registered training organisations.

The RTOs provide training to assessors. The assessor accreditation provider confirms assessors have completed training to hold accreditation.

Return to 8.3. Assessor accreditation

Figure 9. Current NatHERS for new homes approach

The figure visually displays what is currently managed by CSIRO and what is managed by the accredited NatHERS software.

CSIRO managed

Chenath calculation engine:

- Calculates energy loads based on inputs from NatHERS accredited software and returns numbers to the front-end tools.

NatHERS accredited

NatHERS accredited software:

- Collects dwelling data
- Undertakes calculations to send to the Chenath engine
- Calculates thermal star rating and whole of home rating.

Return to 9.1.2. New homes energy rating tools and accreditation approach

Figure 10. Preferred existing home software accreditation approach

The figure visually displays the preferred approach to what is managed by CSIRO and what is accredited by the NatHERS Administrator.

CSIRO managed

AccuRate Enterprise / Chenath (existing homes mode)

- AccuRate collects dwelling data and undertakes calculations to send to the Chenath engine.
- Chenath calculates energy loads based on inputs from AccuRate and returns numbers to AccuRate.
- AccuRate calculates thermal star rating and whole of home rating.

NatHERS accredited

NatHERS accredited User Interface:

- Collects dwelling data and sends it to AccuRate Enterprise.
- Receives rating data from AccuRate and certificate from CSIRO certificate portal.

Return to 9.4. Software accreditation process for existing homes