

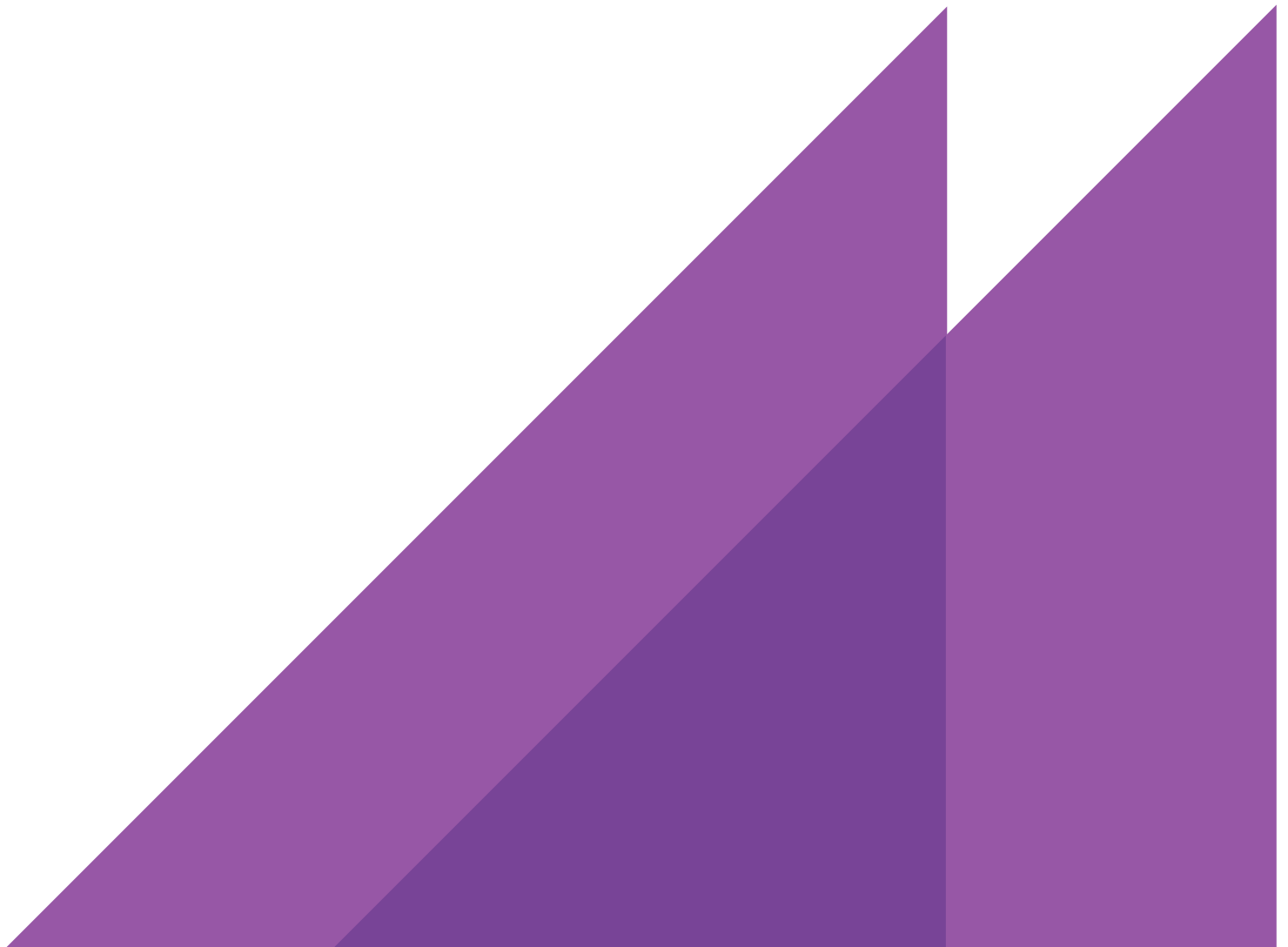
REPORT TO
DEPARTMENT OF INDUSTRY, INNOVATION AND SCIENCE

27 JUNE 2016

GOVERNANCE AND OPERATIONAL REVIEW



NATIONWIDE HOUSE ENERGY RATING
SCHEME (NATHERS)





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GLOSSARY OF TERMS

AAO	Assessor Accrediting Organisations
ABCB	Australian Building Codes Board
ABSA	Australian Building Sustainability Association
ACIL Allen	ACIL Allen Consulting
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASX	Australian Stock Exchange
BC	Buildings Committee
BCA	Building Code of Australia
BCC	Building Codes Committee
BDAV	Building Designers Association of Victoria
CEO	Chief Executive Officer
COAG	Council of Australian Governments
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DIIS	Department of Industry, Innovation and Science
EEAT	Energy Efficiency Advisory Team
EWG	Energy Working Group
KPI	Key Performance Indicator
MOU	Memorandum of Understanding
NABERS	National Australian Built Environment Rating System
NatHERS	Nationwide House Energy Rating Scheme

NCC	National Construction Code
NECA	National Electricity Code Administrator
NEL	National Electricity Law
NEM	National Electricity Market
NEPP	National Energy Productivity Plan 2015-2030
NSEE	National Strategy for Energy Efficiency
OECD	Organisation for Economic Co-operation and Development
Scheme	NatHERS
SCO	Senior Committee of Officials
ToR	Terms of Reference



EXECUTIVE SUMMARY

The Nationwide House Energy Rating Scheme (NatHERS or the Scheme) aims to support the improvement of the energy efficiency of Australian residential buildings through the availability of scientifically valid, cost effective and reliable thermal performance rating tools.

NatHERS rates (out of ten) the thermal performance of a residential building, based on its design, prior to construction. The Scheme works as a 'measuring tape' that 'estimates a home's potential heating and cooling energy use', and helps to make Australian residential dwellings more comfortable and energy efficient for their inhabitants.¹

The NatHERS tool is regarded by stakeholders as a world leader in its development and is still regarded by some stakeholders as world leading. It provides a flexible, outcomes based approach to meeting minimum requirements for thermal performance, rather than adopting a prescriptive approach. It is currently used to rate approximately 70 per cent of new houses and apartments, which is evidence of the value stakeholders hold in the Scheme.

In its role as the NatHERS Administrator, the Commonwealth Department of Industry, Innovation and Science (DIIS) has engaged ACIL Allen Consulting (ACIL Allen) to undertake an independent governance and operational review of NatHERS (the Review).

The Review is to assess the effectiveness of the current NatHERS governance framework and operating model in delivering the Scheme's objectives and to determine any opportunities to simplify and optimise NatHERS governance and operation, within existing Council of Australian Governments (COAG) and jurisdictional governance and regulatory frameworks. The objective of the Review is to deliver recommendations for improving the arrangements underpinning the Scheme.

The purpose of the Review is not to assess the outcomes or impacts of NatHERS.

The Review has been undertaken through a desktop review of relevant documents, plans and reports, and consultation with a range of stakeholders, including industry representatives.

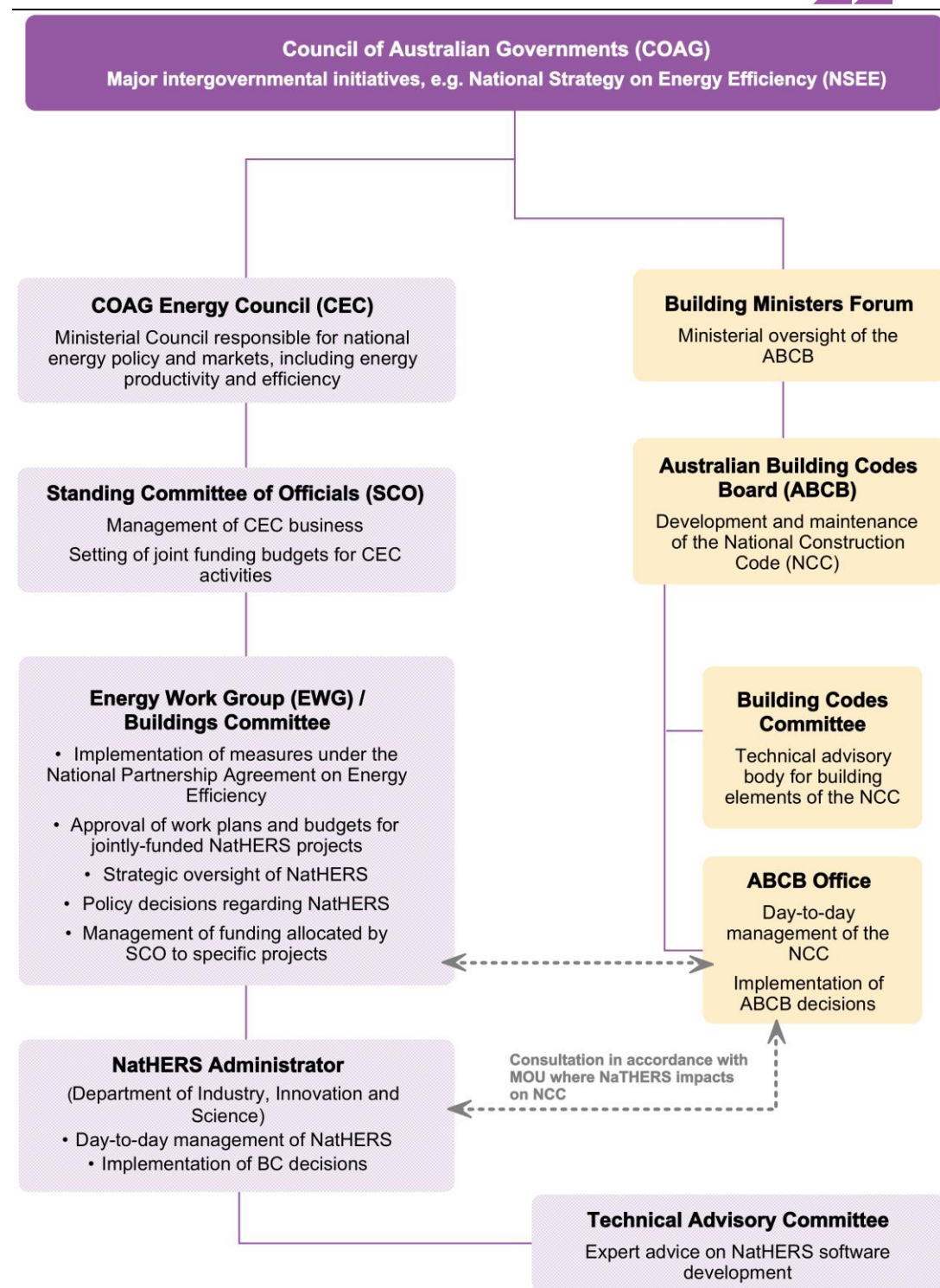
Current governance and operational arrangements

NatHERS is an administrative, rather than a legislative, scheme. This means that the authority to make and enforce decisions about NatHERS is derived from policy agreements between participating jurisdictions, and is not a function of State, Territory or Commonwealth legislation. By contrast, the application of NatHERS is through jurisdictional instruments that reference the National Construction Code (NCC). The NCC provides three options for demonstrating compliance with minimum performance requirements, of which the use of a NatHERS accredited software tool is one option.

¹ See: <http://www.nathers.gov.au/>

The governance model that was in place at the time of the stakeholder consultations is illustrated in Figure ES 1. The governance model is complex with the parties responsible for NatHERS governance including Commonwealth, State and Territory Ministers in the energy and building portfolios, supported by a range of committees. The Energy Working Group and Buildings Committee have subsequently been replaced with an Energy Efficiency Advisory Team (EEAT).

FIGURE ES 1 NatHERS GOVERNANCE AT THE TIME OF THE STAKEHOLDER CONSULTATION



SOURCE: DEPARTMENT OF INDUSTRY, INNOVATION AND SCIENCE, STRATEGIC PLAN 2015-2018, ADAPTED BY ACIL ALLEN

The key functions currently undertaken by the NatHERS Administrator are:

- policy development—by which we mean, identifying and advising EEAT on changes to the NatHERS benchmark software tool, and to the accreditation of assessors, which may be informed by research and development
- technical and administrative² functions—by which we mean:
 - maintaining the benchmark software tool—managing changes to the benchmark software in line with the policy decisions that are made
 - software accreditation—accrediting alternative software tools against the benchmark software
 - assessor accreditation—accrediting assessors, and monitoring and enforcing compliance of the assessors.

NatHERS accredited software fulfils three roles:

1. **Regulatory compliance:** It provides a mechanism for demonstrating that the thermal performance of a residential building **meets** the minimum performance requirements, as set out in jurisdictional instruments that reference the NCC. The NCC provides three options for meeting the minimum performance requirements, of which the use of a NatHERS accredited software tool is one option.
2. **Design aid:** It provides a broader mechanism for those aiming for best practice to demonstrate that the thermal performance of a residential building **exceeds** the minimum performance requirements, and allows designs to be modelled before being built to maximise cost effective solutions and comfort.
3. **Disclosure tool:** It provides a mechanism for determining and disclosing the star rating of an existing building.

How is the governance and operating model of NatHERS performing?

Based on desktop research and stakeholder consultation, the performance of the NatHERS governance and operating model has been assessed against the:

- vision for NatHERS
- objectives of NatHERS
- OECD's principles of good regulatory governance
- ASX's principles of good corporate governance.

During the stakeholder consultation it was noted that the views of stakeholders varied—generally the more important NatHERS is to a stakeholder, the stronger the comments on the current governance and operating model of NatHERS.

Notwithstanding, stakeholders generally consulted for this Review recognise the NatHERS Administrator's work (over the past 12-18 months) to develop a strategic plan, implement more transparent and systematic consultation/communication processes, and to implement more robust Memoranda of Understanding and financial agreements with key parties operating in the Scheme. These stakeholders considered that the NatHERS Administrator has set NatHERS on a pathway which addresses critical design issues. The assessments provided below identify opportunities for further improvements to enhance the effectiveness and sustainability of the Scheme.

Assessment against the vision for NatHERS

The strongest goal-like statement for NatHERS is the vision for NatHERS, which is:

... to support the improvement of the energy efficiency of Australian residential buildings through the availability of scientifically valid, cost effective and, reliable thermal performance rating tools. NatHERS can be integrated across the building design, compliance, construction and renovation cycle.

NatHERS, Strategic Plan 2015-2018, p. 3

Given that approximately 70 per cent of new houses and apartments are currently rated using a NatHERS accredited software tool, NatHERS supports the improvement of energy efficiency of

² Later in this report, we define these functions as regulatory functions, consistent with the COAG guide on best practice regulation.

Australian residential buildings. However, a selection of stakeholders indicated that some larger builders may be moving away from using a NatHERS accredited software tool.

Stakeholders questioned the reliability of ratings as they can vary depending on the software tool and the assessor, and where different versions of the software tool are available, on the version of software. As a result, parties can “shop around” for a software tool and assessor that provide the desired rating.

While NatHERS was considered to be a world leader in its development, some stakeholders are of the view that there has been underinvestment in research and development of the benchmark software over at least the last 15 years, which may detract from the degree to which the software tool remains scientifically valid.

Stakeholders also considered that NatHERS is not fully integrated into the building design, compliance, construction and renovation cycle. It is generally seen as a regulatory compliance tool rather than a means to enhance the thermal performance of buildings. In the absence of a written standard underpinning the NatHERS software, there is a lack of transparency of the principles and functional specifications used in the NatHERS software tools. As a result, building designers often change a design to achieve a particular NatHERS rating rather than integrate relevant design principles into the building design from the outset.

Finally, the limited as-built compliance checking following a NatHERS rating of a design detracts from both the reputation of NatHERS and the achievement of public energy efficiency policy objectives.

Assessment against the objectives of NatHERS

While there is no overarching goal or objective for NatHERS, the NatHERS Strategic Plan 2015-2018 sets out five objectives to improve NatHERS over the life of the Plan. An assessment of the governance and operating model of NatHERS against these objectives is set out in Table ES 1, noting that it is relatively early days in the implementation of the Plan. This assessment identifies areas of improvement for the governance and operating model of NatHERS.

TABLE ES 1 ASSESSMENT OF THE GOVERNANCE AND OPERATING MODEL OF NATHERS AGAINST ITS OBJECTIVES

Objective	Assessment
1. NatHERS will improve the effectiveness and efficiency of its management and create clear roles and responsibilities and decision-making processes in the areas of governance, operating procedures, protocol setting and administration, risk management, and stakeholder engagement.	<p>To date, the role, objective and functions of NatHERS and its bodies have been unclear as they are not clearly specified in a legislative or policy instrument, causing a lack of consistency among stakeholders about the Scheme's objectives.</p> <p>To date, there is no evidence of risk management.</p> <p>Amongst the stakeholders consulted, there is almost universal agreement that stakeholder engagement is inadequate, although some stakeholders recognise the improvements that have occurred over the last 12 months or so.</p>
2. The consistency of NatHERS accredited tools with the benchmark software will be improved and all updates of software will be managed in a way that provides certainty and sufficient time to adjust for software providers, assessors and the housing industry.	<p>Parties are able to “shop around” for a desired rating as the rating varies depending on the software tool and the assessor, and to the extent that there are multiple versions of the software tool, on the software version.</p> <p>The management of the most recent update of the software tools was considered to be poor, with one software provider provided with multiple extensions to the update timeframe. Stakeholders raised concerns that the timeframes do not consider the lead times required in the buildings industry.</p> <p>Some stakeholders commented that the software accreditation process is fundamentally flawed in its approach, as variances between software are difficult and time consuming to identify, particularly where the benchmark software is in error.</p>

Objective	Assessment
3. The benchmark software and the accredited software tools will have improved functionality and ability to accurately model building thermal performance.	Concerns were raised that decisions on the benchmark software have been made without transparent, documented consideration of the problem to be addressed, the options, and a cost benefit analysis. There is also concern about a lack of proportionality in decision making—changes are made to improve the accuracy of the benchmark tool that are not proportional to the problems that they are seeking to address, and with insufficient regard to the needs of the building industry. Stakeholders also raised concerns that the market is moving towards a more holistic assessment of sustainability, rather than just thermal performance.
4. The skill levels, competency and consistency of assessors will be improved, and designers, certifiers and builders will be informed about the appropriate use of rating tools.	A Certificate IV training requirement was recently introduced for accredited assessors. Stakeholders are generally concerned that this will not lead to improved outcomes as the core training modules have not improved, and the cost of the course (including the opportunity cost) is significant so the number of assessors has declined. Stakeholders reported that assessments are increasingly being undertaken by unaccredited assessors.
5. Mechanisms will be put in place to monitor and evaluate the scheme, including the use of the software, the validity of ratings and performance of assessors.	NatHERS currently has insufficient accountability and transparency. While it reports issues regularly to the Steering Committee, there is no public reporting on its performance against its objectives, its governance, funding, budgeting, expenditure, and measures of outputs or outcomes. It is understood that key performance indicators are currently being developed.

SOURCE: ACIL ALLEN BASED ON STAKEHOLDER CONSULTATIONS

Assessment against OECD's principles of good regulatory governance

In its guide on best practice regulation, COAG has stated that³:

Regulation refers to the broad range of legally enforceable instruments which impose mandatory requirements upon business and the community, as well as to those government voluntary codes and advisory instruments for which there is a reasonable expectation of widespread compliance.

The principles of good regulatory practice and regulatory assessment requirements outlined in this Guide apply to decisions of COAG, Ministerial Councils and intergovernmental standard-setting bodies, however they are constituted. This includes bodies established by statute, or administratively by government, to deal with national regulatory problems.

The principles and assessment requirements apply to agreements or decisions to be given effect, whether at the Commonwealth or State/Territory level, or both, through principal and delegated legislation, administrative directions or other measures which, when implemented, would encourage or force businesses or individuals to pursue their interests in ways they would not have otherwise done.

While the functions and powers of NatHERS are not explicitly stated in legislation, the following NatHERS functions can be considered to be regulatory under the COAG guide:

- **Software accreditation.** There is a requirement imposed on parties to comply with minimum performance requirements for thermal efficiency in jurisdictional instruments. The jurisdictional instruments reference the NCC. The NCC includes three options for demonstrating compliance, one of which is by using a software tool that is accredited by NatHERS. NatHERS performs a regulatory function by approving changes to the benchmark software (Chenath engine) and accrediting software under the Software Accreditation Protocol, which change ratings outputs and consequently requirements in meeting this NCC compliance option.
- **Assessor accreditation.** In some jurisdictions, there is a requirement imposed on parties to engage accredited assessors to assess the thermal performance of residential buildings using a NatHERS accredited software tool. NatHERS performs a regulatory function by setting accreditation requirements, including appointing and accrediting Assessor Accrediting Organisations (AAOs) that register, accredit and quality assure assessors.

³ Council of Australian Governments, *Best Practice Regulation, A Guide for Ministerial Councils and National Standard Setting Bodies*, October 2007, page 3

As these NatHERS functions are considered to be regulatory under the COAG guide, the OECD's principles of good regulatory practice provide a useful framework for assessing the performance of the governance and operating model of NatHERS in undertaking these regulatory functions, and identifying areas for improvement.

An assessment of the governance and operating model of NatHERS against the OECD's principles is set out in Table ES 1.

TABLE ES 2 ASSESSMENT OF THE GOVERNANCE AND OPERATING MODEL OF NATHERS AGAINST OECD'S PRINCIPLES OF GOOD REGULATORY GOVERNANCE

Principle	Assessment
Role clarity The role of the regulator should be clearly defined in terms of its objectives, functions and coordination with other entities. These should be clear to the regulator but also to the regulated bodies, citizens and other stakeholders.	<p>As the role of NatHERS is not clearly specified in either a legislative instrument or a policy document, its role is unclear.</p> <p>There is an inconsistent understanding among stakeholders about the role of NatHERS. Some perceive it to be primarily regulatory compliance while others perceive it to be primarily to promote best practice thermal efficiency. Some stated that it had elements of both but that it had primarily focused on the promotion of best practice over its regulatory compliance role.</p> <p>There is limited separation between the policy functions undertaken by NatHERS and the regulatory functions, and a potential conflict of interest with assessors' membership bodies assessing assessors, and monitoring and enforcing their compliance.</p>
Degree of independence A high degree of regulatory integrity helps achieve decision making which is objective, impartial, consistent, and avoids the risks of conflict, bias or improper influence. Establishing the regulator with a degree of independence (both from those it regulates and from government) can provide greater confidence and trust that regulatory decisions are made with integrity.	<p>While it is appropriate that NatHERS' policy functions are undertaken within a government department, it is more appropriate that NatHERS' regulatory functions are undertaken at arm's length to the Government.</p>
Type of governance The appropriate governance structure depends on the nature of the regulatory task and the sectors subject to regulation.	<p>The regulatory functions are currently not undertaken at arm's length to the Government. The governance arrangements are therefore determined by the departmental arrangements.</p>
Accountability and transparency Comprehensive accountability and transparency measures actively support good behaviour and performance by the regulator, as they allow the regulator's performance to be assessed by the legislature or responsible other authority.	<p>There are currently no comprehensive accountability and transparency measures. Accountability for the scheme is diffused across multiple jurisdictions. Many stakeholders consider that greater transparency is required.</p>
Stakeholder engagement One objective of good regulator governance is to enhance public and stakeholder confidence in the regulator, its decisions and its actions. Effective engagement with regulated parties and other stakeholders helps achieve this.	<p>There is no legislative or policy framework requiring NatHERS to consult with stakeholders. Stakeholders raised strong concerns over a perceived lack of stakeholder engagement, although improvements made over the last 12 months was noted by some. Stakeholders are concerned that there is too much reliance on internal resources, whose knowledge is not considered to be current, rather than engaging with industry, and too much focus on issues that are not of interest to the buildings sector.</p>
Funding Clarity about regulators' sources and level of funding is necessary to protect their independence and objectivity. Transparency about the basis of funding can also enhance confidence that the regulator is efficient, as well as effective.	<p>There is a lack of transparency on the sources and level of funding for NatHERS. The funding is not clearly allocated between policy and regulatory functions.</p> <p>Funding arrangements lack certainty as they rely on the Governments' priorities and budgetary processes. This lack of certainty brings to the fore questions about the long term sustainability of NatHERS' funding model.</p>

SOURCE: ACIL ALLEN BASED ON STAKEHOLDER CONSULTATIONS

Assessment against the ASX's principles of good corporate governance

The ASX Corporate Governance Council principles and recommendations of good corporate governance provide another framework against which to assess the performance of NatHERS. While these principles are more clearly focussed on public and private companies, most of them can be translated into principles appropriate for assessing the governance and operating model of NatHERS.

The principles are:

- lay solid foundations for management and oversight
- structure the Board to add value
- act ethically and responsibly
- safeguard integrity in corporate reporting
- make timely and balanced disclosure
- respect the rights of security holders
- recognise and manage risk
- remunerate fairly and responsibly.

The key findings from an assessment of the governance and operating model of NatHERS against the principles of good corporate governance are:

- The precise allocation of functions and roles between NatHERS governance bodies—the EEAT (formerly the EWG and BC) and the NatHERS Administrator—is unclear and is unpublished.
- The NatHERS governance committees are comprised of jurisdictional representatives. The committees do not necessarily have the mix of skills and experience needed to undertake the required governance functions. Furthermore, it is not clear that an optimal mix of skills has been identified for the governance committees nor that members of these committees are required to develop the skills needed to fulfil their governance roles. These were points made by a majority of the stakeholders who had experience working with the committees.
- Stakeholders generally severely critiqued the two-way communication with NatHERS.
- It is not clear whether, and if so how, governance bodies manage risks associated with NatHERS. NatHERS does not publish its exposure to risk and how it manages risk.

A new governance model for NatHERS

The governance and operating model for NatHERS was established many years ago and has not evolved in line with the evolution of the Scheme. While the NatHERS Administrator has implemented a number of incremental improvements to the Scheme, structural transformation is now required to strengthen the governance and operating model of NatHERS. This is evident from the assessment of the current governance and operating model of NatHERS against its vision, its objectives, OECD's principles of good regulatory governance and ASX's principles of good corporate governance, as discussed in the previous sections.

If NatHERS is not transformed, there is a risk that the reference to NatHERS' accredited software tools is removed from the NCC, assessments are increasingly undertaken by unaccredited assessors, and/or industry increasingly chooses to demonstrate compliance with the minimum performance requirements in the NCC using the alternative methods.

For these reasons, we have focused on a small number of very substantial recommendations, rather than provide a large number of relatively immaterial recommendations.

Based on the stakeholder consultations and assessment of the governance and operating model of NatHERS, three dimensions of reform have been identified:

- **Structural reforms**
 - The reforms need to provide a clear separation and definition of NatHERS' policy and regulatory functions, which will require substantial reform to the Scheme's current institutional arrangements. International best practice is to 'house' policy and regulatory functions in separate organisations. This separation also needs to be supported by the extraction of NatHERS from a software driven

development model to one based on clearly documented “standards” that underpin the software tools.

— **Process-based reforms**

- The structural reforms need to be supported by processes that support a rigorous and robust assessment of changes to the documented “standard” which are consistent with national guidelines for developing and amending regulation. It will be particularly important to adopt regulatory change processes that are based on the principles of proportionality. Another key component of this will involve the establishment of consultation processes that ensure open stakeholder engagement and accountability for regulatory decisions, as well as other policy decisions.

— **Capability and capacity improvements**

- The reforms need to support transparent and sustainable funding for the core function of NatHERS. In particular, the regulatory roles need a sustainable funding source that is independent of changes to Government priorities and support best practice regulation. The officers and decision makers involved in NatHERS need to have sufficient skills and experience and be given the authority to make robust decisions that give stakeholders greater confidence in the governance and operating model of NatHERS.

A range of options for an enhanced NatHERS governance and operating model have been identified and assessed. The options are focused on addressing fundamental stakeholder concerns associated with the Scheme’s objectives and structural arrangements, and change range from ‘no’ or ‘minimal’ change in the existing arrangements to ‘maximum’ change scenarios where significant structural reforms are considered.

The objective of NatHERS

Clearly defined objectives are a hall mark of all successful public policies, programs and organisations. It will be important for NatHERS to have a clarity of purpose and vision which meets the current and future needs of stakeholders. The development of an objective for NatHERS is a threshold issue from which other considerations flow.

Four options have been considered, based on the current scope of NatHERS’ operations:

- **Option 1:** Maintain the current vision as the objective.
- **Option 2:** Establish an objective focused on the current provisions in the NCC. Under this option, NatHERS’ vision would be limited to assessing the ‘potential thermal energy of the dwelling envelope’ using a NatHERS accredited software tool. Other, perhaps aspirational, elements which relate to the building life-cycle would be outside the Scheme’s intended purpose. While this objective provides clarity as to NatHERS’ regulatory compliance role, it does not provide any clarity as to NatHERS’ role in promoting best practice thermal efficiency. It also inherently links NatHERS to a software tool rather than a documented “standard”.
- **Option 3:** Establish an objective for NatHERS that is focused on the development and maintenance of a documented “standard” that underpins the software tools. Under this option, NatHERS is conceptualised as a documented “standard”, rather than a software tool, which documents the principles and functional specification that underpin NatHERS software tools and the assessment of the thermal performance of buildings. In practice, this means there is transparency of the NatHERS software for building designers and a basis for developing or amending software tools by software providers. While the proposed objective de-links NatHERS from a software tool, it does not provide any clarity as to NatHERS’ role in promoting best practice thermal efficiency.
- **Option 4:** Establish an objective for NatHERS that clearly distinguishes its regulatory compliance role and its role in promoting best practice thermal efficiency. This option conceptualises NatHERS as a documented “standard” that underpins the software tools, rather than the application of a software tool. However, the objective has two parts and also recognises its role in promoting best practice thermal efficiency of residential buildings. This proposed objective provides much greater clarity as to the role of NatHERS. The objective identifies both its regulatory compliance and promotional roles, refers to “standards” rather than a software tool, and refers to thermal efficiency more specifically rather than energy efficiency.

RECOMMENDATION ES 1 RECOMMENDED FORM OF OBJECTIVE FOR NATHERS

It is recommended that a two part objective, along the following lines, be adopted:

The objectives of NatHERS are to:

- *facilitate the development of scientifically valid, consistent, reliable and cost effective “standards” that support continued improvement in the thermal performance of Australian residential dwellings*
- *develop and maintain scientifically valid, consistent, reliable, cost effective “standards” that support the assessment of the thermal performance of Australian residential dwellings in accordance with the performance requirements in the NCC.*

If a decision is made to expand the scope of NatHERS from thermal efficiency to more holistic sustainability measures, the objective would need to be expanded accordingly.

A decision on the objective of NatHERS is a threshold change from which all other decisions about the governance and operating model of NatHERS should follow. By adopting an objective along the lines of the recommendation, the governance and operating model of NatHERS will embark on a fundamental reform pathway.

Roles and responsibilities of parties

Once agreement about NatHERS' objective has been reached, it is important to consider how the Scheme's functions should be allocated across parties. A key principle of good governance is to ensure the roles of parties are allocated in the most efficient and effective way, giving each party clear responsibility for a function(s), the authority to make decisions when required, and the resources necessary to discharge duties.

Three options have been considered:

- **Option 1:** Maintain, but enhance the current governance and operational arrangements by transferring the NatHERS Administrator to another part of the Department where residential building-related matters are a core competency, and developing a detailed communications strategy comprising key performance indicators/metrics to improve stakeholder engagement. This option does little to improve the clarity of NatHERS' role. NatHERS would continue to be responsible for policy and regulation, but with a shift in the balance to regulation. There is no change to the degree of independence, type of governance, and accountability and transparency. The option would improve stakeholder engagement by providing greater structure to the communications process.
- **Option 2:** Separate the policy and regulatory functions of NatHERS, but retain all functions at a national level. Under this option a COAG Energy Council committee would be responsible for setting the policy agenda of NatHERS, commissioning research and development as appropriate. All software, accreditation and quality assurance functions that come under the NatHERS remit would be delivered by an independent regulator with the statutory powers and functions, skills, experience, resources and processes needed to deliver robust regulatory outcomes. Separate stakeholder consultation and engagement functions would be established for policy development, and regulatory management and change. This option would significantly improve the clarity of NatHERS' role. The degree of independence and governance of the regulatory functions could also be more appropriate. This option facilitates an improvement in the accountability and transparency of the regulatory functions. Stakeholder engagement would be enhanced.
- **Option 3:** Separate the policy and regulatory functions of NatHERS, but devolve some functions to States and Territories. This option mirrors Option 2 but devolves the assessor accreditation and quality assurance function to the States and Territories to align the assessor accreditation and quality assurance function with the jurisdictional legislative requirements. In a practical sense, those States and Territories which have deemed assessor accreditation to be important enough to legislate would have responsibility for accrediting assessors in their jurisdiction. Those States and Territories which do not require assessors to be accredited would not assume any responsibility for assessor accreditation. Relative to Option 2, Option 3 would further improve the clarity associated with the assessor accreditation role, and improve the accountability, transparency and stakeholder engagement associated with assessor accreditation.

RECOMMENDATION ES 2 ROLES AND RESPONSIBILITIES OF PARTIES

It is recommended that the policy and regulatory functions of NatHERS be separated, and the assessor accreditation and quality assurance function devolved to the States and Territories.

If the objective is to conceptualise NatHERS as a documented “standard”, it will be important to establish structural arrangements which support an effective and efficient standards setting and change process. This option provides a pathway to NatHERS being a national “standard” that is insulated from changes to policy priorities and preferences across the jurisdictions. It also devolves key functions of the Scheme to the level of government with the authorising regimes (i.e. legislation) and expertise required to deliver consistent and tailored outcomes for that jurisdiction.

Funding

Three options have been considered to improve the transparency, certainty and long term sustainability of funding for NatHERS.

- **Option 1:** Maintain current funding arrangements but increase the quantum of funding available to the NatHERS Administrator. While this option increases the level of funding, it does not improve the clarity of the sources and level of funding for NatHERS. As the funding continues to rely on governments’ budgeting processes, it also does not improve the sustainability of funding.
- **Option 2:** Decouple funding for policy and regulation. Funding for policy development (and research and development as appropriate) would be funded by jurisdictions in accordance with COAG agreements. Funding for the maintenance of the documented “standard”, and delivery of software and assessor accreditation would be funded in part on a fee-for-service basis, with an amount of government funding support to meet the overhead and running costs of the regulator. While this option improves the transparency of funding of the regulatory functions, concerns remain in relation to the sustainability of funding with some of the funding for the regulatory functions depending on the governments’ budgetary processes, and the ability for revenue to be raised on a fee-for-service basis. This option does not improve the transparency of the sources or level of funding for the policy functions.
- **Option 3:** NatHERS regulatory functions funded on a full cost recovery basis. This option provides government funding for policy, and research and development purposes as appropriate. This funding would be provided through the COAG Energy Council process. All other national functions, activities and investments would be fully funded by a combination of licencing and regulatory fees, and the jurisdictions would be responsible for determining the funding arrangements for any functions undertaken at a jurisdictional level. This option further improves the transparency of the funding of regulatory functions. It also provides a sustainable source of funding for the regulatory functions that is not reliant on government budgetary processes, but requires a mechanism to charge the fees.

RECOMMENDATION ES 3 FUNDING

It is recommended that the funding of NatHERS’ policy and regulatory functions be decoupled, with national regulatory functions fully funded by users and, where appropriate, jurisdictions determining the funding arrangements for jurisdictional regulatory functions.

The funding model chosen is contingent on a clear separation of policy and regulatory functions, and the identification of a cost recovery mechanism. To this end, it is important to establish transparent, certain and sustainable funding arrangements for the regulatory functions.

Implementation considerations of the recommended model

If the recommendations are accepted, NatHERS’ governance structure will look fundamentally different to its current structure.

As these reforms are substantial, it will take several years to fully implement, with a risk that NatHERS becomes irrelevant in the meantime. It is therefore recommended that the implementation be staged to realise the benefits of potential “quick wins”. The potential “quick wins” are:

1. **Objectives**—clarity on the role of NatHERS could be enhanced within a couple of months by agreeing on a clear set of objectives for NatHERS and communicating these widely.
2. **Separating NatHERS’ regulatory and policy functions**—while it will take some time to transfer NatHERS’ regulatory functions to an independent regulator, the regulatory and policy functions could be retained within DIIS in the meantime, but with clear separation. This separation could be reinforced by transferring the regulatory functions to a more building-oriented section within DIIS. By doing so, the policy functions would be aligned with the energy portfolio and the regulatory functions would be aligned with the building portfolio.
3. **Commence work on documenting the “standard” that underpins the NatHERS software tools**—work could commence on documenting a “standard” almost immediately, with parallel consideration as to the most appropriate approach to be taken to formalise it, and any consequential changes that may be required to the NCC.
4. **Enhance stakeholder engagement**—the strong criticism of the current engagement of stakeholders by NatHERS emphasises the need to enhance stakeholder engagement on an urgent basis.
5. **Funding**—the regulatory functions need to transition to a sustainable funding model as quickly as possible to reduce reliance on governments’ budgetary processes and ensure that the regulatory functions are resourced appropriately. In parallel with separating the policy and regulatory functions, a budget for the regulatory functions can be developed and a cost recovery mechanism developed.



The Nationwide House Energy Rating Scheme (NatHERS or the Scheme) aims to support the improvement of the energy efficiency of Australian residential buildings through the availability of scientifically valid, cost effective and reliable thermal performance rating tools.

NatHERS rates (out of ten) the thermal performance of a residential building, based on its design, prior to construction. The Scheme works as a ‘measuring tape’ that ‘estimates a home’s potential heating and cooling energy use’, and helps to make Australian residential dwellings more comfortable and energy efficient for their inhabitants.⁴

In its role as the NatHERS Administrator, the Commonwealth Department of Industry, Innovation and Science (DIIS) has engaged ACIL Allen Consulting (ACIL Allen) to undertake an independent governance and operational review of NatHERS (the Review). The Review is to assess the effectiveness of the current NatHERS governance framework and operating model in delivering the Scheme’s objectives and to determine any opportunities to simplify and optimise NatHERS governance and operation, within existing Council of Australian Governments (COAG) and jurisdictional governance and regulatory frameworks. The objective of the Review is to deliver recommendations for improving the arrangements underpinning the Scheme.

The Review will facilitate one of the objectives in the NatHERS Strategic Plan for 2015-18 to be met, namely:

Governance and project management – NatHERS will improve the effectiveness and efficiency of its management and create clear roles and responsibilities and decision-making processes in the areas of governance, operating procedures, protocol setting and administration, risk management, and stakeholder engagement.

The purpose of this Review is not to assess the outcomes or impacts of NatHERS.

This chapter provides background information for the Review in section 1.1, the purpose of this report in section 1.2, the methodology for the Review in section 1.3, and an outline of the report structure in section 1.4.

1.1 Background

Prior to the introduction of NatHERS in 1993, a few states had their own schemes for rating the thermal performance of residential buildings. However, the lack of a nationally consistent approach to the measurement of energy efficiency raised concerns amongst jurisdictions about the longer term environmental impacts of a national housing stock that was ill-suited to Australia’s climatic conditions.

⁴ See: <http://www.nathers.gov.au/>

The introduction of NatHERS heralded a new way of conceptualising energy efficiency across the States and Territories, by providing a nationally consistent, 'government directed approach' to rating the thermal performance of residential buildings in Australia. Early iterations of NatHERS were based on a Victorian scheme and used the Chenath Engine that had been developed and operated by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) since the 1960s. However, states, such as Queensland, held concerns about the Scheme's capacity to account for tropical climates, and it took several more years (and iterations to the Scheme) before it was adopted universally.

In 2003, minimum energy efficiency standards for residential buildings based on the NatHERS star ratings were incorporated into the Building Code of Australia (BCA) (later the National Construction Code (NCC)). These standards were integrated into the BCA/NCC in recognition that a 'centrally administered national program can minimise the regulatory costs' of compliance with NatHERS and 'improve regulatory consistency of the scheme'.

At present, the NCC energy efficiency Performance Requirements can be achieved through the adherence to several building approaches for houses (Class 1 Buildings) and individual units in apartments (Class 2 buildings). There are three options to meet the building thermal Performance Requirement for Class 1 Buildings. The two methods predominantly used are known as Deemed to Satisfy (DTS) options. Under these DTS options, a home is considered to meet the Performance Requirements of the NCC if they meet criteria that include:

- Obtaining a 6 star energy rating using a software tool accredited under NatHERS, coupled with complying with certain provisions for energy-saving features, and provisions for building sealing.
- Complying with the relevant DTS elemental provisions detailed in the NCC (which prescribe specific levels of energy efficiency materials be included in the home, such as insulation and glazing).

The third option involves developing a Performance Solution, where it can be demonstrated that the proposed solution meets the Performance Requirement through other means.

The most commonly used option for units, is to obtain a 5 star energy rating for each unit and an average of 6 stars across all units in the building using a software tool accredited under NatHERS. Certain provisions for energy-saving features and detailed provisions for building sealing must also be met.

There are no DTS elemental provisions for units in a Class 2 Building, however practitioners can develop a Performance Solution to meet the Performance Requirement. For the remainder of the apartment building, such as common areas, practitioners can use the DTS elemental provisions or develop a Performance Solution.⁵

It is estimated that approximately 70 per cent of new houses and apartments are rated by industry practitioners using one of three software tools accredited by NatHERS. This is because the NatHERS software is recognised by industry as providing a more flexible method to achieve building code compliance than the NCC's elemental Deemed to Satisfy methodology. This flexibility is one of the Scheme's hall mark design features.

Broadly, NatHERS accredited software is now used for three separate purposes.

1. **Regulatory compliance:** As discussed above, NatHERS accredited software provides one of the three mechanisms for demonstrating that the thermal performance of a residential building **meets** the minimum performance requirements, as set out in jurisdictional instruments that reference the NCC.
2. **Design aid:** It provides a broader mechanism for those aiming for best practice to demonstrate that the thermal performance of a residential building **exceeds** the minimum performance requirements, and allows designs to be modelled before being built to maximise cost effective solutions and comfort.
3. **Disclosure tool:** It provides a mechanism for determining and disclosing the star rating of an existing building.

⁵ See the following website for more detail: <http://www.nathers.gov.au/governance/national-construction-code-and-state-and-territory-regulations>

Roles, functions and objectives of NatHERS

The current governance and operational arrangements of NatHERS are a result of many factors, most importantly the historical development of the Scheme.

The Commonwealth Government is the Scheme's administrator and works on behalf of the States and Territories who fund and support NatHERS. Since 2014-15, other funding has been provided by user fees through licencing of CSIRO's Chenath Engine. The NatHERS Administrator, who currently sits within DIIS, acts on behalf of States and Territories who 'provide direction' through the COAG Energy Council process. At the time of stakeholder consultation, this was through the Buildings Committee (BC) to the Energy Working Group (EWG), and is now through the Energy Efficiency Advisory Team (EEAT).

According to the NatHERS Strategic Plan 2015-18 the NatHERS Administrator's core functions include the:

- development and maintenance of NatHERS protocols and procedures
- management of upgrades to the Chenath Engine—which includes the management of research and development for the NatHERS tool
- accreditation of software
- approval of Assessor Accrediting Organisations (AAO)
- maintenance of the NatHERS website
- communication with key and industry stakeholders
- development of policy related to NatHERS.⁶

How the NatHERS Administrator is required to perform these functions is, in part, guided by the core objectives in the NatHERS' Strategic Plan 2015-2018. It is important to note that these objectives have only been recently documented by the NatHERS Administrator to guide the direction of NatHERS to 2018.

Objective 1) Governance and program management.

- *NatHERS will improve the effectiveness and efficiency of its management and create clear roles and responsibilities and decision-making processes in the areas of governance, operating procedures, protocol setting and administration, risk management, and stakeholder engagement.*

Objective 2) Accreditation of ratings tools

- *The consistency of NatHERS accredited tools with the benchmark software will be improved and all updates of the software will be managed in a way that provides certainty and sufficient time to adjust for software providers, assessors and the housing industry.*

Objective 3) Encouraging research and development

- *The benchmark software tool will have improved functionality and ability to accurately model building thermal performance.*

Objective 4) Industry skills and capability

- *The skill level, competency and consistency of assessors will be improved, and designers, certifiers and builders will be informed about the appropriate use of rating tools.*

Objective 5) Monitoring and evaluation

- *Mechanisms will be put in place to monitor and evaluate the scheme, including the use of software, validity of ratings and performance of assessors.*

Strategic Plan 2015-18, p.4.

The NatHERS Administrator's role is also guided, in part, by the level of interest shown in NatHERS and the decisions taken by states and territories at the EEAT and other COAG Energy Council decision making forums.

⁶ NatHERS 2015, 'Strategic Plan 2015-18', p. 4-5.

NatHERS is an administrative program. This means that decisions made by the EEAT are not binding on jurisdictions, and each jurisdiction is responsible for the application of NatHERS in a way which meets their own legislative requirements and applications of the NCC. This means that states and territories are able to vary the technical provisions of the NCC, and ultimately NatHERS to best meet their own circumstances.⁷

A more detailed description of NatHERS' current governance and operational arrangements is provided in the next chapter of this report.

1.2 Purpose of this report

The purpose of this report is to assess the 'effectiveness' of NatHERS' current governance framework and operating model in delivering its objectives and to determine any opportunities to simplify and optimise NatHERS governance and operation, within existing COAG and jurisdictional governance and regulatory frameworks.

The Terms of Reference (ToR) for the Review are outlined in Box 1.1.

BOX 1.1 TERMS OF REFERENCE

The requirements set out in the ToR are to:

- Review the effectiveness of current NatHERS governance and operating arrangements in delivering Scheme objectives and outcomes, including:
 - Identifying best practice governance and operational principles relevant to NatHERS
 - Reviewing current NatHERS governance and operating arrangements through discussion with the NatHERS Administrator, consideration of relevant building and energy regulatory requirements and market arrangements, and review of relevant NatHERS documents
 - Undertaking desktop research into other governance and operating models that may improve NatHERS governance and operation.
- Consult with key government and industry stakeholders as identified by the Department.
- Provide reports as required which clearly and comprehensively document stakeholder feedback and the outcomes of the review, including to:
 - identify stakeholder views and key issues with the current governance and operating arrangements
 - assess alternative options to improve scheme delivery and ensure best practice governance and operation
 - provide recommendations on potential changes to NatHERS governance and operational arrangements.

SOURCE: DIIS, REQUEST FOR QUOTATION DOCUMENT, 2015

1.3 Methodology

The methodology used for this Review included a desktop review, stakeholder consultation and analysis.

1.3.1 Desktop review

This phase involved consideration of existing documents that were identified as relevant to the Review. The documents were reviewed at two levels.

First, ACIL Allen explored relevant foundational and primary documents, plans and reports to understand the current governance and operational arrangements of NatHERS. These documents provided a basis for determining the formally documented objectives, governance and operational arrangements, and the roles and responsibilities of key parties in the Scheme.

Second, ACIL Allen explored key reports, reviews and policy documents from a selection of authoritative sources on regulatory and corporate governance good practice. These documents included the OECD's work on good regulatory governance and the ASX's principles and

⁷ Strategic Plan 2015-18, p. 5.

recommendations of good corporate governance and organisation. The documents were then used to develop a good practice framework suitable for analysing the performance of NatHERS' governance and operational arrangements.

1.3.2 Stakeholder consultations

As part of the project, a number of stakeholders were asked to participate in the Review process. The approach included consultation with a carefully selected group of stakeholder organisations (including a small number of organisations which represent a range of other bodies and interests) to capture data, insights and observations for analysis.

The consultation process was supported by an initial meeting between DIIS and ACIL Allen to identify the stakeholders who should be consulted for the Review. Once identified, DIIS contacted each stakeholder to seek agreement about his/her participation in the Review.

A consultation guide was developed to provide consistency in the consultation approach and to assist stakeholders prepare for the consultations. The consultations were conducted using a mixture of face-to-face, videoconference and teleconference formats.

Details of the consultations are provided in Appendix B of this report.

1.3.3 Development of analysis and recommendations

Following the consultation stage, ACIL Allen developed preliminary findings and suggested options for reform. These preliminary findings and options for reform were presented to the DIIS for consideration and feedback in a workshop. Refinements to the preliminary findings and suggested options for reform were made following the workshop and are presented in this report.

1.3.4 Drafting, reporting and refinements

A Final Report was a key deliverable of the Review. The report (including a draft report) was prepared following the completion of the stakeholder consultations and the presentation of consultation findings to DIIS. The drafting process involved synthesis of the information collected and analysed throughout the Review. It also included a process of review by DIIS for factual and interpretative errors prior to the report being finalised.

1.4 Report structure

The remaining sections of the report are as follows:

- *Chapter 2* outlines how NatHERS is currently governed and operates. It draws on a desktop review of programme guidelines and other materials to provide detail about the Scheme's current arrangements.
- *Chapter 3* outlines the key problems facing NatHERS. It draws on the results of stakeholder consultations to demonstrate why it is important (in the eyes of those who interact with NatHERS) for the Scheme to change.
- *Chapter 4* explores key questions that detail the nature of change. In particular, it considers what is to be done about the problem. The chapter also considers different dimensions of the options for improving NatHERS' governance and operating model.
- *Chapter 5* discusses the range of options that are available to improve the governance and operational arrangements of NatHERS. It also provides an assessment of these options to arrive at a recommended model for improving NatHERS.
- *Chapter 6* identifies the changes that will occur under the recommended model. The chapter also discusses some of the high level implementation considerations that are necessary to progress the recommended model and options identified, over a short to medium term timeframe.
- *Appendix A* provides the results of a desktop review undertaken for the project. It identifies key issues relating to NatHERS' performance identified in the literature.
- *Appendix B* identifies the stakeholders who were consulted for the Review.



CURRENT GOVERNANCE AND OPERATIONAL ARRANGEMENTS

2

This chapter provides information that is important to understand how NatHERS is currently governed, in section 2.1, and how it operates, in section 2.2. The information is drawn from a desktop review of programme guidelines and other materials.

2.1 Current governance arrangements

This section outlines the current governance arrangements for NatHERS. The authorising regime is outlined in section 2.1.1, the general governance model is outlined in section 2.1.2, and the roles and responsibilities of key parties within the governance model outlined in section 2.1.3.

2.1.1 Authorising regime

NatHERS is an administrative rather than a legislative scheme. This means that the authority to make and enforce decisions about NatHERS is derived from policy agreements between participating jurisdictions, and is not a function of State, Territory or Commonwealth legislation.

By contrast, one application of NatHERS accredited software tools is to provide one of three options that demonstrate compliance with the minimum performance requirements for thermal efficiency as set out in jurisdictional instruments that reference the NCC.

Policy basis of the Scheme

Policy decisions of Australian governments provide the foundation for the existence, role, and functioning of NatHERS.

The 2004 National Framework for Energy Efficiency (NFEF) (Stage 1) introduced nationally consistent minimum standards over time for residential energy efficiency and nationally consistent five star standards for all homes in all jurisdictions. Stage 2 of the NFEF, introduced in 2007, undertook to continue NatHERS.

The 2009 National Strategy for Energy Efficiency (NSEE) undertook to strengthen capability in energy auditing and assessment; develop an outcomes-based national building energy standard setting, assessment and rating framework for driving significant improvements in the energy efficiency of Australia's building stock; and significantly increase the stringency of energy efficiency provisions for all new residential buildings in the BCA and broaden coverage of efficiency requirements, and upgrade minimum energy efficiency standards.

The latest policy direction for improving energy efficiency ratings of residential properties is the National Energy Productivity Plan 2015-2030 (NEPP), introduced in December 2015. The NEPP focusses on:

- reducing energy costs for households and businesses

- maintaining Australia's competitiveness and growing the economy
- reducing carbon emissions and improving Australia's sustainability.

One stream of work in the NEPP (Improve residential building energy ratings and disclosure) seeks to improve the energy rating information for residential buildings, while another (Advance the National Construction Code) aims to update building efficiency requirements.

Legislative reference to NatHERS

There is very limited legislative reference to NatHERS. The only such reference appears in the NCC 2016, a national instrument that each State and Territory apply through jurisdictional legislation. The NCC 2016 was adopted by the States and Territories on 1 May 2016.

The NCC 2016 references NatHERS in the definition of "house energy rating software" in Volume Two of *NCC 2016 Building Code of Australia*:

House energy rating software means software accredited under the Nationwide House Energy Rating Scheme and is limited to assessing the potential thermal efficiency of the dwelling envelope.

Australian Building Codes Board, NCC 2016 Building Code of Australia – Volume Two, p. 31.

While the NCC provides no definition of the Scheme, it includes explanatory information as set out in Box 2.1.

BOX 2.1 EXPLANATORY INFORMATION – NatHERS

The Nationwide House Energy Rating Scheme (NatHERS) refers to the Australian governments' scheme that facilitates consistent energy ratings from software tools which are used to assess the potential thermal efficiency of dwelling envelopes.

SOURCE: AUSTRALIAN BUILDING CODES BOARD, NCC 2016 BUILDING CODE OF AUSTRALIA, VOLUME ONE, P. 31.

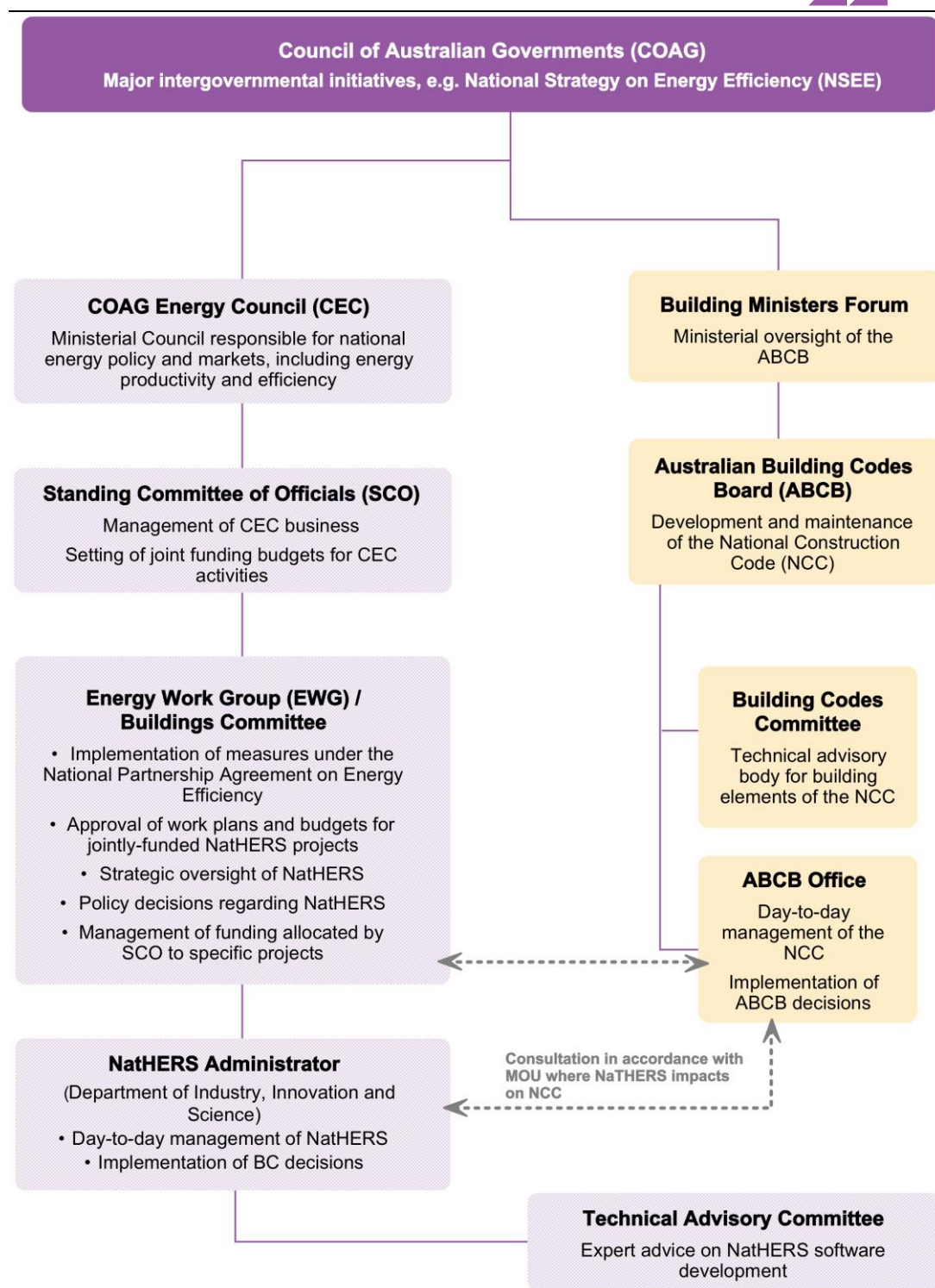
Notably, this reference to NatHERS lacks clarity and refers only to software tools accredited under NatHERS rather than to the Scheme more broadly; it is also a reference to a non-statutory scheme.

It could be argued that the NCC's reference to NatHERS does not guarantee NatHERS continued existence, nor require the creation of a similar Scheme should NatHERS be abolished. This might reflect the existing arrangements under which the use of NatHERS is simply one of three methodologies that can be used to satisfy the thermal building design energy efficiency requirements of the NCC.

2.1.2 Governance model

There are complexities in defining the governance model of NatHERS as the boundaries of the Scheme are unclear. Nonetheless, Figure 2.1 provides a high-level overview of the governance model that is similar to the model outlined in the NatHERS Strategic Plan 2015-2018, and was in place at the time of stakeholder consultation. In this figure, a solid line indicates a reporting relationship while a dotted line indicates a non-reporting relationship.

The Energy Working Group and Buildings Committee have subsequently been replaced by the Energy Efficiency Advisory Team (EEAT).

FIGURE 2.1 NatHERS GOVERNANCE AT THE TIME OF STAKEHOLDER CONSULTATION

SOURCE: DEPARTMENT OF INDUSTRY, INNOVATION AND SCIENCE, STRATEGIC PLAN 2015-2018, ADAPTED BY ACIL ALLEN

2.1.3 Roles and responsibilities of key parties within the governance model

This section details the functions undertaken by the different parties within the NatHERS governance model.

Council of Australian Governments

COAG is the peak Australian intergovernmental body and approves major intergovernmental initiatives, such as the NEPP. COAG consists of the Prime Minister, Premiers, Chief Ministers and the President of the Australian Local Government Association.

COAG Energy Council

The COAG Energy Council is a Ministerial council of energy and resources ministers from the Commonwealth, each State and Territory, and New Zealand. It is responsible for national energy policy and policy for Australian energy markets, including energy productivity and energy efficiency.

Senior Committee of Officials

The Senior Committee of Officials (SCO) is a committee comprised of senior public servants that supports the COAG Energy Council in the performance of its functions. The SCO manages the business of the COAG Energy Council and sets joint funding budgets for COAG Energy Council activities.

Energy Working Group / Buildings Committee

At the time of stakeholder consultation, the NatHERS governance included a separate EWG and BC, which have subsequently been replaced with the EEAT.

The EWG was a body established under the COAG Energy Council to discuss policy issues and to implement agreed national programs related to the COAG Energy Council's agenda for energy market reform and energy productivity, including energy efficiency. The EWG had membership from the Commonwealth, the States and Territories, and New Zealand.

The EWG oversaw NatHERS and provided policy direction for the Scheme. It also made key decisions relating to the Scheme including agreeing on the national benchmark tool, star banding and accrediting software. The EWG previously delegated functions to the BC, a subcommittee of the EWG.

When the BC was a separate committee, it was responsible for facilitating consistent and repeatable ratings of the energy performance of buildings in a way suitable for regulatory purposes. The BC managed funding allocated by the EWG to specific projects.

The BC included a representative of the Australian Building Codes Board (ABCB) Office in relation to issues regarding the use of NatHERS in the NCC.

The NatHERS Administrator

The NatHERS Administrator manages NatHERS on a day-to-day basis and implements decisions of the EEAT. The NatHERS Administrator is currently part of DIIS and staffed by public servants of the Department. The NatHERS Administrator reports to the EEAT; but its line management is the responsibility of DIIS.

The role of the NatHERS Administrator includes:

- developing and maintaining NatHERS Protocols and procedures
- managing upgrades to the Chenath Engine
- accrediting software
- approving AAOs
- maintaining the NatHERS website
- communicating with industry, government and consumer stakeholders
- policy development on NatHERS and related issues.

Under the Interim Memorandum of Understanding (MOU) between the NatHERS Administrator and the ABCB, the NatHERS Administrator is responsible, subject to any directions given by the EEAT, for:

- consulting with the ABCB Office promptly about any of the following matters to enable the ABCB office and Building Codes Committee (BCC) to assess the impact on the BCA and relevant jurisdictional building regulations:
 - proposals to change the NatHERS Software Accreditation protocol
 - proposals for changes to the Chenath thermal calculation engine (apart from bug fixes and functionality changes)
 - directions to software providers about updating their NatHERS software to maintain NatHERS accreditation, including transition periods after the release of new accredited versions of the software
 - other NatHERS administration matters that may have a material effect on the administration of building regulation through the NCC
- raising concerns and requests from the ABCB in relation to the operation of NatHERS that impact on the BCA with the EEAT and advise the ABCB in writing where the ABCB's preferred approach is not supported and why
- accrediting any new version of NatHERS software under the Software Accreditation Protocol in alignment with the NCC amendment cycle where possible, in consultation with the ABCB, and with a transition period providing accreditation of both the old and new versions of the NatHERS software of at least six months
- advising the ABCB before the public announcement of the following matters that have been approved under the NatHERS Software Accreditation Protocol:
 - corrections and functionality changes to existing NatHERS software, and
 - the first-time accreditation of new software
- publishing and maintaining a current list of software versions accredited under NatHERS on the NatHERS website.

The departmental representatives who staff the NatHERS Administrator also provide advice directly to the Commonwealth Minister, through DIIS.

Technical Advisory Committee

The Technical Advisory Committee (TAC) provides expert advice to the NatHERS Administrator on technical issues that aim to improve the Scheme, including NatHERS software development. The TAC provides guidance on technical issues including software functionality, updating the Chenath Engine in accordance with the Software Accreditation Protocol, modelling procedures, work plan prioritisation, and new technology and product evaluation.

The TAC is chaired by the NatHERS Administrator, and comprised of the following members:⁸

- representatives from the EEAT
- a CSIRO representative with technical knowledge of the Chenath Engine
- a representative from each of the accredited NatHERS tool providers
- academic researchers with knowledge of thermal modelling
- representatives from AAOs
- representatives from the building industry.

Additional temporary members or observers may be invited to specific meetings as needed.

As at 18 May 2016, the TAC comprised the following members, which includes peak bodies broadly within the buildings sector:

- the NatHERS Administrator
- State and Territory members of the former EWG
- CSIRO (AccuRate)

⁸ NatHERS, *NatHERS Software, Technical Advisory Committee (TAC), Terms of Reference (TOR)*, p. 2-3.

- NSW Department of Planning and Environment (BASIX)
- University of Tasmania
- University of Adelaide
- University of South Australia
- Building Designers Association of Victoria (BDAV)
- Australian Building Sustainability Association (ABSA)
- Master Builders Association
- Insulation Australasia
- Australian Fenestration Rating Council
- Sustainability Victoria (FirstRate5)
- Energy Inspection (BERS Pro)
- Australian Institute of Architects.

Assessor Accrediting Organisations

The AAOs have two major functions: accrediting, and ensuring the ongoing accreditation of, assessors. There are currently two AAOs, both of which are funded by membership fees of accredited assessors.

The role of AAOs is to:

- ensure accredited assessors meet minimum qualification requirements and adhere to a code of conduct
- undertake quality assurance checks of a sample of ratings done by accredited assessors and provide remedial advice where errors are found
- provide and monitor continuing professional development undertaken by accredited assessors
- provide technical support to accredited assessors
- provide avenues for dealing with consumer complaints about assessors
- provide reports to the NatHERS Administrator.

Building Ministers' Forum

The Building Ministers' Forum comprises the Commonwealth, State and Territory Ministers responsible for building regulation. The Forum oversees nationally consistent building regulation through the Intergovernmental Agreement for the ABCB.

Australian Building Codes Board

The ABCB develops and maintains the NCC. The ABCB is responsible for decisions about the NCC including whether it references NatHERS accredited energy ratings software.

The ABCB has 16 members including a Chair, the head of each of the State and Territory administrations responsible for building issues, up to five industry representatives, and a representative of the Australian Local Government Association.

The ABCB and the NatHERS Administrator agreed on 11 June 2015 to work collaboratively in accordance with an interim Memorandum of Understanding (Interim MOU)⁹. Under the Interim MOU, the parties agreed that where any potential change to accredited software, the Chenath Engine or its administration may have a material effect on the application of building regulation as applying through the NCC, any such change would be considered in accordance with the NatHERS Software Accreditation Protocol. Furthermore, the ABCB has responsibilities to:

- liaise with the NatHERS Administrator as necessary on BCA energy efficiency technical issues and changes to the BCA that may impact on NatHERS
- assist the NatHERS Administrator in assessing the impact of proposed changes to NatHERS

⁹ Which replaced a previous MOU that was agreed in 2011.

- raise concerns and requests from the NatHERS Administrator in relation to the content and operation of the BCA that impact on NatHERS with the Building Codes Committee (BCC) and advise the NatHERS Administrator in writing where the NatHERS Administrator's preferred approach is not supported and why
- advise the NatHERS Administrator of timelines associated with changes to the BCA and amendments relating to energy efficiency.

Building Codes Committee

The BCC is the ABCB's peak building technical advisory body. It advises and makes recommendations to the ABCB on technical matters relevant to the BCA and strategic policy relevant to building control matters, and the merits of proposals to change the BCA.

ABCB office

The ABCB office is a group of professional, technical and administrative Departmental officers responsible for day-to-day management of the NCC and implementing ABCB decisions. The ABCB office is located within DIIS.

Under the Interim MOU, the ABCB Office and the NatHERS Administrator meet at least three times a year to discuss any matters raised by either party and issues raised by jurisdictions or industry bodies relating to the use of NatHERS in the NCC.

2.2 Current operational arrangements by function

This section provides a functional breakdown of responsibilities for NatHERS.

2.2.1 Policy development

The NatHERS standard for rating the thermal efficiency of Australian residential buildings is effectively established through the Chenath Engine and AccuRate software, rather than through a documented "standard" that provides the principles and functional specifications for the Chenath Engine and AccuRate software. Changes to the Chenath Engine and AccuRate software are initiated through decisions made by the EEAT, the TAC or the NatHERS Administrator. Technical changes are also initiated by CSIRO.

The EEAT makes policy decisions that relate to the accreditation of alternative software tools and the accreditation of assessors.

2.2.2 Regulatory functions

There are three regulatory functions undertaken by NatHERS – maintaining the benchmark software tool, accrediting alternative software tools against the benchmark software, and accrediting assessors.

Maintaining the benchmark software tool

The CSIRO maintains and develops the Chenath Engine for use in NatHERS. An MOU between the NatHERS Administrator and CSIRO is being developed to formalise this arrangement. CSIRO owns the intellectual property associated with the Chenath Engine and licenses the engine to software tool developers.

CSIRO developed the AccuRate software, a user interface for the Chenath Engine, as a tool for assessors to rate the thermal energy efficiency of residential building designs. CSIRO has the role of validating the AccuRate software.

Accrediting alternative software tools against the benchmark software

Two software providers have developed alternative tools to assess the thermal performance of residential buildings (Sustainability Victoria's FirstRate5 and Energy Inspector's BERS Pro). This software is accredited under the Software Accreditation Protocol by a benchmarking assessment

against the Benchmark Software. The Benchmark Software is defined as the combination of the Chenath Engine and the AccuRate user interface.

The EEAT is responsible for making decisions to accredit software under the Protocol.

The process for accrediting software consists of four steps. First, the software developer submits an expression of interest to the Administrator. Second, the NatHERS Administrator invites the developer to lodge a formal application for software accreditation. Third, the developer uses a specified three-stage approach to test the software on a standard set of base dwelling designs provided by the NatHERS Administrator. Finally, the NatHERS Administrator and EEAT approve the use of the software under NatHERS.

Assessor accreditation

NatHERS assessors

Requirements on who can undertake assessments of building design thermal energy ratings for regulatory compliance purposes vary from jurisdiction to jurisdiction. While some States and Territories require ratings to be conducted by accredited assessors, others do not. Ratings are more likely to be required to be conducted by accredited assessors in those jurisdictions in which a number of professionals or paraprofessionals in the building chain are required to be accredited, registered or licensed and less likely to be required to be conducted by accredited assessors in those jurisdictions in which few professionals or paraprofessionals in the building chain are required to be accredited, registered or licensed.

Where assessors are required to be accredited, the accreditation and auditing of assessors is undertaken by AAOs. The NatHERS Administrator currently accredits organisations as AAOs under the March 2016 *Protocol for Assessor Accrediting Organisations*.

In order to be accredited by an AAO as an Assessor, a person must complete a Certificate IV in NatHERS Assessment (CPP41212). As of 1 January 2016, all assessors were required to hold a Certificate IV in NatHERS Assessment to maintain their accreditation as an Assessor.

AAOs are required to submit an annual report to the Administrator on their operations over the previous financial year. The annual reports must include specific information including on quality assurance issues.

AAOs are required to provide support to assessors and to facilitate their continuing professional development.

Two organisations are currently accredited as AAOs—the Australian Building Sustainability Association (ABSA) and the Building Designers Association of Victoria (BDV).

Quality assurance of assessments

Each AAO must have a quality assurance system approved by the NatHERS Administrator to ensure that assessors conduct assessments in an accurate, consistent and repeatable manner. AAOs must apply quality assurance processes to assessments to ensure, as far as possible, that:¹⁰

- assessments are accurate, consistent and repeatable
- assessors are correctly applying the relevant building regulations, including any state or territory-specific requirements
- assessors are complying with the AAO's Assessor Code of Practice
- assessors are conducting assessments in line with the relevant version of the NatHERS Technical Notes and using NatHERS Software accredited at the time of the assessment
- appropriate, timely remedial action is taken to improve the performance of assessors whose assessments are found to contain errors.

AAOs are required to undertake a quality assurance review of 20 per cent of all accredited assessors annually. An assessor is subject to remedial action by the AAO if their assessments do not meet

¹⁰ NatHERS Administrator, *Protocol for Assessor Accrediting Organisations*, March 2016, 9.

specified requirements. Remedial action can include examinations, use of benchmark assessments, targeted continuing professional development, mentoring, refresher training and retraining. An AAO is required to suspend the accreditation of an assessor where the remedial action does not improve the quality of that assessor's assessments.

AAOs are required to create a system for responding to complaints about assessors. AAOs are only required to report to the NatHERS Administrator on such complaints where they relate to issues that "impact on Scheme integrity".¹¹

2.2.3 Summary of the roles and responsibilities of parties involved with NatHERS operations

Table 2.1 provides a summary of the roles and responsibilities of stakeholders associated with the operation of NatHERS.

TABLE 2.1 STAKEHOLDERS AND THEIR ROLES IN NatHERS

Stakeholder	Role
COAG (Energy and Building Ministers)	Provides policy direction on the thermal performance of Australian residential buildings
Commonwealth Government	NatHERS Administrator National energy efficiency policy Implementation of the NEPP Building industry policy
State and Territory Governments	Building construction and energy regulation Energy efficiency policy NSEE implementation
ABCB	Development of the NCC
CSIRO	Development of the benchmark software Validation of the benchmark tool Research into thermal performance Expert advice on thermal performance
Product manufacturers	Supply of products to the building industry Practical application of energy efficiency policy Testing of the application of the software to their product Provision of expert advice about products
Research institutions	Research and development Thermal performance research Testing of software
Software developers	Software development Expert advice on use of the software
Assessors	Conduct NatHERS ratings of residential building designs Expert advice for building design to achieve good thermal performance Provide advice to consumers
Assessor Accrediting Organisations	Management of assessor accreditation Assessor support Quality assurance of assessments Access to continuing professional development Maintain a complaints handling procedure

¹¹ Ibid., 12.

Stakeholder	Role
Designers / architects / builders	Work with assessors to produce the required/desired level of thermal performance
Building certifiers	Work with practitioners to assess the level of performance of building designs compared with jurisdictional regulatory requirements Assess as-built compliance with building performance standards
Consumers	Purchase new buildings Influence new building design Pay operating costs for new buildings Provide feedback to governments

SOURCE: ADAPTED FROM NatHERS, ADMINISTRATIVE AND GOVERNANCE ARRANGEMENTS, AUGUST 2015



3

HOW IS THE GOVERNANCE AND OPERATING MODEL OF NATHERS PERFORMING?

This chapter analyses the performance of NatHERS' governance and operational arrangements against the NatHERS vision (in section 3.1), stated objectives set for the Scheme (in section 3.2), and best practice principles (in sections 3.3 and 3.4).

This chapter draws on a desktop review of programme materials and stakeholder views expressed through consultations. The stakeholder views were largely dependent on the importance of the Scheme to that stakeholder. The more important the Scheme was to a stakeholder, the stronger the comments on of the Scheme by that stakeholder. Notwithstanding, some stakeholders recognised improvements that have been made over the last 12 months.

This chapter identifies a number of opportunities to improve NatHERS' governance and operational arrangements.

3.1 Performance against NatHERS' vision

The Strategic Plan 2015-2018 outlines a vision for NatHERS. The desktop review indicates that this is the strongest goal-like statement for NatHERS.

The vision for NatHERS is to support the improvement of the energy efficiency of Australian residential buildings through the availability of scientifically valid, cost effective and, reliable thermal performance rating tools. NatHERS can be integrated across the building design, compliance, construction and renovation cycle.

NatHERS, Strategic Plan 2015-2018, p. 3

Given that approximately 70 per cent of new houses and apartments are currently rated using a NatHERS accredited software tool, NatHERS supports the improvement of energy efficiency of Australian residential buildings. However, a selection of stakeholders indicated that some larger builders may be moving away from using a NatHERS accredited software tool.

At the core of the vision is making thermal rating tools available for Australian residential buildings that are 'scientifically valid, cost effective, and reliable'.

Although ACIL Allen has not evaluated the outputs (e.g. the Chenath Engine and accredited software) or outcomes of NatHERS (e.g. that building designs meet specified minimum thermal energy efficiency standards), stakeholder comments suggest that NatHERS is not meeting this element of the vision.

Stakeholders indicated that there are significant weaknesses in the reliability of the software ratings tools, principally from a variance in reliability arising from varying levels of skill among assessors in using the software tools. Stakeholders also indicated that the three different software rating tools could give different ratings from the same inputs. Stakeholders suggested this was primarily due to the way

different software tools were configured to the Chenath Engine and the different ways data can be inputted to the engine.

In addition, the scientific reliability of the software has, until recently, been negatively impacted by the existence of different versions of software at the same time. The one set of inputs into different versions of software could result in different ratings.

Stakeholders stated that parties could “shop around” for a software tool and assessor that gave a desired rating.

While stakeholders regard NatHERS as a world leader in development, there was concern that there had been underinvestment in research and development of the software over at least the last 15 years. Stakeholders stated this lack of research and investment may detract from the degree to which the tool is scientifically valid. Stakeholders also stated that the lack of investment inhibited the Chenath Engine’s ability to use updated input values of parameters for building materials that were included in building designs. Stakeholders indicated that input values were updated infrequently, and this detracted from the scientific validity of the software.

Stakeholders also stated that there were significant challenges in having NatHERS fully integrated into the building design phase as it was generally seen as a regulatory compliance tool rather than a means to enhance the thermal performance of buildings. In the absence of a written standard underpinning the NatHERS software, there is a lack of transparency of the principles and functional specifications for the NatHERS software tools. As a result, stakeholders indicated that building designers often sought to change a design to achieve a particular NatHERS rating rather than integrate relevant design principles into building design from the outset.

In addition, stakeholders stated NatHERS was not integrated into the construction phase of a building and that the limited as-built compliance checking following a NatHERS rating detracted from the reputation of NatHERS and the achievement of policy goals for energy efficiency.

Stakeholders further commented that there are significant governance and process issues with NatHERS that have the potential to impede its achievement of the vision. In particular, stakeholders indicated that there was a lack of engagement from the NatHERS Administrator (although there has been improvement over the last 12 months), lack of clarity about NatHERS governance processes, lack of clarity about the processes for accrediting alternative software tools, and lack of good regulatory practice in making changes to the Chenath Engine.

The focus of development of the Chenath Engine was perceived to be on issues that had a relatively minor impact on star ratings rather than resolving the core issues—easily repeatable ratings from multiple software tools. The inappropriate focus was perceived to arise from a technically driven development agenda striving for a level of accuracy disproportionate to the range of outcomes for a particular star rating, and the other errors in the rating of a building. A policy driven development agenda, consistent with COAG principles of best practice regulation (including a clear articulation of the problem, identification of the options, and cost-benefit analysis), is generally considered by stakeholders to be more appropriate.

3.2 Performance against its own objectives

While there is no overarching goal or objective for NatHERS, the NatHERS Strategic Plan 2015-2018 sets out five objectives for NatHERS to improve NatHERS over the life of the Plan. This section provides ACIL Allen’s assessment of the governance and operating model of NatHERS against those objectives, noting that it is relatively early days in the implementation of the Plan. This assessment is qualitative as there was a lack of data to make a quantitative assessment.

3.2.1 Objective 1

NatHERS’ first objective focuses on ‘governance and program management’:

NatHERS will improve the effectiveness and efficiency of its management and create clear roles and responsibilities and decision-making processes in the areas of governance, operating procedures, protocol setting and administration, risk management, and stakeholder engagement.

As discussed in section 3.3.1, to date, the role, objective and functions of NatHERS and its bodies are very unclear as they have not been clearly specified in a legislative or policy instrument. There is a lack of consistency among stakeholders about the Scheme's objectives. There is also a lack of clarity about the functions of the NatHERS bodies as these have also not been detailed in a legislative or policy instrument.

Some stakeholders commented on the lack of accountability for decision making related to NatHERS. The decision making process is necessarily convoluted as NatHERS falls within the COAG processes. While this may be appropriate for policy decision making, it is less appropriate for regulatory decision making.

In addition, stakeholders were of the view that NatHERS governance bodies do not employ the principle of proportionality, as endorsed by COAG, in decision-making about the Chenath Engine. The principle of proportionality is that "government action should be commensurate with the magnitude of a problem, its impacts, or the level of risk without action". Stakeholders stated that NatHERS' focus on improving the accuracy of the Chenath Engine was misplaced as other factors, such as the reliability of assessments, impacted the thermal energy efficiency ratings of buildings to a much greater extent than the accuracy of the tool. Box 3.1 provides an overview of the principle of proportionality.

BOX 3.1 PRINCIPLE OF PROPORTIONALITY

Principle 8: Government action should be effective and proportional to the issue being addressed

In all responses to identified problems, government action should be effective and proportional to the issue being addressed. Effectiveness should be judged solely in terms of meeting the specified objective. Consideration should be given to the effectiveness of implementation and administration and, as relevant, an assessment of likely compliance rates should be made taking into account matters such as incentive structures and costs to regulated parties.

Proportionality involves ensuring that government action does not 'overreach', or extend beyond addressing a specific problem or achieving the identified objective. The scope or nature of government action should be commensurate with the magnitude of a problem, its impacts, or the level of risk without action. The principle of proportionality applies equally to the implementation of regulation, including the development of frameworks for ensuring compliance.

SOURCE: COAG, BEST PRACTICE REGULATION, A GUIDE FOR MINISTERIAL COUNCILS AND NATIONAL STANDARD SETTING BODIES, 2007, P.6.

There is also limited focus on risk management within the Scheme, with no body clearly identified as having responsibility for identifying or managing risks. Standard risk management procedures (such as risk registers and contingency provisions) do not appear to be in place for the Scheme, although some risks are naturally assessed during the development of the NatHERS Administrator's Annual Work Plan. This lack of systematic and documented risk management presents a significant governance failure of the entire Scheme.

As discussed in section 3.3.5, there is also insufficient stakeholder consultation and engagement, with no legislative or policy requirement for NatHERS to consult. Stakeholders almost universally stated that NatHERS' stakeholder engagement was insufficient, while some recognised improvements that have occurred over the last 12 months or so. Some stakeholders viewed that the lack of engagement presented a very large risk to the Scheme.

In ACIL Allen's opinion, it is essential for the governance bodies to clarify the roles, responsibilities, functions, and decision making authority of each entity within NatHERS. It is also essential for NatHERS to continue to dramatically improve its engagement with stakeholders.

3.2.2 Objective 2

NatHERS' second objective focuses on 'accreditation of rating tools':

The consistency of NatHERS accredited tools with the benchmark software will be improved and all updates of software will be managed in a way that provides certainty and sufficient time to adjust for software providers, assessors and the housing industry.

A number of stakeholders indicated that the use of different accredited software can give rise to different ratings for the one residential building design. Such a situation is suboptimal if the differences in ratings are material; and can result in assessors “shopping around” for a desired rating.

Stakeholders stated that there were material timing problems with the existing processes for updating software. During the consultations, stakeholders stated that one software tool was still transitioning to the latest version of the benchmark software after more than a year, with multiple time extensions having been granted.

Some stakeholders commented that the software accreditation process was fundamentally flawed. Differences between a software tool and a benchmark software were difficult to identify and time consuming, and could be due to errors in the software tool, or the benchmark software. This issue could be addressed if the “standards” underpinning the benchmark software were documented in a more transparent way and the accreditation process was undertaken by progressively testing elements of a residential building, rather than by testing five fully designed residential buildings. For example, a simple residential building could be tested first. If the results between the benchmark software tool and the software tool being accredited aligned, then additional elements could progressively be added to the residential building.

The process for accrediting software should be a robust regulatory process that takes the legitimate needs of all parties into account. From consultations with stakeholders, the current process for making changes to the benchmark software lacks transparency and an understanding of the factors important to the developers of alternative software tools.

3.2.3 Objective 3

NatHERS’ third objective focuses on ‘encouraging research and development’:

The benchmark software and the accredited software tools will have improved functionality and ability to accurately model building thermal performance.

Many stakeholders considered that the research and development which supports NatHERS does not sufficiently focus on areas of interest to the buildings sector, and too much of the research is focused on improving the precision of the Chenath Engine, even if there was an immaterial impact on the output (i.e. the star rating). This focus on improving the precision of the Chenath Engine represents a lack of proportionality and indicates a lack of connection to the buildings sector.

Stakeholders also stated that there is a risk to NatHERS if it does not evolve. The market is rapidly moving to a whole-of-building sustainability approach which incorporates a much wider set of considerations (such as water sustainability and wider notions of human comfort) than NatHERS, which focuses only on thermal performance.

Stakeholders also provided anecdotal evidence that the buildings industry might be moving away from using NatHERS to satisfy the building thermal performance requirements in the NCC. Many stakeholders expressed concern with a perceived lack of regulatory rigour to approve changes to the Chenath Engine. Stakeholders also expressed concern that the standard has not been separately documented but is in effect referenced to the Chenath Engine, which itself is perceived as aged and using an old programming language that does not effectively facilitate innovation.

Consultations with stakeholders indicated that private funding could be used to fund the development of the NatHERS benchmark software tool where this delivered private benefits. This brings to the foreground the question of public versus private funding of research. Policy fora must provide clear guidance about the role of each.

It would be expected that a developed market would involve research funded from public and private sources. There would also be a clear split between funding for regulatory-related research and development, and policy or market-related research and development.

3.2.4 Objective 4

NatHERS' fourth objective focuses on 'industry skills and capability':

The skill levels, competency and consistency of assessors will be improved, and designers, certifiers and builders will be informed about the appropriate use of rating tools.

Many stakeholders expressed strong concern with a perceived lack of consistency in the work of assessors.

As discussed in section 151.1421836.0, a requirement was introduced on 1 January 2016 that all assessors were to hold a Certificate IV in NatHERS Assessment to maintain their accreditation as an Assessor. A number of stakeholders indicated great concern that many assessors were now not accredited due to the costs, particularly the opportunity cost, of obtaining the required Certificate IV qualification.

Stakeholders are also concerned that the Certificate IV requirement for accreditation as an assessor will not lead to improved assessment outcomes. They advised that the core training aspect of the course had not improved with the introduction of the Certificate IV requirement and that additional modules were introduced that had little practical benefit in terms of using ratings software.

Some stakeholders stated that software tools do not have user guides, which inhibits the ability of assessors to use the software.

It is unclear how the skill levels, competency and consistency of assessors will be improved under the existing governance arrangements given that assessors do not need to be accredited in many jurisdictions. It is also unclear how designers, certifiers and builders will be informed about the appropriate use of rating tools given the lack of stakeholder engagement with these groups.

3.2.5 Objective 5

NatHERS' fifth objective focuses on 'monitoring and evaluation':

Mechanisms will be put in place to monitor and evaluate the scheme, including the use of the software, the validity of ratings and performance of assessors.

As discussed in Section 3.3.4, NatHERS currently has insufficient accountability and transparency. While it reports regularly to the Steering Committee, there is no framework for NatHERS to report publicly on its performance against its objectives. Nor is there any approach to reporting on its governance, funding, budgeting, expenditure, nor measures of outputs or outcomes. Responsibility for the Scheme is diffuse across jurisdictions and no one jurisdiction takes responsibility for the Scheme.

The Strategic Plan 2015-2018 states that NatHERS will develop a set of Key Performance Indicators (KPIs) to measure the effectiveness and administration of the Scheme. It also states that it will publish an annual report on the outcomes of NatHERS against KPIs and include statistics from software providers and AAOs.

In ACIL Allen's view, it is essential that NatHERS reports regularly on its performance to its governance bodies, stakeholders and the public. This is a standard approach to enhancing accountability and transparency. The lack of annual reporting to date is a mark against the ability of governance bodies to monitor and evaluate the performance of NatHERS.

An essential element to improving monitoring and evaluation is clearly specifying the objectives, roles and functions of the bodies in the Scheme and provide a reporting framework for each of them. Responsibility for the Scheme has to be clearly specified, and NatHERS must be transparent about its decisions.

3.3 Performance against the principles of good regulatory practice

In its guide on best practice regulation, COAG has stated that¹²:

¹² Council of Australian Governments, *Best Practice Regulation, A Guide for Ministerial Councils and National Standard Setting Bodies*, October 2007, page 3

Regulation refers to the broad range of legally enforceable instruments which impose mandatory requirements upon business and the community, as well as to those government voluntary codes and advisory instruments for which there is a reasonable expectation of widespread compliance.

The principles of good regulatory practice and regulatory assessment requirements outlined in this Guide apply to decisions of COAG, Ministerial Councils and intergovernmental standard-setting bodies, however they are constituted. This includes bodies established by statute, or administratively by government, to deal with national regulatory problems.

The principles and assessment requirements apply to agreements or decisions to be given effect, whether at the Commonwealth or State/Territory level, or both, through principal and delegated legislation, administrative directions or other measures which, when implemented, would encourage or force businesses or individuals to pursue their interests in ways they would not have otherwise done.

While the functions and powers of NatHERS are not explicitly stated in legislation, the following NatHERS functions can be considered to be regulatory under the COAG guide:

- **Software accreditation.** There is a requirement imposed on parties to comply with minimum performance requirements for thermal efficiency in jurisdictional instruments. The jurisdictional instruments reference the NCC. The NCC includes three options for demonstrating compliance, one of which is by using a software tool that is accredited by NatHERS. NatHERS performs a regulatory function by approving changes to the benchmark software (Chenath engine) and accrediting software under the Software Accreditation Protocol, which change ratings outputs and consequently requirements in meeting this NCC compliance option.
- **Assessor accreditation.** In some jurisdictions, there is a requirement imposed on parties to engage accredited assessors to assess the thermal performance of residential buildings using a NatHERS accredited software tool. NatHERS performs a regulatory function by setting accreditation requirements, including appointing and accrediting Assessor Accrediting Organisations (AAOs) that register, accredit and quality assure assessors.

As these NatHERS functions are considered to be regulatory under the COAG guide, the OECD's principles of good regulatory practice provide a useful framework for assessing the performance of the governance and operating model of NatHERS in undertaking these regulatory functions.

The OECD's six principles of good regulatory governance are:

1. Role clarity
2. Degree of independence
3. Type of governance
4. Accountability and transparency
5. Stakeholder engagement
6. Funding

This section outlines ACIL Allen's analysis of the performance of the governance and operating model of NatHERS against these principles. The analysis indicates that there are opportunities to improve the governance and operating model of NatHERS as it currently:

- does not have a clear role
- has a poor governance model for regulatory decision making
- is perceived as having a poor level of accountability and transparency
- has a poor approach to stakeholder engagement
- has a funding model that is not transparent and is not sustainable.

3.3.1 Role clarity

The OECD stated that:¹³

Role clarity is essential for a regulator to understand and fulfil its role effectively. The role of the regulator should be clearly defined in terms of its objectives, functions and coordination with other entities. These should be clear to the regulator but also to the regulated bodies, citizens and other

¹³ OECD, *The Governance of Regulators*, p. 31.

stakeholders. This is necessary for a well-functioning regulatory framework with different actors knowing their role and purpose that is complimentary and not duplicative or detrimental toward each other.

As the role of NatHERS is not clearly specified in either a legislative instrument or a policy document, its role is unclear. In addition, the roles it does have—both policy and regulatory—have the potential to conflict.

There is an inconsistent understanding among stakeholders about the role of NatHERS. Some perceive it to be primarily regulatory compliance while others perceive it to be primarily to promote best practice thermal efficiency. Some stated that it had elements of both but that it had focused on the promotion of best practice over its regulatory compliance role.

A theme from many stakeholders was that the NatHERS Administrator focusses on the “wrong things”. For example, many stakeholders had a view that the Administrator focusses on making the Chenath Engine ever more precise even though the actual assessments can vary more materially according to which assessor undertakes the assessment, and which software tool they use to make the assessment. In addition, stakeholders stated there should be a much greater focus on the building end product.

This section discusses NatHERS’ objectives, functions and coordination with other bodies.

Objectives

The objectives of NatHERS are not set out clearly in a legislative instrument or a policy document.

The Interim Terms of Reference and Work Plan for the former EWG state that the objectives of the EWG include:¹⁴

The Energy Working Group...will take on the remits of the former Energy Market Reform Working Group (EMRWG) and Energy Efficiency Working Group (E2WG) including:

- *Energy efficiency issues including the Greenhouse and Energy Minimum Standards for...building standards, rating and disclosures, information provisions [sic], skills and improved data for policy making.*

The ToR for the former BC state that the objectives of the former BC include:¹⁵

The [Building] Committee’s work is focused on:

- *Ensuring households and business are able to effectively manage their energy consumption through the provision of targeted information and awareness measures, effective rating, assessment and disclosure tools, as well as appropriate energy efficiency standards;*

The NatHERS Strategic Plan 2015-2018 outlines a vision for NatHERS, which includes elements of an objective for the Scheme:¹⁶

The vision for NatHERS is to support the improvement of the energy efficiency of Australian residential buildings through the availability of scientifically valid, cost effective and, reliable thermal performance rating tools. NatHERS can be integrated across the building design, compliance, construction and renovation cycle.

In addition to a lack of clarity about a legislative or policy objective for NatHERS, stakeholders have inconsistent views about the objectives or goals of the Scheme. Some stakeholders—primarily those with a buildings sector focus—emphasise NatHERS’ regulatory compliance objective. Other stakeholders—primarily those with an energy efficiency focus—emphasise its objective to promote best practice thermal performance. Some stakeholders consider that NatHERS has both objectives but that it has focused on one end of the spectrum at the expense of the other end.

ACIL Allen considers that it is poor regulatory practice for the objective of NatHERS to not be clearly defined.

¹⁴ COAG Energy Council, *COAG Energy Council Energy Working Group: Interim Terms of Reference and Work Plan Agreed on 22 May 2015*, p.1.

¹⁵ COAG Energy Council, *COAG Energy Council Buildings Committee Terms of Reference*, p.1.

¹⁶ NatHERS, *Strategic Plan 2015-2018*, p. 3

Functions

The functions of NatHERS are not set out clearly in a legislative instrument or a policy document. In addition, the functions of key component bodies of NatHERS—the EEAT and the NatHERS Administrator—are not set out clearly in a legislative instrument or a policy document. Furthermore, the functions of NatHERS bodies do not distinguish between policy and regulatory functions.

The functions of the former EWG specified in the Interim Terms of Reference and Work Plan Agreed on 22 May 2015 do not specify particular categories of decisions relating to the Scheme, as shown in the quote below:¹⁷

The Energy Working Group will:

- *Identify, develop and progress strategic priorities and issues that are consistent with the Energy Council's energy market reform priorities and provide advice on energy policy using, where relevant, reviews and analysis prepared by the energy market institutions and other key stakeholders;*
- *Develop papers, proposals, work plans and budgets for consideration by SCO, and where appropriate, the Energy Council;*
- *Implement the Energy Council's energy reform agenda and work plan and report progress to SCO, and where appropriate, the Energy Council;*
- *Advise on obligations under relevant agreements and legislation including but not limited to the Australian Energy Market Agreement, National Partnership Agreement on Energy Efficiency and the Inter-Governmental Agreement for the Greenhouse and Energy Minimum Standards Legislative Scheme; and*
- *Consult with stakeholders as required.*

The NatHERS Administrative and Governance Arrangements states that:¹⁸

NatHERS is overseen by the Energy Working Group (EWG)...

Policy direction on NatHERS is provided by EWG. Key decisions are referred to the EWG including agreement on the national benchmark tool, star banding and the accreditation of software. EWG also provides policy advice for the Scheme and supports the work of the ABCB to develop and implement energy efficiency standards for buildings, including rating tools.

The Interim Terms of Reference and Work Plan for the former EWG established an initial Buildings Standing Sub-Group (also known as the BC). The ToR for the former BC specify its functions to include the following:¹⁹

The Buildings Committee will:

- *Oversee the operation and administration of the Nationwide House Energy Rating Scheme (NatHERS);*

The former BC's ToR indicates indirectly that the BC may have the capability to make decisions impacting the NCC:²⁰

Decision making and voting will be made under the following protocol:

- *The Australian Building Code Board (ABCB) to have voting rights when the Buildings Committee makes decisions which may impact the National Construction Code.*

Although it was not specifically stated in the Interim ToR of the former EWG or the ToR of the former BC, it was implied that the EWG could delegate functions and tasks to the BC as the BC was a sub-group of the former EWG. The Interim MOU between the NatHERS Administrator and ABCB dated 11 June 2015 states that:²¹

¹⁷ COAG Energy Council, *COAG Energy Council Energy Working Group: Interim Terms of Reference and Work Plan Agreed on 22 May 2015*, p.2.

¹⁸ NatHERS, *NatHERS Administrative and Governance Arrangements*, p. 8.

¹⁹ COAG Energy Council, *COAG Energy Council Buildings Committee Terms of Reference*, p.2.

²⁰ COAG Energy Council, *COAG Energy Council Buildings Committee Terms of Reference*, p.2.

²¹ Australian Building Codes Board, *Interim Memorandum of Understanding between the NatHERS Administrator and the ABCB* dated 11 June 2015, p. 2.

The EWG may delegate any of its NatHERS functions to the Buildings Committee of EWG.

The NatHERS Administrative and Governance Arrangements states that:²²

Development and implementation of the NatHERS work program is delivered by the Buildings Committee (BC), a sub-committee of the EWG. The BC is tasked by EWG to develop and implement improvements to the Scheme to facilitate consistent and repeatable ratings of the energy performance of buildings suitable for regulatory purposes.

The functions of the former EWG, former BC and NatHERS Administrator relating to NatHERS are not clearly specified and it is not possible to identify the functions of each body.

There is no clear delegation of functions from the former EWG to the former BC or NatHERS Administrator, nor from the former BC to the NatHERS Administrator, nor is there any clear process about how functions are to be delegated. The NatHERS Administrative and Governance Arrangements states:²³

Key decisions are referred to EWG including agreement on the national benchmark tool, star banding and the accreditation of software.

We have not seen any documentation that indicates the extent to which there is improved clarity with the replacement of the EWG and BC by the EEAT. However, we would expect the arrangements would be clearer as no functions would now be delegated from the EWG to the BC.

Many stakeholders stated that they did not understand the functions of NatHERS bodies and did not understand which function was exercised by which body.

Combined policy and regulatory functions

The lack of clarity about the functions of NatHERS bodies extends to a lack of clear separation between policy and regulatory functions.

Some stakeholders considered that NatHERS often focused on issues secondary to its primary functions. For example, some building sector stakeholders considered that the primary function of NatHERS was regulatory compliance but that it had failed to be a robust regulator. On the other hand, other stakeholders considered that the primary function of NatHERS should be to focus on strengthening the broad resource efficiency—including energy and water—of new residential building stock.

One of the OECD's principles for role clarity is that a regulator should not be assigned conflicting or competing functions or goals.

There is a conflict in NatHERS bodies having both regulatory and policy functions. Conceptually, the one group of DIIS officers in the NatHERS Administrator is responsible for administering parts of both functions and having one group of officers responsible for both functions can lead to confusion about the resources allocated to each function. This confusion generates misunderstanding amongst stakeholders and often leads to criticism about the way resources are used to deliver policy and regulatory activities.

In addition, policy development and regulation are two distinct types of activities, with different cultures, habits of mind, frameworks, and approaches to conducting activity.

Having the two distinct sets of functions can cloud the overall role and goals of NatHERS, particularly if stakeholders perceive that there could be conflict or potential for conflict between them. A perception of a conflict or potential conflict could arise if the goals of one role impacted the way in which NatHERS undertook its other role. For example, it is conceivable that the Chenath Engine could be developed in a way that helps meet policy goals but is implemented in a way that is inconsistent with the processes agreed with the ABCB to change what is, in effect, a regulatory standard.

It is sub-optimal regulatory practice for the functions of bodies in a policy and regulatory scheme to be unclearly specified, and for the regulatory and policy functions to be combined. It is also sub-optimal regulatory practice for a single body—in this case the EEAT or NatHERS Administrator depending on

²² NatHERS, *NatHERS Administrative and Governance Arrangements*, p. 8.

²³ NatHERS, *NatHERS Administrative and Governance Arrangements*, p. 8.

the decision—to have both policy and regulatory functions. Having both roles in the one body can cloud its functions both to the organisation and to external parties. In Australia, it has been leading practice for policy makers to separate regulation from policy in many areas over recent decades, especially in the energy sector.

Assessor Accrediting Organisations

AAOs also have overlapping functions: being membership organisations for accredited assessors, accrediting assessors, mentoring assessors, and ensuring accredited assessors comply with the conditions of their accreditation.

These overlapping functions result in AAOs having a clear conflict of interest. While the ongoing financial viability of AAOs depends on accredited assessors being members of the organisation, they also audit 20 per cent of accredited assessors annually. Stakeholders indicated that they considered AAOs to have a clear conflict of interest that needs to be resolved as the Scheme matures.

Case study of clear functional separation between regulation and policy

A clear example of separation between regulation and policy is given in the governance arrangements for Australia's national electricity and gas markets. A recent COAG Energy Council review stated that the governance arrangements were fundamentally sound and among best practice internally.²⁴

Box 3.2 provides a case study of the separation of regulation and policy-making functions in the governance arrangements for the National Electricity Market (NEM). Notably, rule-making and regulation, which had originally been the responsibility of a single body from the NEM's creation in 1998 until 2005, were split and allocated to separate bodies from 1 July 2005.

While the case study in Box 3.2 focusses on the NEM, a similar functional split exists for the governance of national gas markets.

The split of regulatory and policy functions in the governance of the NEM is instructive for NatHERS, notwithstanding the differences in the scale and scope of the activities being regulated and the effort involved in the regulation: for example, the governance of the NEM uses many more resources than does NatHERS. The current governance arrangements for the NEM are the result of much evolution in the electricity industry, its policy environment, and governance arrangements. Australian governments have been prepared to change the governance arrangements for the NEM with an aim of enhancing economic outcomes for Australians. Australian governments should also be prepared to change the governance arrangements for NatHERS, to enhance stakeholder confidence in the Scheme.

²⁴ Michael Vertigan, George Yarrow, and Euan Morton, *Review of Governance Arrangements for Australian Energy Markets, Final Report October 2015* (Canberra: Commonwealth of Australia, 2015), 7.

BOX 3.2**GOVERNANCE ROLE CLARITY IN THE NATIONAL ELECTRICITY MARKET**

The National Electricity Market (NEM) comprises the financial, legal, and physical systems for the generation of electricity and its supply to consumers throughout Australia (with variations in the regime across the States and Territories about the precise arrangements in each jurisdiction). Legally, the NEM is a Commonwealth-State cooperative legislative scheme in which the Parliament of South Australia makes and amends the National Electricity Law (NEL) and other laws which are then applied in other jurisdictions through jurisdiction-specific application acts.

The governance arrangements in the NEM are as follows.

Council of Australian Governments (COAG)

COAG is the peak intergovernmental forum in Australia. It provides very high-level oversight and policy direction for Australian energy markets.

COAG Energy Council

The COAG Energy Council has overarching responsibility and policy leadership for Australian gas and electricity markets.

Australian Energy Market Commission (AEMC)

The AEMC is the rule maker for the NEM and advises the COAG Energy Council on market development. The AEMC is an independent Commission governed by a three-member Commission: a Chair appointed by States and Territories, a second Commissioner also appointed by the States and Territories, and the third Commissioner appointed by the Commonwealth. The AEMC makes the National Electricity Rules, subordinate legislation that governs the operation of the NEM, in accordance with a statutory process laid out in the NEL.

Australian Energy Regulation (AER)

The AER, part of the Australian Competition and Consumer Commission, regulates energy markets and energy networks operating under national electricity legislation.

Australian Energy Market Operator (AEMO)

AEMO is the system operator—it operates the NEM, including the wholesale spot market and dispatch engine. From the creation of the NEM in 1998 until 2005, the rule-making and regulatory functions were incorporated into the one organisation—the National Electricity Code Administrator (NECA). However, the two sets of functions were separated between two distinct bodies following the 2002 Parer Report, which identified dissatisfaction with the then-existing arrangements.

SOURCE: ACIL ALLEN

Coordination with other bodies

The level of coordination between NatHERS bodies and other entities is essential to the success of the Scheme as NatHERS bodies are just one part of the residential energy efficiency regime. Evidence indicates, and stakeholders state, that there is a low level of coordination between NatHERS and other bodies.

From a regulatory perspective, it is essential that there is coordination and cooperation between NatHERS bodies (the NatHERS Administrator and the EEAT) and the ABCB in relation to decisions affecting the NCC. The institutional importance of this is evidenced by the right of the ABCB to exercise a vote on the former BC when the former BC made decisions “which may impact the National Construction Code”.²⁵

However, evidence indicates that coordination between NatHERS bodies and the ABCB could be improved. There was an MOU between the ABCB and the NatHERS Administrator, from 11 April 2011 to 30 April 2015, on software accredited under NatHERS. There has been an interim MOU between the ABCB and the NatHERS Administrator since 11 June 2015 but the MOU is still in development. The interim MOU indicates that agreement on the MOU depends on the finalisation of an updated NatHERS Software Accreditation Protocol. As of 30 May 2016, an updated software protocol has not been finalised.

²⁵ COAG Energy Council, *COAG Energy Council Buildings Committee Terms of Reference*, p.2.

One stakeholder stated that the NatHERS Administrator did not properly engage with the ABCB in relation to a change to software relating to windows. Many buildings sector stakeholders considered that NatHERS bodies do not, in practice, approach regulatory decisions with a regulatory lens and focus. Stakeholders stated that this represents a lack of coordination with the ABCB.

While the NatHERS Administrator responds to issues raised by industry and is advised by the Technical Advisory Committee that is made up of industry bodies, many stakeholders perceived that the NatHERS Administrator does not have the required knowledge of the constantly evolving issues that are of importance to the buildings industry, and therefore conducts its activities without the appropriate regard to their concerns. A number of stakeholders stated that they perceived the NatHERS Administrator does not have sufficient knowledge of the buildings sector to undertake its role and that it did not seek the required information from the buildings sector when conducting its role.

A broader point is that there is no connection between NatHERS and the parties responsible for ensuring compliance with building performance standards. While it may be argued that NatHERS is specifically designed to rate building designs rather than as-constructed buildings, the lack of a connection detracts from the efficacy of NatHERS as a residential energy efficiency scheme.

3.3.2 Degree of independence

Trust in a regulatory scheme can be enhanced if the regulator is perceived as conducting its regulatory functions in a way that is consistent with specified (independent, transparent and consistent) decision making processes. Australian policy-makers have provided regulators with a degree of independence from government and from those they regulate to seek to enhance community and stakeholder confidence in their decisions.

The OECD emphasised the association between a regulator's degree of independence and community and stakeholder confidence in its decisions:²⁶

A high degree of regulatory integrity helps achieve decision making which is objective, impartial, consistent, and avoids the risks of conflict, bias or improper influence. The nature of some regulatory decisions can at times involve higher risks to the integrity of the regulatory process, for example, due to pressures from the affected interests or the contentious and sometimes politically sensitive nature of the decisions.

Establishing the regulator with a degree of independence (both from those it regulates and from government) can provide greater confidence and trust that regulatory decisions are made with integrity. A high level of integrity improves outcomes of the regulatory decisions. Regulators should have provisions for preventing undue influence of their regulatory decision making powers and maintaining trust in their competence and delivery.

The OECD and the New Zealand Productivity Commission have identified a number of factors to indicate whether independent regulatory decision making, at arm's length from the political process, is appropriate. The factors that have been identified are provided in Table 3.1.

²⁶ OECD, *The Governance of Regulators*, p. 47.

TABLE 3.1 FACTORS THAT INDICATE WHETHER INDEPENDENT REGULATORY DECISION MAKING IS APPROPRIATE

Independence is less appropriate where ...	Independence is more appropriate where ...
<ul style="list-style-type: none"> – decisions involve clear value judgements – the regulatory environment is subject to rapid change – political control is needed to guard against “regulatory capture” by the regulated sector – decisions have significant fiscal implications or are integral to a government’s economic strategy – decisions involve the significant exercise of coercive state power (e.g. policing and taxation) – flexibility is needed to take account of political imperatives – specialist knowledge and expertise are retained within the department – regulatory functions are incidental to departmental functions such as service delivery 	<ul style="list-style-type: none"> – the costs arising from decisions are long term, and likely to be undervalued due to a focus on electoral cycles – decisions weigh a politically powerful private interest against a dispersed public interest – decisions require a substantial degree of technical expertise, or expert judgement of complex analysis – the causal relationship between the policy instrument and the desired outcome is complex or uncertain – a consistent approach over a long period of time is needed to create a stable environment – regulation is of a state power, or government-funded services (including where government and non-government entities are under the same framework) – decisions need to be taken urgently – public confidence that the regulator is impartial is important

SOURCE: NEW ZEALAND PRODUCTIVITY COMMISSION, REGULATORY INSTITUTIONS AND PRACTICES, JUNE 2014, PAGE 218; OECD, THE GOVERNANCE OF REGULATORS, 2014, PAGE 53

The level of independence that is appropriate for NatHERS’ functions is likely to be different in relation to policy and regulation.

The NatHERS policy functions include supporting the EEAT and providing advice on residential energy efficiency policy to the Commonwealth Minister as a member of the COAG Energy Council. They include providing advice on the scope of future tools assessing the efficiency of residential dwellings. Less independence is appropriate for these functions as they involve the use of clear value judgements, can be integral to a government’s economic strategy, and also involve coercive state power.

Stakeholders generally agreed that policy functions should remain within government—within the COAG structure as currently.

On the other hand, greater independence is appropriate for the regulatory functions of NatHERS—agreeing on changes to the benchmark software tool within the policy framework, accrediting software, and appointing and regulating AAOs. It is currently unclear which NatHERS body or bodies undertakes these functions. Greater independence for these functions is appropriate in relation to:

- *Maintaining the benchmark software tool within the policy framework.* Decisions about the technical details of the tool must weigh the interests of those promoting change against a dispersed public interest and require a substantial degree of technical expertise; it is also important that regulator decisions be impartial to maintain stakeholder confidence.
- *Accrediting software.* Decisions about accreditation require a substantial degree of technical expertise. In addition, a consistent approach over a long period of time is needed to create a stable environment as government is seeking to create the conditions for a market in software tools, and the assessments created by those tools.
- *Accreditation and regulation of assessors.* Decisions about assessor accreditation are currently undertaken by AAOs. A greater degree of independence in these regulatory activities is appropriate as decisions require a substantial degree of technical expertise or expert judgement of complex analysis, a consistent approach over a long period of time is needed to create a stable environment, and it is important that public confidence is maintained that the regulator is impartial.

Agreeing on changes to the benchmark software tool involves decisions on changes to the Chenath Engine and the AccuRate user interface required to fix technical problems or to implement policy decisions. These decisions can affect the operation of the NCC; the ABCB had a vote on the former BC when the Committee made decisions affecting the NCC. Any changes to the benchmark software tool to implement a policy decision should first be subject to a robust process akin to a Regulatory Impact Statement.

Accrediting software is a technical decision that should be made at arm's length from government.

The accreditation and regulation of assessors is an operational decision and should be made at arm's length from government.

3.3.3 Type of governance

The governing body structure of a regulator should be fit-for-purpose. A structure that is not fit-for-purpose may detract from well-considered and robust regulatory decision making.

The OECD highlighted the range of structures used for regulators:²⁷

If a regulator is established as a unit of the ministry, the decision making and governing body structure will be determined by the ministry's own arrangements ... However, for independent regulators, there are three main governance models used:

- *Governance board model – the board is primarily responsible for the oversight, strategic guidance and operational policy of the regulator, with regulatory decision making functions largely delegated by the Chief Executive Officer (CEO) and staff ...*
- *Commission model – the board itself makes most substantive regulatory decisions ...*
- *Single member regulator – an individual is appointed as regulator and makes most substantive regulatory decisions and delegates other decisions to its staff.*

The appropriate governance structure in each case will depend on the nature of the regulatory task and the sectors subject to regulation...

The OECD stated that:²⁸

Factors identified in considering the potential value of a multi-member compared with a single-member decision-making model are summarised below. Once an assessment of these factors is made, the basic choice between decision making by an individual or by a collective can be considered and determined. These factors include:

- *Potential commercial/safety/social/environmental consequences of regulatory decisions, taking account of the degree of impact of a risk event and the probability of its occurrence – a group of decision makers is less likely to be “captured” than an individual and a group will bring differing perspectives to decisions;*
- *Diversity of wisdom, experience and perceptions required for informed decision making because of the degree of judgement required (for example, where regulation is principles-based or particularly complex) – collective decision making provides better balancing of judgement factors and minimises the risks of varying judgements*
- *Degree of strategic guidance and oversight of delegated regulatory decisions required to achieve regulatory objectives – where the regulator requires significant strategic guidance and oversight to achieve its regulatory objectives, such as in developing compliance or enforcement policies or resource allocation, these functions are better located in a body separate from its day-to-day operations. A multi-member body provides collegiate support for such strategic decision making;*
- *Difficulty and importance of maintaining regulatory consistency over time – where regulatory decisions require a high degree of judgement, a multi-member decision-making body provides more “corporate memory” over time; and*
- *Importance of decision-making independence of the regulator – a board will be less susceptible to political or industry influence than a single decision maker.*

It is currently unclear which bodies in the Scheme—e.g. the COAG Energy Council, SCO, EEAT, or NatHERS Administrator—make regulatory decisions. While the former BC's ToR implies that the former BC made decisions on the benchmark software tool that involve changing the Chenath Engine,

²⁷ OECD, *The Governance of Regulators*, p. 69.

²⁸ OECD, *The Governance of Regulators*, p. 70-71.

the NatHERS Administrative and Governance Arrangements document states that these decisions are referred to the (former) EWG and that the (former) EWG also accredits software. The same document states that the NatHERS Administrator accredits AAOs.

While none of the NatHERS bodies are independent of government, only the NatHERS Administrator is part of a Department.

In the first instance, regulatory decisions should only be made by parties that clearly have the functions allocated to them by a legislative or policy instrument to make such decisions.

In relation to each of the regulatory functions:

- *Maintaining the benchmark software tool:* it is appropriate for a multi-member decision body to make these decisions as they may have economic and commercial consequences through impacts on the NCC. In addition, collective decision making may provide a better balancing of factors and maintain regulatory consistency over time. Neither the former EWG nor the former BC were seen by stakeholders as having the knowledge and skills needed to make these decisions.
- *Accrediting software:* on balance, it is appropriate for a multi-member decision body to make decisions to accredit software. While decisions to accredit software require a substantial degree of technical expertise, which would be communicated by the secretariat to the decision body, the accrediting of software may have substantial commercial and economic impacts extending across the Australian residential housing market, and impact on the achievement of government residential energy efficiency policies. It may also be important for the decision maker to retain a corporate memory over time and be truly independent of the software market it regulates. Neither the former EWG nor the former BC were seen by stakeholders as having the knowledge and skills needed to make these decisions.
- *Accreditation and regulation of assessors:* these functions can be undertaken by a single member decision maker as limited judgement is required to accredit and regulate assessors. To enhance regulatory consistency, appeal mechanisms could be established to a multi-member decision body.

3.3.4 Accountability and transparency

Accountability and transparency are essential to ensure that regulators maintain the confidence of their stakeholders and the community.

The OECD stated that:²⁹

Accountability and transparency is the other side of the coin of independence and a balance is required between the two. Comprehensive accountability and transparency measures actively support good behaviour and performance by the regulator, as they allow the regulator's performance to be assessed by the legislature or responsible other authority.

The regulator exists to achieve objectives deemed by government and the legislator to be in the public interest and operates within the powers attributed by the legislature. A regulator is therefore accountable to the legislature, either directly or through its minister, and should report regularly and publicly to the legislature on its objectives and the discharge of its functions, and demonstrate that it is efficiently and effectively discharging its responsibilities with integrity, honesty and objectivity. A system of accountability that supports this ideal needs to clearly define what the regulator is to be held accountable for, how it is to conduct itself and how this will be assessed.

There is no clear reporting framework for NatHERS. The Scheme has no framework for publicly reporting progress against objectives, outputs or outcomes; nor for publishing information on the Scheme's governance, funding arrangements, budgets or expenditure. Annual reports are not published for the Scheme.

While the NatHERS Administrator is in the process of developing key performance indicators, none currently exist.

Responsibility for the Scheme is diffuse, with responsibility shared among the EEAT, the SCO and the COAG Energy Council. Responsibility for the Scheme's performance is shared across these bodies and across jurisdictions.

²⁹ OECD, *The Governance of Regulators*, p. 81.

Many stakeholders considered that NatHERS needed to be much more transparent. It needed to be clear which party was making a decision, the decisions that were made, and the reasons for those decisions. The parties making decisions needed to be held accountable for their decisions. Transparency about decision making would likely strengthen stakeholder support for the Scheme.

Regulatory decisions made in the Scheme should be clearly documented and available to stakeholders as appropriate.

In ACIL Allen's judgement, regulatory decisions should be readily identifiable and either published or in a form that can be readily accessed by the public and stakeholders. It is also good regulatory practice for the regulator to give reasons for their decisions as this enhances accountability and hopefully confidence in the regulator and its decisions. The regulator needs to be accountable for its decisions. Regulator accountability can be enhanced in a number of ways, including through:

- publishing regulatory decisions
- subjecting regulatory decisions to review processes (e.g. judicial or merit review)
- having formal arrangements for the removal of a regulator for unsatisfactory performance.

NatHERS currently lacks these forms of accountability and transparency.

3.3.5 Stakeholder engagement

One way for a regulator to enhance confidence in its operations is to engage with stakeholders in a transparent and meaningful way. Engagement can strengthen the transparency of its operations and hence build confidence and trust among stakeholders. Most successful regulators have a strong and effective stakeholder engagement program while weak stakeholder engagement is often associated with a poorly performing regulator.

Not only is it important for a regulator to engage well with stakeholders to perform its functions, such engagement is essential to ensure that stakeholder perceive the regulator is performing its functions. Both are important for the ongoing viability of and confidence in a regulatory regime.

The OECD highlighted the importance of stakeholder engagement:³⁰

One objective of good regulator governance is to enhance public and stakeholder confidence in the regulator, its decisions and its actions. Effective engagement with regulated parties and other stakeholders helps achieve this.

Depending on the regulators' functions this engagement may relate to:

- *matters relating to individual decisions (where information from stakeholders is necessary to inform a regulatory decision);*
- *the regulator's operational policies (for example, to better understand community expectations relating to regulatory priorities); or*
- *the potential policy outcomes a regulator might seek to achieve (based on stakeholder input on what might be achievable in different circumstances).*

There is no legislative or policy framework requiring NatHERS to consult with stakeholders. The level of consultation NatHERS undertakes is determined by its governance bodies and does not appear to be underpinned by a coherent strategy or plan. NatHERS does not appear to have a Charter of Consultation or other similar framework creating expectations about the extent to which it consults. While the NatHERS Strategic Plan 2015-2018 includes an action item to develop a stakeholder engagement and communications plan, it does not include a corresponding action item to develop a Charter of Consultation.

It is leading practice for regulators to consult publically on their decision making. However, the NatHERS website does not indicate that it has undertaken consultations on regulatory decisions. In addition, stakeholders indicated that they were unclear about the regulatory processes NatHERS has used.

The communication tools NatHERS uses provide insufficient engagement between stakeholders and the Scheme. There is no evidence to date of a stakeholder engagement and communications plan,

³⁰ OECD, *The Governance of Regulators*, p. 91.

and the NatHERS website appears to be directed towards providing information rather than facilitating two-way communication between stakeholders and NatHERS.

The extent to which NatHERS consults is based on individuals in the NatHERS Administrator and not systemic factors. This is a weakness in the existing arrangements. Stakeholders stated that consultation on technical issues is lacking and there is limited transparency in decision making.

Stakeholders were almost uniformly negative on stakeholder engagement by the NatHERS Administrator. They did, however, specifically note that engagement had improved under the current NatHERS Administrator over the past 12 months. In particular, stakeholders stated that two currently serving senior NatHERS officers were responsive and had improved communication and engagement. Consultees specifically mentioned NatHERS had undertaken the consultation on the AAO Protocol, which involved an iterative process, really well, and that “the officers knew how to conduct that consultation”.

Stakeholders expressed concern that the NatHERS Administrator was too reliant on internal sources of advice instead of consulting with industry. In particular, they stated that the internal sources of advice draw on knowledge that was considered out of date by some industry practitioners consulted for this Review. Some stakeholders expressed great concern about a perceived lack of transparency in what advice the NatHERS Administrator drew on.

Comments from stakeholders indicated that there was a strong view that NatHERS was not achieving its objectives due, in part, to a lack of transparency and communication from the NatHERS Administrator and limited two-way communication. This engagement approach meant that the NatHERS Administrator has an insufficient understanding of the issues important to the buildings sector, and is unable to explain why changes to the software resulted in changes to ratings.

Stakeholders also considered that there is inconsistency in the way issues brought to the attention of the NatHERS Administrator are addressed. Stakeholders further considered that NatHERS needs to communicate and engage with a broader range of stakeholder groups including building surveyors and builders.

Box 3.3 presents a representative selection of comments to highlight the range and depth of unfavourable stakeholder views about NatHERS’ stakeholder engagement. This highlights the urgent need for NatHERS to continue to improve its stakeholder engagement. It must be noted that a failure to engage with stakeholders may eventually result in the Scheme becoming irrelevant through insufficient stakeholder support.

BOX 3.3**NatHERS STAKEHOLDER ENGAGEMENT—SELECTED STAKEHOLDER COMMENTS**

The following list presents selected stakeholder comments regarding NatHERS' stakeholder engagement.

- We do not know what is going on in NatHERS unless we fly to Canberra and have a face-to-face meeting with staff in the NatHERS Administrator. Even then, we have to hope that the Administrator addresses the issues raised.
- There is limited to no communication unless initiated by industry.
- We only come to know that NatHERS had a communications officer through a passing comment by our NatHERS contact.
- We do not know who works in the NatHERS Administrator apart from the key contacts.
- We are concerned about the lack of NatHERS engagement with stakeholders and that it is always reactive and never proactive.
- We do not know how many people work in the NatHERS Administrator. While the Department indicated that there are 6 FTE officers in the NatHERS Administrator, stakeholders estimated that there were approximately 4 officers.
- Officers in the NatHERS Administrator do not understand issues of concern to the building industry. The Administrator makes decisions that affect the industry without consulting industry. Instead, the Administrator should only make decisions affecting the building industry after receiving advice from the sector.
- We no longer waste our time interacting with NatHERS, except as required.
- We do not know who to speak to on specific issues, and avoid contacting some NatHERS officers because feedback is of no use.
- We are not aware of how NatHERS is managed and governed. There is a real lack of transparency and we haven't met the new manager.
- There is insufficient transparency and communication. Changes are made to software without knowledge about the likely impact on the building sector.
- There is a lack of consistency in how NatHERS communicates with stakeholders.
- Communication with members of the TAC could be strengthened. We do not receive materials for TAC meetings before the meetings, and the meetings are treated as a means of updating members rather than being an advisory committee.
- NatHERS is quite opaque to industry about how the NatHERS Administrator makes decisions.
- Engagement ebbs and flows with the importance government gives to it.
- There is poor engagement with Building Ministers and policy officers.
- NatHERS needs to think about who the stakeholders are and engage with them properly; it needs to engage with a much wider range of stakeholders.
- The Administrator does not properly engage with the ABCB for a change to the software relating to windows after the Protocol between the Administrator and the ABCB changed to a Memorandum of Understanding.
- NatHERS needs to improve its recognition among the wider industry. The majority of the buildings sector looks at NatHERS as a rubber stamp and it could be a lot more than just a minimum standard.
- There aren't enough roadshows as part of the engagement model.
- No communications plans are provided or published.
- Consultation on all changes to the software needs to improve.
- Little transparency around how decisions are taken and when changes are made to the Chenath Engine.
- NatHERS does not communicate its success very well. It needs to blow its trumpet more effectively.
- We informed the Administrator about a major software issue in 2015. The Administrator's response, requesting that stakeholder identify a potential solution, was very unsatisfactory.

SOURCE: ACIL ALLEN

In ACIL Allen's opinion, it is very serious that stakeholders have such a poor perception of NatHERS' approach to stakeholder engagement, particularly given the potential threat that future versions of the NCC will not reference software accredited under the Scheme. These perceptions become more pronounced as stakeholders become more acquainted with NatHERS' processes and outputs.

The statements by some stakeholders that NatHERS focusses on issues that are not of interest to the buildings sector, to the detriment of issues that are, suggests a material misalignment between the understandings and views of stakeholders and NatHERS. This may pose a threat to the ongoing viability of NatHERS if stakeholders withdraw their support from the Scheme.

3.3.6 Funding

Clarity and transparency about the funding arrangements for a regulator can enhance stakeholder confidence in the independence of its actions. Sustainable funding frameworks can strengthen the independence of a regulator while unsustainable frameworks can diminish confidence in the regulator's ability to fulfil its role.

The OECD emphasised the importance of funding arrangements for regulators:³¹

Clarity about regulators' sources and level of funding is necessary to protect their independence and objectivity. Transparency about the basis of funding can also enhance confidence that the regulator is efficient, as well as effective.

The current funding sources for NatHERS are as follows:

- **Departmental funding**—subject to Commonwealth priorities.
- **COAG Energy Council funding**—half from the Commonwealth and half from the states and territories in proportion to population. The jurisdictions have previously contributed funding for maintaining the benchmark software through their joint funding to implement the NSEE. This funding source closed in 2013-14. Further funding depends on decisions made by jurisdictions through the COAG Energy Council and budget appropriations in each jurisdiction.
- **Software licensing**—royalties from licencing of the Chenath Engine to other software tools are provided to CSIRO for re-investment in NatHERS related work. CSIRO recently started charging a license fee to software developers for use of the Chenath Engine. The fee is charged on a per-assessment basis and no government funding has since been allocated through NatHERS to CSIRO for maintenance and development of the Chenath Engine.
- **CSIRO investment**—research in developing building thermal performance analysis tools has been funded by CSIRO. CSIRO has also funded additional costs associated with ad-hoc software support and maintenance tasks.

There is a lack of transparency in the funding of NatHERS. The total amount of funding for the Scheme, and the amounts funded from each source of funding, are not published. The amounts expended in the Scheme are not published. Stakeholders indicated they did not understand the source of funds for NatHERS and how funds were budgeted or expended. In addition, CSIRO does not publish disaggregated information about the royalties it receives and the expenditure it incurs in relation to the Chenath Engine, nor in relation to research in building thermal performance analysis tools and software support and maintenance.

Funding for NatHERS is not split identifiably between regulatory and policy-related functions. There is a lack of clarity about the amounts budgeted and expended on policy and on regulatory functions. Allocating funding collectively to both types of activities presents a risk that insufficient funding is allocated to either the policy or regulatory functions, even if sufficient total funding is allocated overall for both policy and regulatory functions.

The existing funding arrangements are not sustainable as they depend on the Commonwealth providing sufficient staffing resources to the NatHERS Administrator to allow it to fulfil its policy and regulatory roles, and the Commonwealth and jurisdictions providing sufficient financial resources to enable research to be conducted. Stakeholders considered that the existing funding arrangements are not sustainable as government priorities dictate whether NatHERS receives enough government funding to undertake its policy and regulatory roles.

Many stakeholders stated that there had been insufficient funding and attention given to developing the Chenath Engine over many years. A number of stakeholders indicated that there were minimal CSIRO resources (one researcher) allocated to working on the Chenath Engine. This was perceived as severely constraining the development of the engine and the development of NatHERS as a scheme to meet Australian governments' policy goals.

³¹ OECD, *The Governance of Regulators*, p. 99.

3.4 Performance against the principles of good corporate governance

The ASX Corporate Governance Council principles and recommendations of good corporate governance provide another framework against which to assess the performance of NatHERS. While these principles are more clearly focussed on public and private companies, they can be translated into principles appropriate for NatHERS.

The principles are:

- lay solid foundations for management and oversight
- structure the Board to add value
- act ethically and responsibly
- safeguard integrity in corporate reporting
- make timely and balanced disclosure
- respect the rights of security holders
- recognise and manage risk
- remunerate fairly and responsibly.

It is important to note that the high level principles are the relevant analytical tools for this Review and the recommendations (while worth noting) are secondary considerations.

This section provides ACIL Allen's overall assessment of the governance and operation of NatHERS against the principles of good corporate governance. The key findings are:

- The precise allocation of functions and roles between NatHERS governance bodies—the EEAT (formerly the EWG and BC) and the NatHERS Administrator—is unclear and is unpublished.
- The NatHERS governance committees are comprised of jurisdictional representatives. The committees do not necessarily have the mix of skills and experience needed to undertake the required governance functions. Furthermore, it is not clear that an optimal mix of skills has been identified for the governance committees nor that members of these committees are required to develop the skills needed to fulfil their governance roles. These were points made by a majority of the stakeholders who had experience working with the committees.
- While stakeholders generally severely critiqued the two-way communication with NatHERS, some stakeholders recognised the improvement over the last 12 months or so.
- It is not clear whether, and if so how, governance bodies manage risks associated with NatHERS. NatHERS does not publish its exposure to risk and how it manages risk.

Table 3.2 below provides ACIL Allen's detailed analysis. It outlines a summary of the principles and recommendations, their application to NatHERS, and ACIL Allen's assessment of NatHERS' governance and operation against the principles.

TABLE 3.2 ASSESSMENT OF THE GOVERNANCE AND OPERATING MODEL OF NatHERS AGAINST THE PRINCIPLES OF CORPORATE GOVERNANCE

Principle/recommendation	Applicability to NatHERS	ACIL Allen assessment
Principle 1 – Lay solid foundations for management and oversight		
<ul style="list-style-type: none"> – Disclose: (a) the roles/responsibilities of the Board; and (b) those matters expressly reserved to the Board and delegated to management – An entity should: (a) undertake checks before appointing a person, or putting forward a director for election; and (b) provide all material information relevant to a decision on whether to elect or re-elect a director – An entity should have a written agreement with each director and senior executive setting out the terms of their appointment – The company secretary should be accountable directly to the Board on all matters to do with the Board – An entity should: (a) have and disclose periodic evaluations of Board performance; and (b) disclose the evaluations 	<p>The roles and responsibilities of NatHERS governance bodies need to be clear and published.</p> <p>Clear reporting and governance arrangements need to exist.</p> <p>There should be periodic evaluations of the performance of governing bodies and disclosure of these evaluations to COAG.</p>	<ul style="list-style-type: none"> – A Terms of Reference (ToR) exists for the COAG Energy Council. The ToR outlines the Council's scope, responsibilities, and specific actions to progress its responsibilities. It also outlines the Council's reporting mechanisms and COAG's processes for reviewing the Council – The COAG Energy Council has published a ToR for the Council's Senior Committee of Officials (SCO). This provides the SCO's scope and objectives, which includes oversight of working groups (including the Buildings Sub-group). – An Interim ToR outlines the scope, objectives, and functions of the former EWG and does not specifically identify decision making or oversight of NatHERS. The Interim ToR specifies that the former EWG will have a standing Buildings Sub-group (Committee) – The ToR for the former BC specifies the membership, secretariat, objectives and scope, and functions of the Committee. The functions include overseeing the operation and administration of NatHERS.
Principle 2 – Structure the Board to add value		
<ul style="list-style-type: none"> – An entity should have and disclose a Board skills matrix setting out the mix of skills and diversity that the Board has – A majority of the Board should be independent directors – The Board Chair should be an independent director and, in particular, should not be the same person as the CEO of the entity – An entity should have a program for inducting new directors and provide opportunities to develop/maintain the skills and knowledge needed 	<p>The EEAT should be structured with a view to add value, where value is defined according to the objectives of the Scheme.</p> <p>The EEAT should be comprised of members with a sufficient mix of skills and experience to cover the responsibilities of the governing bodies.</p> <p>Members of governing bodies should be provided with the opportunity to develop the skills and knowledge needed to effectively undertake their roles.</p>	<ul style="list-style-type: none"> – The former BC, a sub-committee of the former EWG, was comprised of Commonwealth, state and territory agencies responsible for building energy efficiency. New Zealand had observer status at meetings of the Committee. The ABCB had voting rights when the Committee made decisions impacting the NCC. The Committee had no industry representatives or independent members. Members of the Committee were selected as jurisdictional representatives and not necessarily according to their individual capability to undertake a governance role. – The former EWG was similarly comprised of Commonwealth, state and territory, and New Zealand agencies responsible for energy market reform and energy efficiency. – There was no evidence that an optimal mix of skills and experience had been identified for members of the governance bodies.

Principle/recommendation	Applicability to NatHERS	ACIL Allen assessment
Principle 3 – Act ethically and responsibly		
– An entity should: (a) have a code of conduct for its directors, senior executives and employees; and (b) disclose that code	There should be a requirement that all managers, employees, AAOs, and accredited assessors act ethically and responsibly	The requirement for public service employees to act ethically and responsibly is part of the public sector employment guidelines. The Review has not identified any instances of this requirement not being complied with by public sector employees. AAOs are required to implement an Assessor Code of Practice under the Protocol for AAOs. The Code includes requirements that assessors act responsibly and ways similar to requirements that they act ethically.
Principle 4 – Safeguard integrity in corporate reporting		
– The Board should: (a) have an audit committee which: (1) has at least three non-executive directors and a majority of whom are independent directors; and (2) is chaired by an independent director, who is not the chair of the Board, and disclose: (3) the charter of the committee; (4) the relevant qualifications and experience of the members of the committee; and (5) in relation to each reporting period, the number of times the committee met throughout the period and the individual attendances of the members at those meetings; or (b) if it does not have an audit committee, disclose that fact	A governing body should have an audit committee or disclose the fact that it does not have an audit committee. The audit committee would focus on financial and non-financial performance of NatHERS.	Neither the former EWG nor the former BC had an audit committee. The Department is subject to standard Commonwealth Government audit processes.
Principle 5 – Make timely and balanced disclosure		
– A listed entity should: (a) have a written policy for complying with its continuous disclosure obligations under the Listing Rules; and (b) disclose that policy or a summary of it	NatHERS should communicate in a timely way with all stakeholders regarding matters that impact them	Stakeholders stated that the NatHERS Administrator communicated less frequently with them than they required or desired, although communication has improved over the last 12 months.

Principle/recommendation	Applicability to NatHERS	ACIL Allen assessment
Principle 6 – Respect the rights of security holders		
<ul style="list-style-type: none"> – A listed entity should provide information about itself and its governance to investors via its website – A listed entity should design and implement an investor relations program to facilitate effective two-way communication with investors – A listed entity should disclose the policies and processes it has in place to facilitate participation at meetings of security holders – A listed entity should give security holders the option to receive communications from the entity and its security registry electronically 	<p>NatHERS should provide information about itself and its governance to stakeholders.</p> <p>NatHERS should ensure that there is effective two-way communication with stakeholders.</p> <p>NatHERS should disclose the policies and processes it has in place to facilitate participation of stakeholders in processes.</p>	<p>In August 2015, DIIS published a document entitled Administrative and Governance Arrangements which describes the governance arrangements in an unclear way.</p> <p>Stakeholders severely critiqued the level of two-way communication with the NatHERS Administrator, while noting improvements over the last 12 months.</p> <p>There is little information published on the way NatHERS facilitates the participation of stakeholders. The Administrative and Governance Arrangements document indicates that the main form of communication with stakeholders is through the website, and that information about NatHERS is also communicated through fact sheets, in response to requests for information, conference presentations and journal articles. The document states that NatHERS has no way to communicate or collect accurate details from unaccredited assessors.</p>
Principle 7 – Recognise and manage risk		
<ul style="list-style-type: none"> – The Board should have a committee(s) to oversee risk. – The Board should: (a) review the entity's risk management framework annually; and (b) disclose whether such a review has taken place – An entity should disclose: (a) how an internal audit function performs; or (b) disclose the fact that it does not have an internal audit function – An entity should disclose its exposure to economic, environmental and social sustainability risks and how it manages risks 	<p>NatHERS should have published process for overseeing and managing risk.</p> <p>Governing bodies should be responsible for managing risks, with regular reporting by staff to those bodies.</p> <p>Governing bodies should review risks at least annually.</p> <p>NatHERS should disclose how any internal audit function performs or disclose the fact that it does not have an internal audit function.</p> <p>NatHERS should disclose its exposure to risks and how it manages risks.</p>	<p>The Review has not identified the publication of any processes for overseeing and managing risk in NatHERS.</p> <p>Governing bodies do not appear to review risks in a regular way.</p> <p>The Review has not identified any internal audit function within the Scheme, except for audits AAOs conduct in relation to energy efficiency ratings and the extent to which accredited assessors have maintained the requirements of their accreditation</p> <p>NatHERS bodies do not appear to disclose their exposure to risk and how they manage risk.</p>
Principle 8 – Remunerate fairly and responsibly		
<ul style="list-style-type: none"> – The Board should have a remuneration committee. – An entity should disclose its policies regarding the remuneration of non-executive, executive directors and other senior executives 	<p>Remuneration of public sector employees is according to public sector standards</p>	<p>Principle is met for public sector employees</p>

SOURCE: ACIL ALLEN ADAPTED FROM ASX CORPORATE GOVERNANCE COUNCIL, CORPORATE GOVERNANCE PRINCIPLES AND RECOMMENDATIONS 3RD EDITION (ASX CORPORATE GOVERNANCE COUNCIL, 2014)



The governance and operating model for NatHERS was established many years ago and has not evolved in line with the evolution of the Scheme. While the NatHERS Administrator has implemented a number of incremental improvements to the Scheme, many stakeholders are of the view that structural transformation is now required to strengthen the governance and operating model of NatHERS. This is evident from the assessment of the current governance and operating model of NatHERS against its vision, its objectives, OECD's principles of good regulatory governance and ASX's principles of good corporate governance, as discussed in the previous chapter.

This chapter considers the question: *what should be addressed given the assessment of the governance and operating model of NatHERS against good practices and its own objectives?* It draws on a combination of stakeholder feedback and ACIL Allen's analysis, as discussed in Chapter 3.

4.1 Clarity of purpose

ACIL Allen has observed considerable divergence in stakeholder understanding about the current and future purpose of NatHERS. Stakeholders consulted for this Review often describe the purpose of NatHERS in one of three ways.

One group of stakeholders views NatHERS as a tool capable of driving sustained improvements to the energy efficiency of residential buildings. These stakeholders often attach highly aspirational values to the Scheme. They also tend to be closely aligned with the energy efficiency agendas surrounding NatHERS.

Another group of stakeholders views NatHERS as a flexible tool that enables compliance with the regulatory requirements to be demonstrated. These stakeholders often see little or no role for the Scheme beyond regulatory compliance. These stakeholders often have a buildings background.

The final group of stakeholders views both the regulatory compliance and aspirational aspects of NatHERS as fundamental to the Scheme's objectives. These stakeholders come from a mixture of energy efficiency and building backgrounds.

The problem is that the divergence of stakeholder views creates confusion about NatHERS' fundamental objectives, and confusion about how the Scheme's governance and operations should be arranged. This confusion leads to frustration (and more often than not criticism) when stakeholders engage with NatHERS or are subjected to the outcomes of its decision making processes. This frustration and criticism is greatest amongst stakeholders who interact with NatHERS on a regular basis or who are highly dependent on NatHERS as industry practitioners.

This confusion raises fundamental questions that will need to be settled and then clearly communicated to stakeholders. These questions are:

- What objectives should NatHERS pursue?
- How should the competing tensions about NatHERS' objectives be resolved?

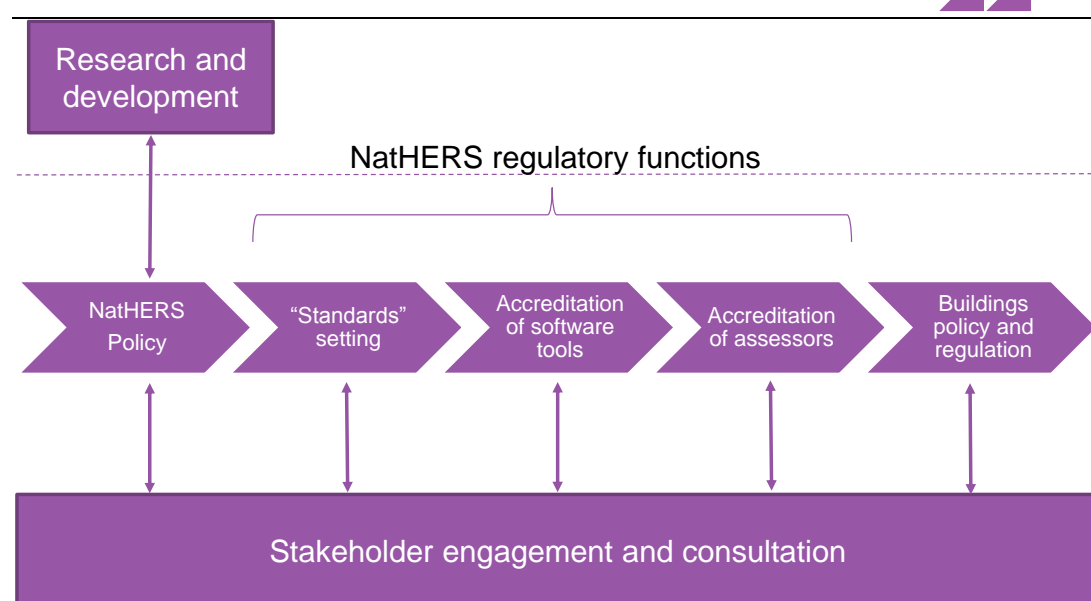
To address these questions it is important to also consider how stakeholder confusion about the objectives intersects with the allocation of functions across the Scheme.

4.2 Clarity of core functions

NatHERS has a set of intertwined and generally unclear set of governance and operational arrangements. This is most starkly evidenced by the Review team during consultations when some key stakeholders involved in NatHERS governance and decision making processes were themselves unclear about the roles and responsibilities of the different parties involved in the Scheme.

The arrangements have evolved over time to deliver three core functions: 1) policy (including research and development which may inform subsequent policy decisions); 2) regulation (consisting of developing and maintaining a “standard” consistent with policy decisions that have been made; accreditation of software; and accreditation of assessors); and 3) stakeholder engagement and consultation. These functions are depicted in Figure 4.1 to demonstrate how they relate to one another.

FIGURE 4.1 CURRENT FUNCTIONAL ARRANGEMENTS



Note: Highly styled presentation of NatHERS' functions for illustrative purposes

SOURCE: ACIL ALLEN

Clarity about who is responsible for the delivery of these core functions is a critical issue for the Scheme. Generally, clarity (especially the lack of it) plays out in two ways.

First, it is that the current arrangements are not well geared towards best practice regulation. The current governance framework lacks the separation needed between policy and regulation to effectively deliver either function in the eyes of many stakeholders.

This is perhaps best illustrated in Table 4.1 that (builds on Table 2.1 and) presents a high level breakdown of the functions performed by key parties. The table focuses on the role of those stakeholders responsible for the governance and operations of NatHERS from the perspective of the energy efficiency portfolio responsibility and the buildings portfolio responsibility. The table clearly shows there is a lack of functional demarcation between key parties in the current NatHERS model.

TABLE 4.1 CURRENT FUNCTIONAL RESPONSIBILITIES

Portfolio responsibility	NatHERS Administrator	Commonwealth	States and Territories
Policy development functions (including research and development)			
Energy efficiency	Provides policy advice to Commonwealth Government and to various committees, working groups etc Oversees the delivery of research projects and contributes to the priorities of a research agenda	Participant in various energy efficiency-related committees, working groups etc, which determine policy for NatHERS Contributes funding and ideas to a research agenda determined by a combination of parties (inc the advisory committees, the NatHERS Administrator, the Commonwealth)	Participant in various energy efficiency-related committees, working groups etc, which determine policy for NatHERS Contributes funding and ideas to a research agenda determined by a combination of parties (inc the advisory committees, the NatHERS Administrator, the Commonwealth)
Buildings		Participant in various building-related committees, working groups etc, which determine contents of NCC	Participant in various building-related committees, working groups etc, which determine contents of NCC Determine jurisdictional building-related legislation and regulations Ensure compliance with jurisdictional building-related regulations
Regulatory function (standards setting and software accreditation)			
Energy efficiency	Manages changes to Chenath Engine Accredits software providers	Participant in various energy efficiency-related committees, working groups etc, which make decisions on changes to Chenath Engine and to software accreditation protocol	Participant in various energy efficiency-related committees, working groups etc, which make decisions on changes to Chenath Engine and to software accreditation protocol
Buildings	Liaison with ABCB Office	Participant in various building-related committees, working groups etc, which determine contents of NCC, including reference to NatHERS-accredited software	Participant in various building-related committees, working groups etc, which determine contents of NCC, including reference to NatHERS-accredited software Develop policies relating to the NCC
Regulatory function (AAO accreditation)			
Energy efficiency	Accredits AAOs	Participant in various energy efficiency-related committees, working groups etc, which make decisions on the accreditation of AAOs	Participant in various energy efficiency-related committees, working groups etc, which make decisions on changes to Chenath Engine
Buildings			Determine whether jurisdictional building-related legislation and regulations require assessors to be accredited, licensed etc
Stakeholder consultation and engagement			
Energy	Manages the NatHERS website Acts as a Secretariat for the EEAT Publishes and distributes information (including the outcomes of key decisions)	Participant in the consultation process	Participant in the consultation process

Portfolio responsibility	NatHERS Administrator	Commonwealth	States and Territories
Buildings		Manages the NCC website Participant in the consultation process	Participant in the consultation process

SOURCE: ACIL ALLEN

Second, it is clear that the current arrangements do not facilitate best practice corporate governance, as discussed in the previous chapter. NatHERS currently lacks a committee, body or governing board to:

- Effectively set NatHERS direction both from a policy perspective relating to energy efficiency and from a regulatory perspective. In particular, this includes a focus on:
 - policy decisions that reflect the governments' broader policy objectives
 - best practice processes for identifying regulatory problems and options underpinning the policies, and implementing processes that support an impartial assessment of the options against key principles such as 'proportionality'
 - the longer term impacts of policy and regulatory changes
 - the application of regulatory practices that are consistent, robust, transparent and maintain the standards underpinning a strategic policy framework.
- Monitor and manage key risks (such as the Scheme's dependence on the Chenath Engine and the reputational risks associated with poorly conducted assessments).
- Take remedial action if sufficient progress against strategic priorities is not being made.
- Manage and monitor compliance with key policies, legislation and regulations.
- Manage the performance of the NatHERS Administrator and give strategic guidance to the NatHERS Administrator to minimise its exposure to risk.
- Secure and effectively manage the resources needed to deliver an efficient, effective and well-regarded Scheme.

ACIL Allen recognises that it is unrealistic to expect a single body, committee or group within the representative structure of the COAG Energy Council to deliver all of these governance roles efficiently and effectively. In particular, as discussed above, there will need to be separation of the policy and regulatory functions. Nevertheless, these core functions must be performed in a transparent and accountable way. If they are not, stakeholders who work closely with NatHERS will continue to demonstrate frustration with the Scheme, and may withdraw support for it entirely.

One solution is to consider allocating core governance and operational functions to those bodies/organisations and jurisdictions best placed to manage them. This solution resolves tensions between stakeholder perceptions of the Scheme's underlying objectives (as described above) by giving those stakeholders who are best placed to deliver each objective a clearly defined role and remit.

Re-allocation of these functions also relieves the pressure on the committees of the COAG Energy Council (in particular, the EEAT) to guide policy development as well as manage national regulatory functions. These bodies are generally well placed to develop policy, but not well suited to provide governance and oversight of regulatory bodies. There are good examples within the COAG Energy Council where regulation is separated from the policy decision making process and handed to an independent body to manage and deliver (see for instance Box 3.2).

Re-allocation also relieves pressure on the NatHERS Administrator to manage a diverse range of activities for which it does not have the legislative authority nor the level of resources, skills and capabilities. Re-allocation further gives rise to the idea of an independent regulator to manage the standard setting and software accreditation functions on behalf of the Scheme. Other regulatory functions (such as the accreditation of assessors) can be re-allocated to the jurisdiction which has the legislative authority to deliver those functions.

Such a solution represents fundamental reform of the current governance and operational arrangements, which ACIL Allen believes is critical to the longer term survival of NatHERS as a

national Scheme. Other solutions which maintain the current allocation of roles and responsibilities, but improve processes and procedures, will not build the stakeholder confidence required to ensure the Scheme's longer term sustainability. This point was consistently made by stakeholders throughout the consultations.

While the allocation of roles and responsibilities will dramatically improve NatHERS' current governance and operational arrangements, it will require complementary investment in the skills, experience and resources of the organisations responsible for delivering the Scheme. The next question in our analysis therefore becomes: *What sort of capabilities and capacities are required to support the re-allocation of NatHERS' functions?*

Consideration of the capabilities and capacities required for an enhanced NatHERS are outlined below.

4.3 Capability and capacity of key parties

The success of any organisation, scheme, policy initiative or regulation lies in the ability for the right people to make the right decisions at the right time, and in a way that is consistent with policy objectives and intentions. In the case of the NatHERS, its success lies in its ability for the Scheme to deliver its core functions and to make a positive contribution to the agendas of both energy efficiency and buildings-focused stakeholders.

Through the re-allocation of functions, it will become evident that a number of core skills are needed to deliver NatHERS.

First, it will be necessary to consider whether existing parties have the skills, understanding and resources to deliver a robust and independent regulatory function. It is evident from stakeholder consultations that these skills and resources are not present in the current arrangements and will need to be developed or brought into the Scheme in the future.

Second, it will be necessary to consider whether existing parties have the policy (and research and development planning) skills to guide the ongoing development and future evolution of the Scheme. It is further evident from stakeholder consultations that these skills are present across the NatHERS stakeholder groups but that the current arrangements do not facilitate the full use of their skills and knowledge.

Third, it will be necessary for the administrative support of NatHERS to effectively meet the needs of a model based on policy and regulatory separation. In order to support the policy function, strong COAG secretariat skills are needed, and experience in managing stakeholder engagement is required. It is ACIL Allen's view that the current NatHERS Administrator is well placed to perform this role. In order to support the regulatory function, a new body with the experience in managing regulatory processes and systems will also be required. It is ACIL Allen's view that the NatHERS Administrator is not well-positioned to perform this role, and another body with experience in best practice regulation will need to be identified to deliver this function.

4.4 Funding

Transparent and predictable funding arrangements are also a key determinant of any successful organisation, scheme, policy initiative or regulation. This review has identified that NatHERS funding lacks an identifiable split between regulatory and policy-related functions. This presents a real and ongoing risk that funding for regulatory functions will fluctuate with changes in policy direction.

It also increases the risk that stakeholders will not understand how the funding is being used (even if it is sufficient). This lack of understanding could, over time, impact on the support those stakeholders provide to the Scheme, and the confidence they have in NatHERS' use of public money.

With such risks in mind, it is important to consider: *What funding models best meet the current and future needs of NatHERS?* A selection of the key funding options identified during consultations with stakeholders are considered in the next chapter.

4.5 Conceptualising the options

It is evident from this chapter that the 'form' of NatHERS should follow its 'function' with the objectives providing a clear purpose and demarcation between the roles and responsibilities of parties involved in the Scheme, as vital supporting elements. However, moving from the current model to a new one requires consideration of the various options available for reform, of which there are many.

Based on the stakeholder consultations undertaken for this Review, ACIL Allen has identified three dimensions of reform:

— **Structural reforms**

- The reforms need to provide a clear separation and definition of NatHERS' policy and regulatory functions, which will require substantial reform to the Scheme's current institutional arrangements. International best practice is to 'house' policy and regulatory functions in separate organisations. This separation also needs to be supported by the extraction of NatHERS from a software driven development model to one based on clearly documented "standards" that underpin the software tools.

— **Process-based reforms**

- The structural reforms need to be supported by processes that support a rigorous and robust assessment of changes to the documented "standard" which are consistent with national guidelines for developing and amending regulation. It will be particularly important to adopt regulatory change processes that are based on the principles of proportionality. Another key component of this will involve the establishment of consultation processes that ensure open stakeholder engagement and accountability for regulatory decisions, as well as other policy decisions.

— **Capability and capacity improvements**

- The reforms need to support transparent and sustainable funding for the core function of NatHERS. In particular, the regulatory roles need a sustainable funding source that is independent of changes to Government priorities and support best practice regulation. The officers and decision makers involved in NatHERS need to have sufficient skills and experience and be given the authority to make robust decisions that give stakeholders greater confidence in the governance and operating model of NatHERS.

The range of reform options across these dimensions are detailed in the next chapter.

5

WHAT ARE THE
OPTIONS?

The previous chapter identified the elements of NatHERS that need to change to improve its governance and operational arrangements. These elements included changes that enhance its clarity of purpose, its allocation of roles and responsibilities amongst parties and its funding arrangements.

In this chapter ACIL Allen has identified a range of options for an enhanced NatHERS governance and operating model. The options are focused on addressing fundamental stakeholder concerns associated with the Scheme's objectives and structural arrangements. The options presented in this chapter are therefore high level in nature and do not address lower order administrative or process related issues.

Moreover, the option to abandon NatHERS completely, in place of state based schemes, has not been considered at length within this Review. The option is a valid one, however the vast majority of key stakeholders consulted for the Review value the presence of a national, government directed Scheme. These stakeholders do not seek to have NatHERS removed from the national landscape, but rather enhance the governance and operating model to improve its overall effectiveness.

The spectrum of potential change span structural, process, and capability and capacity-based changes as outlined in the previous chapter. The options for delivering that change range from 'no' or 'minimal' change in the existing arrangements to 'maximum' change scenarios where significant structural reforms are considered.

The factors of good regulatory governance, as described by the OECD, are the dominant analytical lens applied to the performance of NatHERS' current arrangements and hence form the main criteria for assessing options. The options are assessed against the factor or factors that are most relevant to that element of change.

Within this context, options relating to the purpose of NatHERS are identified and assessed in section 5.1, options relating to the roles and responsibilities of parties are assessed in section 5.2, and options relating to funding are assessed in section 5.3.

5.1 The objective of NatHERS

Clearly defined objectives are a hall mark of all successful public policies, programs and organisations.

It will be important for NatHERS to have a clarity of purpose and vision which meets the current and future needs of stakeholders. The development of such an objective is a threshold issue from which other considerations flow.

Four options for the objective of NatHERS are considered in the following sections:

- maintain the current vision as the objective
- establish an objective focused on the current provisions in the NCC

- establish an objective focused on the development and maintenance of a documented “standard” that underpins the software tools
- establish an objective that clearly distinguishes between its regulatory compliance role and its role in promoting best practice thermal efficiency.

5.1.1 Option 1: Maintain the current vision as the objective

This option seeks to maintain the current vision articulated in the Strategic Plan 2015-2018:

The vision for NatHERS is to support the improvement of the energy efficiency of Australian residential buildings through the availability of scientifically valid, cost effective and, reliable thermal performance rating tools. NatHERS can be integrated across the building design, compliance, construction and renovation cycle.

Strategic Plan 2015-2018, p. 3.

This vision is the strongest articulation of the Scheme’s strategic objective we can find. The objectives outlined in the Strategic Plan, in our opinion, are more closely aligned to the operational objectives of the Scheme. The vision has a number of key dimensions, which reflect the dominant views of stakeholders consulted for this Review.

The vision is aspirational as it focuses on improvement in the energy efficiency of all residential buildings at all stages of the buildings life-cycle. This is a departure from the operations of the current Scheme which focus on thermal performance at the design stage only.

The vision also focuses on the use of a ‘reliable thermal performance rating’ tool, which is consistent with the reference to NatHERS accredited software tools in the NCC and ultimately with the view that NatHERS has an embedded regulatory function (refer to Box 2.1).

5.1.2 Option 2: Establish an objective focused on the current provisions in the NCC

This option, by comparison, provides an objective for NatHERS that concentrates on its regulatory compliance role, rather than other aspects of the Scheme. Under this option NatHERS’ vision would be limited to assessing the ‘potential thermal energy of the dwelling envelope’ using a NatHERS accredited software tool. Other, perhaps aspirational, elements which relate to the building life-cycle would be outside the Scheme’s intended purpose.

In practice this means establishing an objective for NatHERS that focuses on the consistent and reliable application of a software tool. An example of what that objective could look like under the option is presented below:

The objective of NatHERS is to ensure scientifically valid, consistent, reliable, cost effective application of a software tool to demonstrate regulatory compliance with minimum performance requirements on thermal efficiency.

While this objective provides clarity as to NatHERS’ regulatory compliance role, it does not provide any clarity as to NatHERS’ role in promoting best practice thermal efficiency. It also inherently links NatHERS to a software tool rather than a documented “standard”.

5.1.3 Option 3: Establish an objective for NatHERS that is focused on the development and maintenance of a documented “standard”

A further option is to conceptualise NatHERS as a “standard”. By “standard”, we refer to documents setting out the principles and functional specification that underpin NatHERS software tools and the assessment of the thermal performance of buildings. Standards are designed to ensure products/services/systems are reliable and consistent and ‘based on industrial, scientific and consumer experience and are regularly reviewed to ensure they keep pace with new technologies’.³²

In practice this means there is transparency of the NatHERS software for building designers and a basis for developing or amending software tools by software providers. An example of what that objective could look like is presented below:

³² http://www.standards.org.au/standardsdevelopment/what_is_a_standard/Pages/default.aspx

The objective of NatHERS is to ensure scientifically valid, consistent, reliable and cost effective application of the documented “standards” underpinning the Scheme.

Under this option, the objective would be agnostic about the type of standard and in particular, how aspirational that standard should be. The type of standard underpinning NatHERS would be a matter for policy makers to preside over, and would be subjected to a rigorous standards setting process (as outlined in the next chapter).

While the proposed objective de-links NatHERS from a software tool, it does not provide any clarity to NatHERS’ role in promoting best practice thermal efficiency.

5.1.4 Option 4: Establish an objective for NatHERS that clearly distinguishes its regulatory compliance role and role in promoting best practice thermal efficiency

A further option conceptualises NatHERS as a documented “standard”, rather than the application of a software tool, as its regulatory compliance role. However, the objective has two parts and also recognises its role as a means to promote best practice thermal efficiency of residential buildings.

An example of what this objective could look like is presented below:

The objectives of NatHERS are to:





- *facilitate the development of scientifically valid, consistent, reliable and cost effective “standards” that support continued improvement in the thermal performance of Australian residential dwellings*
- *develop and maintain scientifically valid, consistent, reliable, cost effective “standards” that support the assessment of the thermal performance of Australian residential dwellings in accordance with the performance requirements in the NCC.*

This proposed objective provides much greater clarity as to the role of NatHERS. The objective identifies both its regulatory compliance and promotional roles, refers to “standards” rather than a software tool, and refers to thermal efficiency more specifically rather than energy efficiency.

5.1.5 Assessment of options


An assessment of these four objective-based options against the role clarity principle is presented in Table 5.1.

TABLE 5.1 ASSESSMENT OF ALTERNATIVE OBJECTIVES FOR NatHERS AGAINST THE ROLE CLARITY PRINCIPLE

Objective	Role clarity
1. Maintain the current vision as the objective	
2. Establish an objective focused on the current provisions in the NCC	
3. Establish an objective for NatHERS that is focused on the development and maintenance of a documented “standard”	
4. Establish an objective for NatHERS that clearly distinguishes its regulatory compliance and promotional roles	

LEGEND:

 = principle not met

 = principle partly met, but mostly inadequate

 = principle partly met

 = principle largely met

 = best practice

SOURCE: ACIL ALLEN

5.2 Roles and responsibilities of parties

Once agreement about NatHERS’ objective has been reached, it is important to consider how the Scheme’s functions should be allocated across parties. A key principle of good governance is to ensure the roles of parties are allocated in the most efficient and effective way, giving each party clear responsibility for a function(s), the authority to make decisions when required, and the resources necessary to discharge duties.

For NatHERS there are several options for achieving this clarity:

- maintain, but enhance current governance and operational arrangements
- separate the policy and regulatory functions of NatHERS, but retain all functions at a national level
- separate the policy and regulatory functions of NatHERS, but devolve some functions to the States and Territories.

These options are assessed against the following principles:

- role clarity
- degree of independence
- type of governance
- accountability and transparency
- stakeholder engagement.

5.2.1 Option 1: Maintain, but enhance the current governance and operational arrangements

This option seeks to maintain the current governance and operational arrangements of the Scheme, but improve key aspects where required.

One improvement centres on the location of the NatHERS Administrator within the Commonwealth Government Administration. The NatHERS Administrator was originally located in the Australian Greenhouse Office (AGO). This role was transferred to the Department of Environment, Water, Heritage and the Arts in 2007, the Department of Climate Change and Energy Efficiency in 2010, the Department of Resources, Energy and Tourism in 2013 and the DIIS in 2013 where it currently resides today.³³

The NatHERS Administrator is currently managed by a small staff located in the Residential Buildings Section within the Energy Productivity Branch of the Energy Division of DIIS. There are concerns amongst some stakeholders that the NatHERS Administrator would be a “better fit” if it were to be re-located to another part of the Department where residential building-related matters are a core competency. Consultation with the NatHERS Administrator has identified that it could be transferred to a more building-orientated section within the Department. This move would ensure that the NatHERS Administrator has improved access to building-related advice if and when required. The consultations also suggest that some officers within DIIS are at least sympathetic to this view.

Another improvement centres on the communication and engagement function of the Scheme. Currently this function is managed by the NatHERS Administrator who is responsible for the NatHERS website, and coordinating and communicating progress against a work plan and any significant agreements of changes to the Scheme. Information about NatHERS is also communicated through fact sheets, in response to requests for information, through conference presentations and journal articles.

The proposed improvements focus on process-related enhancements that give greater structure to the communication process, which would ideally be underpinned by a detailed communications strategy comprising key performance indicators/metrics. The improvements would provide, in particular, enhanced clarity about EEAT and TAC meeting outcomes and advice, as well as a more structured (and streamlined) pathway for industry stakeholders to engage with the software and assessor accreditation processes.

This option does little to improve the clarity of NatHERS’ role. NatHERS would continue to be responsible for policy and regulation, but with a shift in the balance from policy to regulation.

There is no change to the degree of independence, type of governance, and accountability and transparency. The option would improve stakeholder engagement by providing greater structure to the communications process. The alignment of the NatHERS Administrator with a more building-oriented section within DIIS may also facilitate improved engagement with stakeholders in the building sector.

³³ NatHERS Administrative and Governance Arrangements, August, 2015.

5.2.2 Option 2: Separate the policy and regulatory functions of NatHERS, but retain all functions at a national level

This option represents a significant reform to the existing governance and operational arrangements, by separating policy from regulation with the establishment of an independent regulatory function. Under this option a COAG Energy Council committee would be responsible for setting the policy agenda of NatHERS, commissioning research and development as appropriate. All software and assessor accreditation functions that come under the NatHERS remit would be delivered by an independent regulator with the statutory powers and functions, skills, experience, resources and processes needed to deliver robust regulatory outcomes. Details and additional considerations relating to the establishment of the regulator are discussed in the next chapter.

Under this option, the NatHERS Administrator would transition to a secretariat for the COAG Energy Council committee, and would have little role to play in the Scheme's daily administration.

The day-to-day management of NatHERS' regulatory functions would be the responsibility of the independent regulator. Under this option, software accreditation would be transferred from the NatHERS Administrator to the independent regulator. Assessor accreditation (including training, monitoring and enforcement) functions would be transferred from AAOs to the regulator.

Governance arrangements for the NatHERS independent regulator could be established in any one of three ways, as identified by the OECD:

- *Governance board model – the board is primarily responsible for the oversight, strategic guidance and operational policy of the regulator, with regulatory decision making functions largely delegated by the Chief Executive Officer (CEO) and staff ...*
- *Commission model – the board itself makes most substantive regulatory decisions ...*
- *Single member regulator – an individual is appointed as regulator and makes most substantive regulatory decisions and delegates other decisions to its staff.*

The decision to adopt a commission model or a single member regulator is secondary to the decision to establish an independent regulator, and will be influenced by whether a new stand-alone regulator is established or whether NatHERS' regulatory functions are transferred into an existing regulator.

The New Zealand Productivity Commission identified that a commission model is appropriate where:

- the regulatory has the power to make administrative decisions that have significant commercial consequences
- the regulator has a large industry and functional scope and has responsibility for a high volume of regulation
- the regulator is a general rather than industry specific regulator
- regulations are complex and principle-based, requiring a greater degree of judgement in interpretation
- regulatory consistency over time is very important.³⁴

The New Zealand Productivity Commission identified that a single member regulator is appropriate where:

- decisions are based on expert understanding of complex technical matters
- the area of regulation is well defined and subject matter is not particularly complex, or processes and decisions are largely standardised or routine
- potential commercial, environmental or public safety risks of regulated activities are low.³⁵

On balance, if NatHERS' regulatory functions are established as a new stand-alone regulator, the scale and scope of regulatory functions would indicate that a single member regulator is appropriate. If NatHERS' regulatory functions are transferred to an existing regulator, the governance model will most likely be dictated by the governance model of the existing regulator.

Questions about who is best placed to manage the regulatory function and the most appropriate governance arrangements are dealt with in the next chapter.

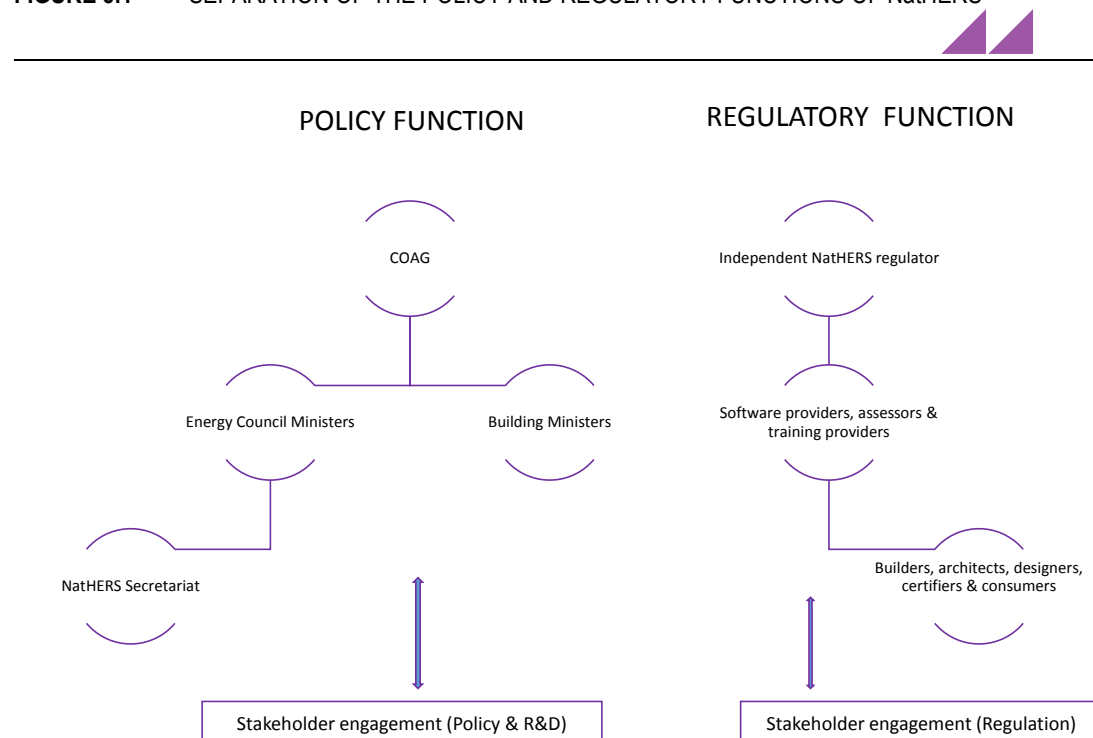
³⁴ New Zealand Productivity Commission 2014, 'Regulatory Institutions and Practices', p. 271-272.

³⁵ New Zealand Productivity Commission 2014, 'Regulatory Institutions and Practices', p. 271-272.

Under this option, separate stakeholder consultation and engagement functions would be established for policy development, and regulatory management and change. Engagement functions for policy would be tailored to meet the needs of COAG, while the engagement functions for regulation would follow accepted best practices, such as consultation processes for regulatory change (as promoted by the Office of Best Practice Regulation (OBPR)) which follow concepts of 'proportionality', 'efficiency' and 'effectiveness'.

A high level schematic of the governance and operational arrangements under this option are outlined in Figure 5.1 below.

FIGURE 5.1 SEPARATION OF THE POLICY AND REGULATORY FUNCTIONS OF NatHERS



SOURCE: ACIL ALLEN

This option would significantly improve the clarity of NatHERS' role by separating policy and regulation roles. Additional changes would be required to clarify the objectives of NatHERS. The degree of independence and governance of the regulatory functions could also be more appropriate.

This option facilitates an improvement in the accountability and transparency of the regulatory functions, but not of the policy functions. Stakeholder engagement would be enhanced as there would be a clear distinction between the engagement of stakeholders for policy purposes and the engagement of stakeholders for regulatory purposes. In and of itself, this is not sufficient change to meet best practice in stakeholder engagement. Additional action would need to be taken.

5.2.3 Option 3: Separate the policy and regulatory functions of NatHERS, but devolve some functions to the States and Territories

This option mirrors Option 2 but devolves the assessor accreditation and quality assurance function to the States and Territories. The State and Territory-based building authorities have the legislative authority, skills and expertise to manage the assessor accreditation and quality assurance function effectively.

This option aligns the assessor accreditation and quality assurance function with the jurisdictional legislative requirements. In a practical sense, those States and Territories which have deemed assessor accreditation to be important enough to legislate would have responsibility for accrediting assessors in their jurisdiction. Those States and Territories which do not require assessors to be accredited would not assume any responsibility for assessor accreditation.

This option also involves each of the relevant States and Territories choosing whether to require assessors in their jurisdiction to have a Certificate IV.

Relative to Option 2, Option 3 would further improve the clarity associated with the assessor accreditation role, and improve the accountability, transparency and stakeholder engagement associated with assessor accreditation.

5.2.4 Summary of assessment

An assessment of the three structural options against the principles of role clarity, degree of independence, type of governance, accountability and transparency, and stakeholder engagement is provided in Table 5.2.

TABLE 5.2 ASSESSMENT OF ALTERNATIVE NatHERS STRUCTURAL OPTIONS AGAINST THE RELEVANT PRINCIPLES OF GOOD REGULATORY GOVERNANCE

Option	Role clarity	Degree of independence	Type of governance	Accountability and transparency	Stakeholder engagement
0. Existing arrangements			N/A		
1. Maintain, but enhance the current governance and operational arrangements			N/A		
2. Separate the policy and regulatory functions of NatHERS, but retain all functions at a national level					
3. Separate the policy and regulatory functions of NatHERS, but devolve some functions to states and territories					

LEGEND:

= principle not met
 = principle partly met, but mostly inadequate
 = principle partly met
 = principle largely met
 = best practice

SOURCE: ACIL ALLEN

5.3 Funding

Three funding options that seek to improve the transparency and sustainability of funding for NatHERS have been identified and assessed against the funding principle:

- maintain current funding arrangements but increase the quantum of funding available to the NatHERS Administrator
- decouple funding for policy and regulation
- decouple funding for policy and regulation and fund regulatory functions on a full cost recovery basis.

5.3.1 Option 1: Maintain current funding arrangements but increase the quantum of funding available to the NatHERS Administrator

This option seeks to maintain the current funding arrangements, but increase the quantum of funding provided to the NatHERS Administrator to manage the Scheme's day-to-day operations and ongoing evolution.

Funding for the current Scheme and the benchmark software is derived from the following sources:

- **Departmental funding from DIIS.** Allocation of resources for NatHERS is subject to annual appropriation and budget priorities throughout the Department.
- **COAG Energy Council funding.** Allocation of funding is subject to annual appropriation and budget priorities in each jurisdiction.
- **Software licensing.** Royalties from licencing of the Chenath Engine to the other software tools are returned to CSIRO for re-investment in NatHERS-related work.
- **CSIRO investment.** Research in developing building thermal performance analysis tools has been funded by the CSIRO. CSIRO has also absorbed additional costs associated with ad-hoc software support and maintenance tasks.

These funding sources would be retained under this option.

While this option increases the level of funding, it does not improve the clarity of the sources and level of NatHERS funding. As the funding continues to rely on governments' budgeting processes, it also does not improve the sustainability of funding.

5.3.2 Option 2: Decouple funding for policy and regulation

This option complements options that seek to separate the policy and regulatory functions of NatHERS. Funding for policy development (and research and development as appropriate) would be funded by jurisdictions in accordance with COAG agreements.

Funding for the maintenance of the documented "standard" and delivery of software and assessor accreditation would be funded in part on a fee-for-service basis. Fees would be payable for example, for the accreditation of software, the accreditation of assessors, and each assessment certificate issued. In addition, there may be annual fees for software providers and assessors.

Under this model, industry could elect to fund enhancements to the benchmark software tool, within the existing policy framework, or to fund research and development to inform future policy decisions.

The independent regulator would collect these fees on an agreed and transparent basis, with an amount of government funding support to meet the overhead and running costs of the regulator. This option is premised on the fees and charges of the regulator only meeting a proportion of the costs associated with delivering the regulatory function.

While this option improves the transparency of funding of the regulatory functions, concerns remain in relation to the sustainability of funding with some of the funding for the regulatory functions depending on the governments' budgetary processes. This option does not improve the transparency of the sources or level of funding for the policy functions.

5.3.3 Option 3: NatHERS regulatory functions funded on a full cost recovery basis

This option provides government funding for policy, and research and development as appropriate. This funding would be provided through the COAG Energy Council process.

All other functions, activities and investments would be fully funded by a combination of licencing and regulatory fees collected by the NatHERS Administrator or an independent regulator.





Under this model, industry could elect to fund enhancements to the benchmark software tool, within the existing policy framework, or to fund research and development to inform future policy decisions.

This option further improves the transparency of the funding of regulatory functions. It also provides a sustainable source of funding for the regulatory functions that is not reliant on government budgetary processes, but requires a mechanism to charge the fees.






5.3.4 Summary of assessment

The assessment of the funding options against the funding principle of good regulatory governance is summarised in Table 5.3.

TABLE 5.3 ASSESSMENT OF ALTERNATIVE NatHERS FUNDING OPTIONS AGAINST THE FUNDING PRINCIPLE OF GOOD REGULATORY GOVERNANCE

Option	Funding
0. Current funding arrangements	
1. Maintain current funding arrangements but increase the quantum of funding available to the NatHERS Administrator	
2. Decouple funding for policy and regulation	
3. NatHERS regulatory functions funded on a full cost recovery basis	

LEGEND:

 = principle not met
 = principle partly met, but mostly inadequate
 = principle partly met
 = principle largely met
 = best practice

SOURCE: ACIL ALLEN

5.4 Assessment of options against the ASX principles of good corporate governance



In section 5.2, we have assessed that the options that separate NatHERS policy and regulatory functions better meet the OECD's principles of good regulatory governance than the current arrangements.


As a further layer of analysis, we have assessed the preferred option against the ASX's principles of good corporate governance. While not all of these principles are relevant, the analysis presented in Table 5.4 clearly demonstrates that the preferred option is aligned with good practice in the key corporate governance areas of:


- laying a solid foundation for management and oversight of NatHERS
- structuring the board or governance body to add value
- recognising and managing key risks facing NatHERS.

Once again, Harvey Balls have been used to demonstrate the degree to which the option meets each relevant corporate governance principle.

TABLE 5.4 ASSESSMENT OF THE PREFERRED OPTION (ROLES AND RESPONSIBILITIES) AGAINST PRINCIPLES OF GOOD CORPORATE GOVERNANCE

ASX principle	Rating	Justification
Principle—Lay solid foundations for management and oversight		By separating policy from regulation and transferring the regulatory functions to an independent regulator with the appropriate statutory powers and functions, NatHERS is afforded the opportunity to clearly articulate the roles and responsibilities between the policy development and regulatory functions. Within the regulatory functions, the option provides a further level of clarity by identifying those matters expressly reserved to the Board or governance body of the regulator and those matters delegated to the management of the regulator. Currently these roles are confused between the NatHERS Administrator, the EEAT and the advisory committees which support the Scheme.
Principle 2—Structure the Board/governance body to add value		By separating policy from regulation and moving to an independent regulator, NatHERS is afforded the opportunity to establish a governance body/board with the skills and expertise required to guide the Scheme. The option will allow NatHERS to adopt a skills based approach to its governance, and provide new opportunities to incorporate independent, industry relevant experience within its governance arrangements. These are absent from the current Scheme, but stakeholders consulted for this Review see them as important to the future directions of NatHERS.

ASX principle	Rating	Justification
Principle 7—Recognise and manage risk		<p>Risk identification and management are critical activities of all effective governance arrangements. There is little evidence to suggest that NatHERS' current governance arrangements support a systematic and robust process for managing its day-to-day as well as longer term strategic risks. The adoption of this option provides an opportunity for the risks associated with NatHERS' regulatory functions to be escalated to a governance or board structure (say within an existing regulator) which has the processes, frameworks and expertise to review the NatHERS' risk management framework annually and disclose whether such a review has taken place, and to take actions which remediate the risks that have been identified.</p> <p>Under the option, failure to both identify and address the critical economic, environmental and social sustainability risks will be a fundamental accountability of the governance board/body. Failure will also give key stakeholders (in particular, funding bodies) the transparency required to hold NatHERS to account for its use of public and industry funding.</p>

LEGEND: = principle not met = principle partly met, but mostly inadequate = principle partly met = principle largely met = best practice

SOURCE: ASX PRINCIPLES AND RECOMMENDATIONS ADAPTED TO MEET THE REQUIREMENTS OF THIS REVIEW

5.5 The recommended model


Given the assessment provided above, the following model is recommended for consideration by DIIS and other decision makers responsible for NATHERS (as shown in Table 5.5 below). Additional detail about the implementation actions required to progress the preferred model is provided in the next chapter.

TABLE 5.5 ASSESSMENT OF OPTIONS—RECOMMENDED MODEL

Category	Preferred option	Comment
The objective of NatHERS	Develop a two part objective that clarifies NatHERS' regulatory compliance role and role in promoting best practice thermal efficiency	This is a threshold option from which all other decisions about NatHERS should follow. By selecting this option, NatHERS will embark on a fundamental reform pathway to the existing governance and operational arrangements.
Roles and responsibilities of parties	Separate the policy and regulatory functions of NatHERS, and devolve the assessor accreditation and quality assurance function to the States and Territories	If an objective to conceptualise NatHERS as a documented "standard" that underpins software tools is chosen for the Scheme, it will be important to establish structural arrangements which support an effective and efficient standards setting and change process. This option provides a pathway to NatHERS being a national regulatory standard that is insulated from changes to policy priorities and preferences across the jurisdictions. It also devolves key functions of the Scheme to the level of government with the authorising regimes (i.e. legislation) and expertise required to deliver consistent and tailored outcomes.
Funding	Decouple funding for policy and regulation, with regulatory functions fully funded by users	The funding model chosen is contingent on clear separation of policy and regulatory functions. To this end, it is important to establish transparent and sustainable funding arrangements for the regulatory functions, but is dependent on identifying cost recovery mechanism.

SOURCE: ACIL ALLEN

The recommended model fundamentally reforms the governance and operational model for NatHERS. Once decisions are made on these fundamental reform elements, the implementation process will need to consider a range of detailed issues which may facilitate further improvements in the regulatory governance of NatHERS.



IMPLEMENTATION CONSIDERATIONS OF THE RECOMMENDED GOVERNANCE AND OPERATING MODEL

6

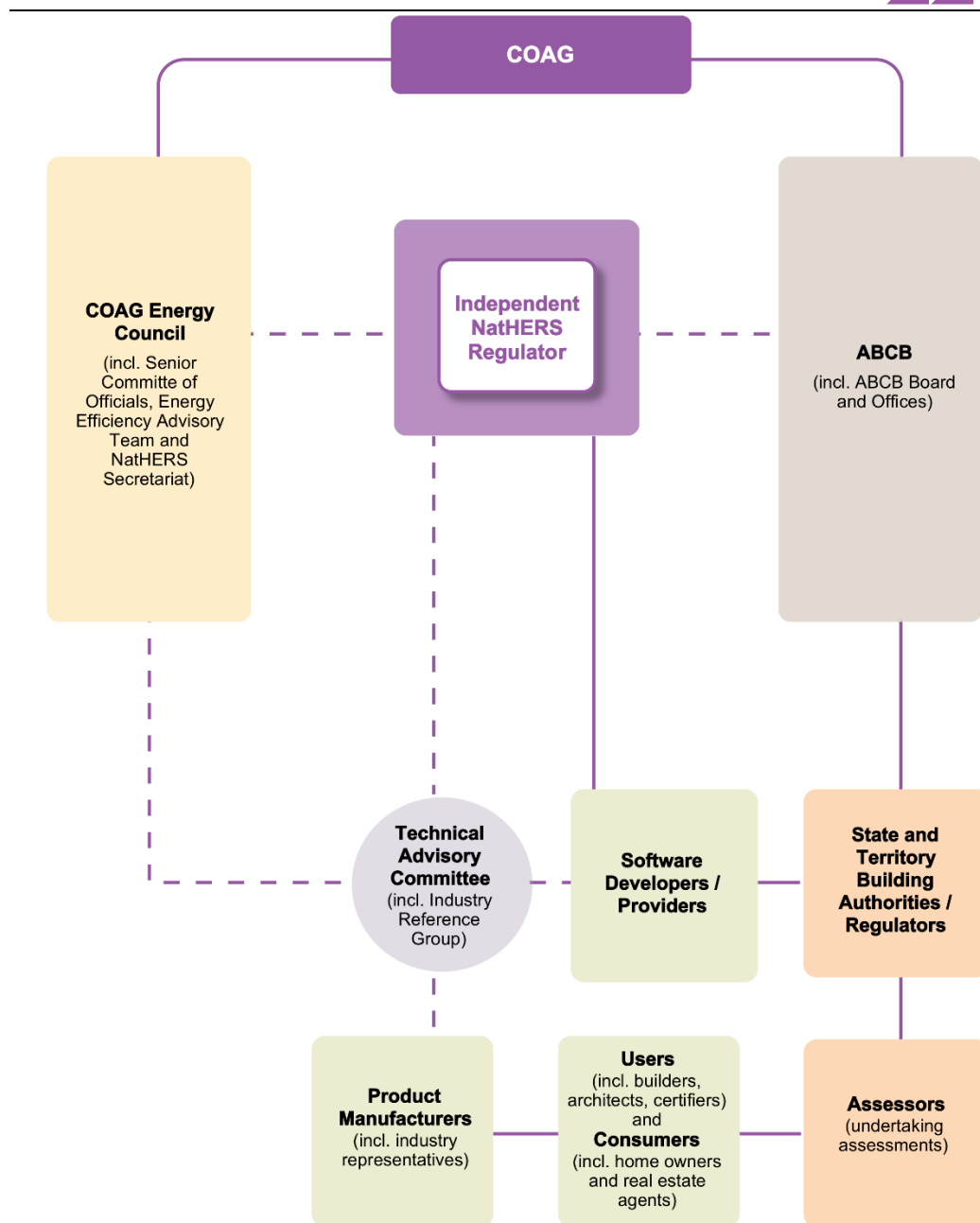
The previous chapter concluded by articulating the preferred options underpinning a recommended model for improving the governance and operating model of NatHERS. The recommended model is based on three cascading sub-recommendations that include:

- establishing a two part objective for NatHERS that clarifies its regulatory compliance role and its role in promoting best practice thermal efficiency
- separating the policy and regulatory functions of NatHERS, and devolve the assessor accreditation and quality assurance function to the States and Territories
- decoupling funding for policy and regulation, with the regulatory functions fully funded by users.

The focus of this chapter now turns to the key changes, investments, actions and other key considerations necessary to progress the implementation of the recommended model.

6.1 Key changes proposed under the recommended governance and operating model

If the recommended model is chosen to replace the current Scheme, the proposed governance structure will look fundamentally different to its current structure. To illustrate the change, Figure 6.1 outlines what a future governance could look like. The figure shows the a revised role for the NatHERS Administrator, the establishment of an independent regulator, revised advisory committee structure, and the enhanced roles of state and territory-based building authorities.

FIGURE 6.1 GOVERNANCE STRUCTURE OF THE RECOMMENDED MODEL

SOURCE: ACIL ALLEN

A summary of the key changes proposed to the current governance structure are provided in Table 6.1.

TABLE 6.1 KEY CHANGES ASSOCIATED WITH THE RECOMMENDED GOVERNANCE AND OPERATING MODEL

Element/party	Current	Proposed
COAG Energy Council committees	Provide governance and oversight of NatHERS' policy and regulatory functions	Provide governance and oversight of NatHERS' policy functions only
NatHERS Administrator	Manage a broad range of functions spanning policy, regulation and stakeholder engagement	Provide secretariat support to EEAT and deliver NatHERS policy-related communications and stakeholder engagement

Element/party	Current	Proposed
Advisory Committees	Advisory committees provide expert advice on a range of policy and technical matters	Establish a new industry reference group
Independent regulator	Function currently performed by a mixture of the NatHERS Administrator, AAO and states and territories	Establish an independent regulator to develop and maintain the documented “standard”, and accredit software tools
States and territories	Fund and support policy and regulation, undertake some accreditation where it is a requirement to do so	Fund policy, and research and development as appropriate Undertake assessor accreditation and training where required under state and territory law
Building Ministers Council, ABCB Board, ABCB Offices	Manage evolution and changes to the NCC and references to NatHERS accredited software tools within the NCC	No change, other than any consequential change that may be required to the NCC with the development of a documented “standard”
Software providers, training providers, users etc	Complaints, issues, requests for changes to the Chenath Engine through the NatHERS Administrator	Complaints, issues, requests for technical changes to the documented “standard” channelled through the independent regulator. Changes to policy channelled through the COAG Energy Council consultation and engagement process. Fund regulatory functions on a user pays basis

SOURCE: ACIL ALLEN

6.2 Major investment decisions required to support the change

To progress these changes, ACIL Allen has identified two key areas where investment decisions are required. The first involves the process for establishing a documented “standard” that provides the principles and functional specifications for the software tools. The second involves deeper consideration about who is best placed to manage an independent regulatory function.

6.2.1 Establishing a documented “standard”

Standards are documents setting out specifications, procedures and guidelines. They have the benefit of being objective, scientific and, most importantly, regularly reviewed to ensure they keep pace with industry needs. Standards also have the benefit of being linked to national, regional and international regimes, which provides scope for a Scheme like NatHERS to be linked to regional and international best practice as the industry’s understanding of the thermal performance of residential dwellings grows over time.

The “standard” could be developed and maintained by the independent regulator. Alternatively, the “standard” could be developed as a national standard under the auspices of Standards Australia.

Standards Australia sets out the process for establishing a national standard on its website and in its published guidelines. There is little preventing the development of the “standard” as an Australian Standard, as ‘anyone can propose the development or revision of a standard or technical document by following the process put in place by Standards Australia’.³⁶ However, it is acknowledged that a documented “standard” for NatHERS could be developed by mirroring the broad approaches used by Standards Australia without adopting the formal Standards Australia standards development process.

The first step in the development of a “standard” is a proposal that meets specific criteria (or principles for a standard). The two main criteria are net benefit and stakeholder support for the establishment of

³⁶ http://www.standards.org.au/StandardsDevelopment/Developing_Standards/Pages/default.aspx

a standard, consistent with the guiding principles for the establishment of an Australian Standard, as shown in Box 6.1.

BOX 6.1 GUIDING PRINCIPLES FOR THE DEVELOPMENT OF AN AUSTRALIAN STANDARD

The principles to guide development and alignment of Australian Standards are:

- Principle 1: Standards will benefit the Australian community.
- Principle 2: Australia will influence the development of and maximise use of relevant International Standards.
- Principle 3: Standards development will be driven by the needs, and relies on the commitment of stakeholders.
- Principle 4: Australian Standards will only be produced where appropriate.

SOURCE: GUIDING PRINCIPLES – NATIONAL STANDARDS 2015.

[HTTP://WWW.STANDARDS.ORG.AU/STANDARDSDEVELOPMENT/DEVELOPING_STANDARDS/DOCUMENTS/AUSTRALIAN%20STANDARDS%20GUIDING%20PRINCIPLES.PDF](http://www.standards.org.au/StandardsDevelopment/Developing_Standards/Documents/Australian%20Standards%20Guiding%20Principles.pdf)

To meet these criteria, it will be important to undertake a complementary piece of work which seeks to document the principles and functional specification underpinning the Chenath Engine. Based on consultations undertaken for this Review, documentation could take approximately 12-18 months to complete and require the resources of a small team of experienced Chenath Engine practitioners.

It is ACIL Allen's understanding that the current NatHERS Administrator has the expertise to undertake some of this work, however will require significant input from the CSIRO team who currently manage the Chenath Engine to deliver an outcome that meets the criteria laid out by Standards Australia. There also appear to be a few individuals who have had experience with the Chenath Engine or other software tools who could support this development.

There has been some further suggestion that the documentation work could cost between \$300,000 and \$500,000 to complete. However, these estimates have not been verified by ACIL Allen and further analysis beyond this Review would be required to more accurately estimate the costs associated with documenting the principles and functional specification for the Chenath Engine.

If the decision is made to produce a standard under the auspices of Standards Australia, the documentation will need to be presented as a formal proposal to Standards Australia. The proposal would then be reviewed in accordance with a Project Prioritisation Process and guidelines published on the Standards Australia website.³⁷

It is important to note that there are four pathways open to NatHERS in the development of a national standard under the auspices of Standards Australia. At this stage three pathways are relevant to the progression of an Australian Standard for NatHERS, which are outlined in Box 6.2 below. The fourth pathway (international standards development) is not assessed to be relevant to the progression of the preferred model at this stage of its development.

³⁷ http://www.standards.org.au/StandardsDevelopment/Developing_Standards/Documents/GU104%20-%20SA%20Guide%20to%20Project%20Prioritisation%20Criteria%20and%20Process.pdf

BOX 6.2 PATHWAYS AND APPROACHES TO THE DEVELOPMENT OF A NatHERS NATIONAL STANDARD

There are three relevant pathways for standards development:

- Standards Australia Resourced
 - This pathway uses Standards Australia’s resources, project management expertise and infrastructure. Standards Australia Resourced projects require commitment and active contribution from stakeholders over a defined period of time. Proposals for Standards Australia resourced projects are submitted through the Prioritisation Process.
- Externally Funded
 - The Externally Funded pathway offers stakeholders customised solutions, greater choice in resourcing levels and accelerated project timeframes. Externally Funded project proposals must meet the same net benefit and stakeholder support requirements. However, proposals for Externally Funded projects are not part of the Prioritisation Process and may be submitted to Standards Australia at any time throughout the year. The provision of external funding does not give the funding entity any preferential consideration in relation to the technical content and outcome of the Standard.
- Standards Development Organisation Managed
 - The opportunity exists for individual organisations to be formally accredited as standards developers in their own right. Amongst other benefits, ownership of the standards development process allows the organisation to determine their development program, the level of resources to be provided and the timeframes to meet its stakeholders’ needs. Accreditation is carried out by the Standards Development and Accreditation Committee.

SOURCE: DEVELOPMENT PATHWAYS FOR A NATIONAL STANDARD.
[HTTP://WWW.STANDARDS.ORG.AU/STANDARDSDEVELOPMENT/DEVELOPING_STANDARDS/PAGES/DEVELOPMENT-PATHWAYS.ASPX](http://www.standards.org.au/standardsdevelopment/developing_standards/pages/development-pathways.aspx)

6.2.2 Who could or should manage the national regulatory functions?

Who could or should manage the regulatory functions of NatHERS is another fundamental question requiring resolution. During the course of this Review, at least three sub-options have been identified for an independent regulator. These options range in scope from the establishment of a new entity through to the use of an existing Commonwealth, State or Territory regulator.

The pros and cons of each option are considered in Table 6.2 below. The pros and cons are based on the range of considerations including the financial/technical costs and benefits of the sub-option; the level of stakeholder acceptance for the sub-option; and the capabilities, capacities and willingness of jurisdictions/organisations to assume the regulatory role.

TABLE 6.2 PROS AND CONS OF REGULATORY MANAGEMENT OPTIONS IDENTIFIED DURING THE REVIEW

Option identified	Pros	Cons	Overall assessment
Establish a new independent regulator from scratch	<ul style="list-style-type: none"> – Regulator given a single focus and the opportunity to develop core expertise around that focus – A new regulator would provide clear signals to disaffected stakeholders and industry practitioners that their concerns have been noted and fundamental reform to the existing arrangements will occur – Independence and expertise of the regulator will be established from the outset, helping to build confidence amongst stakeholders in the regulators ability to discharge its duties 	<ul style="list-style-type: none"> – Legislation required to establish regulator – The establishment of new entities can be costly and requires consideration of the associated corporate costs and running costs – Unlikely to have scale or scope to justify a stand-alone regulator – New regulatory processes, including engagement processes will need to be established for the option – Funding approval to implement the sub-option may be difficult to gain from States and Territories 	<p>Least preferred sub-option</p> <p>(The financial costs of establishing a dedicated NatHERS regulator may prove difficult to justify to jurisdictions)</p>

Option identified	Pros	Cons	Overall assessment
Allocate the role to an existing national regulator (e.g. the Clean Energy Regulator)	<ul style="list-style-type: none"> Builds on existing expertise in managing national regulations Builds on existing processes and procedures for managing national regulations Leverages existing cost structures of the national regulator 	<ul style="list-style-type: none"> Legislative amendment required to provide regulator with powers and functions Regulators may not want/desire additional responsibilities Funding approval to implement the sub-option may be difficult to gain from States and Territories 	Preferred sub-option (Use of a national body preserves the national focus of the Scheme, while minimising the costs of establishing a regulator)
Fund an existing state or territory regulator to perform regulatory functions	<ul style="list-style-type: none"> Builds on existing expertise in the states and territories who manage effective ratings systems Leverages existing cost structures of the regulator 	<ul style="list-style-type: none"> Legislative amendments required to provide regulator with powers and functions State or territory-based regulators may not want/desire additional responsibilities Potentially detracts from a nationally focused scheme by drawing on the regulatory processes and expertise of a state and territory Funding approval to implement the sub-option may be difficult to gain from States and Territories 	Sub-option has merits (Use of an existing state or territory based regulator avoids the costs of establishing a new regulator)

SOURCE: ACIL ALLEN

Based on the high level assessment presented in Table 6.2, the sub-option that allocates the role to an existing national regulator is recommended.

In order to progress the recommended sub-option, it is suggested that DIIS undertake a more detailed feasibility study of the recommended sub-option to better understand the financial costs associated with its implementation and the benefits that it will deliver to the Scheme. Following the outcomes of the study, it will be important to then develop a robust business case (which includes a cost-benefit analysis) and work closely with the OBPR, the COAG Energy Council and Building Ministers to implement the preferred regulatory model.

6.3 Implementation activities

The reform that has been identified for the governance and operating model of NatHERS is substantial.

With the luxury of time, this reform could be undertaken in a considered way. However, the risks associated with not moving quickly down the reform path include having the reference to NatHERS accredited software tools removed from the NCC, assessments increasingly being undertaken by unaccredited assessors, and for industry increasingly choosing to comply with Deemed to Satisfy elemental provisions in the NCC. During consultations, stakeholders considered that “major transformation is required”. For these reasons, we have identified two implementation approaches—the first assumes the luxury of time, and the second outlines a staged approach.

6.3.1 Implementation with the luxury of time

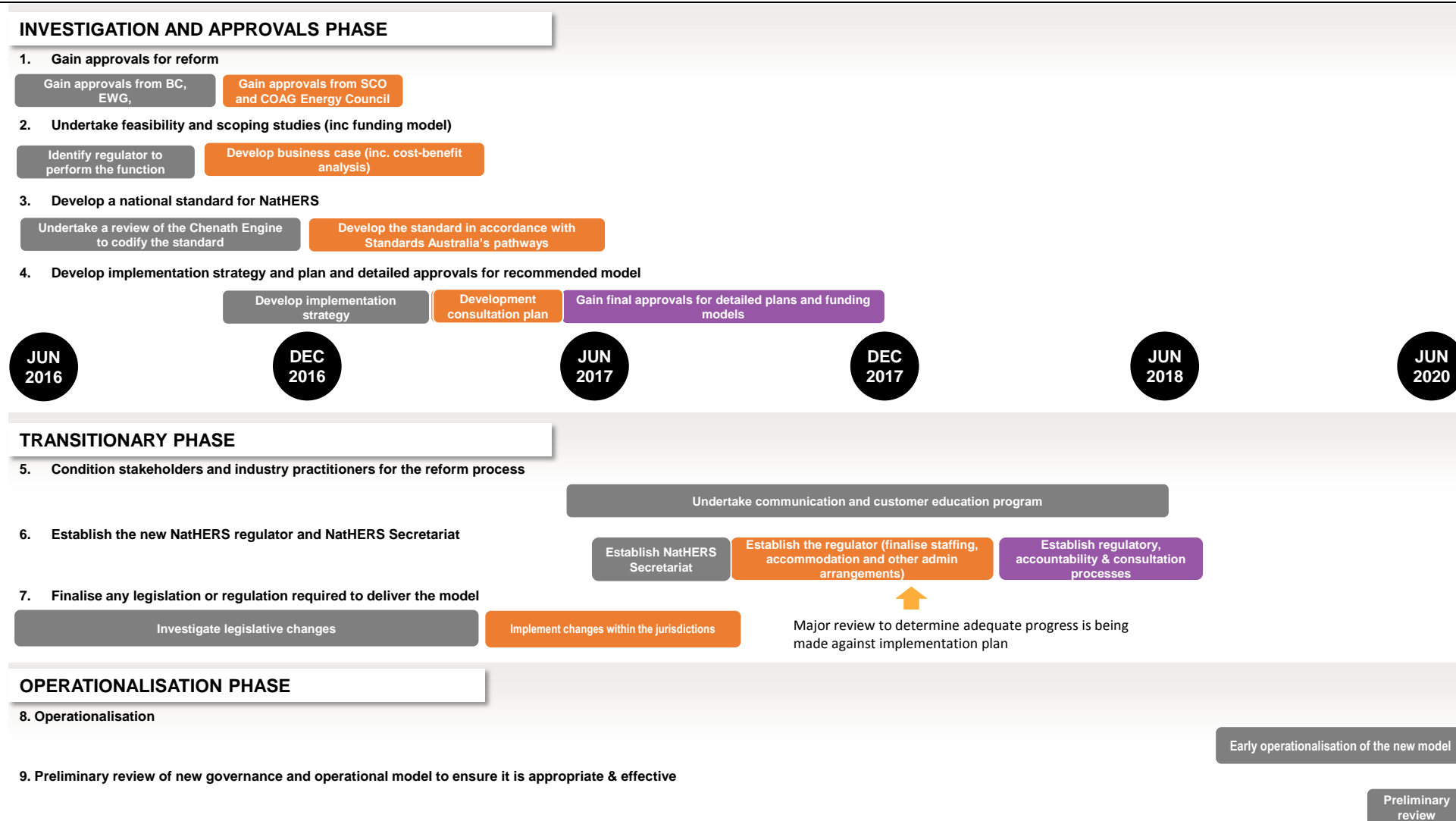
In ACIL Allen’s view, reform should occur over a short to medium term timeframe, ideally over a five to six year period. This timeframe will provide governments with the breathing space to consider the design issues of the recommended model, but provide a time frame which maintains the momentum for reform. A long or drawn out reform process will run the risk of stalling in an environment where reforms require the approval of multiple jurisdictions, at multiple levels of decision making.

The implementation activities will generally involve three distinct phases, however, it is important to note that there may be some consolidation of these phases where it makes sense to do so. These phases are the:

- *Investigation and approvals phase.* In this phase government should explore the feasibility and the high level design issues associated with each option and sub-option. The outcome of this phase should provide a clear indication of government's intention to progress and plan for reform. The activities for this phase are likely to include:
 - a process for gaining the appropriate approvals and sign-off through the COAG Energy Council
 - undertaking the feasibility and scoping studies required to progress the recommended model
 - the documentation of a “standard” that underpins the software tools
 - the development of a detailed implementation strategy and plan—which includes a stakeholder engagement strategy—and a process for gaining the detailed approvals required to implement a sustainable model.
- *Transitional phase.* In this phase government should tackle all of the design issues associated with the recommended model and its implementation against an agreed schedule. This phase should also involve detailed consultation (where required) to ensure the parameters of the recommended model are appropriately identified and the implementation steps/actions will deliver the outcomes being sought. The activities for this phase are likely to include:
 - a process of conditioning stakeholders and industry practitioners for the upcoming change (i.e. through a customer education programme)
 - the establishment of the new NatHERS secretariat and regulator—including finalising all of its staffing, accommodation and corporate arrangements for the new bodies
 - finalisation of any legislative or regulatory changes required to support the new governance and operating model.
- *Operationalisation phase.* In this phase, relevant parties will be involved in managing the ongoing implementation of the recommended model. This will also include a preliminary review to ensure the new arrangements are performing as intended.

The implementation activities should be underpinned by constant monitoring and reporting to ensure they are progressing against any overall strategies or implementation plans developed to achieve long term simplification. A small number of independent reviews could also help to provide assurance that sufficient progress against any implementation plans is being achieved and to address any implementation problems as they emerge.

A high level illustrative implementation plan for the recommended model is presented in Figure 6.2 below. The figure illustrates the sequencing of actions and the timeframes associated with different aspects of the implementation process. The figure also indicates when an independent review of phase is desirable.

FIGURE 6.2 HIGH LEVEL ILLUSTRATIVE PLAN OF IMPLEMENTATION ACTIVITIES

SOURCE: ACIL ALLEN BASED ON ANALYSIS UNDERTAKEN FOR THE REVIEW

6.3.2 A staged approach to implementation

There is the potential for “quick wins” by undertaking a staged approach to implementation.

1. **Objectives**—clarity on the role of NatHERS could be enhanced within a couple of months by agreeing on a clear set of objectives for NatHERS and communicating these widely.
2. **Separating NatHERS’ regulatory and policy functions**—while it will take some time to transfer NatHERS’ regulatory functions to an independent regulator, the regulatory and policy functions could be retained within DIIS in the meantime, but with clear separation. This separation could be reinforced by transferring the regulatory functions to a more building-oriented section within DIIS. By doing so, the policy functions would be aligned with the energy portfolio and the regulatory functions would be aligned with the building portfolio.
3. **Commence work on documenting a “standard” that underpins the software tools**—work could commence on documenting a “standard” almost immediately, with parallel consideration as to the most appropriate approach to formalise it, and any consequential changes that may be required to the NCC.
4. **Enhance stakeholder engagement**—the strong criticism of the current engagement of stakeholders by NatHERS emphasises the need to enhance stakeholder engagement on an urgent basis, building on the improvements that have been made over the last 12 months.
5. **Funding**—the regulatory functions need to transition to a sustainable funding model as quickly as possible to reduce reliance on governments’ budgetary processes and ensure that the regulatory functions are resourced appropriately. In parallel with separating the policy and regulatory functions, a budget for the regulatory functions can be developed and a cost recovery mechanism developed.

Following these quick wins the reform path can continue as per section 6.3.1.

6.4 Next steps

Stakeholders consulted for this Review generally recognise the NatHERS Administrator’s work (over the past 12-18 months) to develop a strategic plan, implement more transparent and systematic consultation/communication processes, and to implement more robust MOUs and financial agreements with key parties operating in the Scheme. These stakeholders considered that the NatHERS Administrator has set NatHERS on a pathway which addresses critical design issues. However, these changes alone will not ensure the longer term survival of NatHERS and more fundamental reforms (as outlined in the report) will need to be planned for and investment decisions will need to be taken by the Scheme.

In terms of this Review, we have identified a number of next steps that are important in progressing reforms. They include:

- DIIS to circulate this report among the jurisdictions responsible for the Scheme’s governance and operations. This will include circulation amongst the EEAT before approval can be granted at SCO and higher levels.
- DIIS to provide a copy of this report to all stakeholders consulted during the project. This will be important for socialising the concepts underpinning the recommended governance and operating model, and for demonstrating that NatHERS is listening to key stakeholders and takes their feedback (especially constructive criticism) seriously.
- DIIS to publish this report on the NatHERS website once the report has been granted its appropriate approvals.
- DIIS, the NatHERS Administrator and jurisdictional representatives to jointly scope out the preferred options within the recommended governance and operating model and to explore transitional requirements of reform. This would be a good opportunity to identify any changes to the recommended option that might be required to deliver an efficient and effective governance and operational model.
- DIIS to consider a detailed plan for implementing the recommended governance and operating model. This will involve the sequencing of concurrent investment activities (as outlined in Figure 6.2) and developing business cases and new policy proposals where resources are required to fund the

activities outlined in this Review. It is assumed that the overall benefits of reform will, over time, exceed the upfront costs associated with implementing the recommended governance and operating model. Further analysis of what these costs and benefits are will be required to convince funding partners about the merits of reform.

Support from various NatHERS stakeholders that sit outside government would assist with the progression of the recommended model, in part by strengthening government confidence that key stakeholders support their implementation plans. Historically, the rancour of energy versus buildings sector policy debate in Australia makes broad stakeholder support crucial to the delivery of any future reforms.



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APPENDICES



This appendix provides the results of a desktop review undertaken for the project.

A.1 Literature review of key issues with the NatHERS Scheme

This section identifies key issues discussed in the literature regarding the governance and administration of NatHERS. This section does not include ACIL Allen analysis of the issues raised. The issues identified are as follows:

- governance of NatHERS
- governance of the national energy efficiency building design regime
- the performance of energy efficiency ratings tools
- the accuracy of NatHERS assessments made by accredited NatHERS assessors
- governance regime for building energy efficiency performance
- assessing building performance on an “as built” basis.

A.1.1 Documents reviewed

The literature review undertaken for this section has examined the following documents:

- ACIL Allen 2015 – *Commercial building disclosure: program review* (ACIL Allen Consulting, 2015)
- CIE 2009 – *Final regulatory impact statement for energy efficiency requirements for the BCA* (Centre for International Economics, 2009)
- CSIRO report – *The evaluation of the 5-star energy efficiency standard for residential buildings* (Ambrose, 2013)
- Floyd Energy 2014 – *NatHERS benchmark study* (Floyd Energy, 2014)
- Pitt & Sherry – *National energy efficient building project* (Pitt & Sherry, 2014)
- Sustainability House – *Report for the Australian Building Codes Board on the comparison of NCC Elemental energy efficiency requirements with NatHERS Energy ratings* (Sustainability House, n.d.)
- O'Dea 2016 (O'Dea, 2016)
- Heaton 2016 (Heaton, 2016).

A.1.2 Findings and recommendations

This section details findings and recommendations identified in the literature review that are relevant to the NatHERS governance and operational review. The literature presented limited findings and recommendations relevant to this review, the most material of which were as follows:

- there should be a new governance model for NatHERS with greater industry participation with a viable ongoing financial model

- State and territory governments should consider having a single national act addressing building regulation instead of state and territory Acts
- the energy efficiency rating software needed technical improvement
- the energy efficiency rating assessments made by accredited assessors were of varying quality with many making inaccurate assessments.

Table A.1 below presents key findings, recommendations and supporting quotes from the literature review.

TABLE A.1 FINDINGS, RECOMMENDATIONS AND SUPPORTING QUOTES FROM THE LITERATURE REVIEW

Author	Finding and recommendation
Governance of NatHERS	
Pitt and Sherry (Pitt & Sherry, 2014)	<p>Recommendation:</p> <p><i>That governments develop a new governance model for NatHERS, with greater industry participation, and commission an independent, zero-based budget assessment of the ongoing funding for professional standards of tool maintenance and development. This review process should establish a viable ongoing financial model for NatHERS.</i></p>
O'Dea (O'Dea, 2016):	<p>O'Dea, in a blog, addressed the funding model, questioning whether the Chenath Engine should be open source:</p> <p><i>Given the recent Chenath engine updates to account for bugs and improvements, which has taken over a year to integrate into the various software tools, should we not have seen a BESTEST update illustrating continual compliance against the protocol? Paid for by the tax payer, should this not be an open source engine, as the equivalent (Standard Assessment Procedure) is in the UK?</i></p>
Governance of the national energy efficiency building design regime	
Pitt and Sherry (Pitt & Sherry, 2014)	<p>Recommendation:</p> <p><i>State and territory governments should consider having a single national act addressing building regulation instead of state and territory Acts.</i></p> <p>Pitt and Sherry argued:</p> <p><i>While not a major issue in the review, a number of stakeholders queried why the Code is given effect by differing legislation at the state/territory level, given that the clear intent of governments, and desire of industry, is for national consistency. The Inter Governmental Agreement that provides for the operation of the ABCB calls, inter alia, for '...the consistent application of the NCC across and within each State and Territory...' and '...encouraging increased harmonisation in the administration of the NCC across Australia. At the same time, it allows for (albeit discourages) variations and additions. We note that energy performance standards for appliances and equipment were until 2012 given legislative effect via state and territory Acts (using a 'mirror legislation' that required only one jurisdiction, South Australia, to pass model provisions, while simple Acts in other jurisdictions gave legal effect to the South Australian Act in their territories). However, this machinery was replaced by a single national Greenhouse and Energy Minimum Standards Act 2012. As a longer term initiative, state and territory governments may wish to consider a similar 'streamlining' reform for building regulation.</i></p>

Author	Finding and recommendation
Performance of rating tools	
Pitt and Sherry (Pitt & Sherry, 2014)	<p>The performance of energy efficiency ratings tools may relate to the governance arrangements surrounding the NatHERS Administrator. There were many comments made on the performance of ratings tools, with a view from many parties that the tool needed improving.</p> <p>Pitt and Sherry observed that (Pitt & Sherry, 2014) stakeholders had many concerns about the performance of ratings tools.</p> <p><i>Stakeholders raised many issues regarding the performance of rating tools. The primary focus was on the NatHERS family of tools, although some raised issues with software tools used for reference building modelling for Class 2 – 9 buildings as well. The key issues appear to be:</i></p> <ul style="list-style-type: none"> – <i>Excessive ‘flexibility’, allowing poor designs to achieve required ratings;</i> – <i>A lack of investment in tool maintenance and upgrading through time;</i> – <i>A lack of responsiveness to stakeholder concerns and, relatedly, governance structures that are perceived as remote from industry;</i> – <i>Concerns about the handling of certain climatic factors, from hot, humid climates to local factors such as shading and breezeways.</i> <p><i>It is beyond the scope of this review to validate all of the concerns raised. We note that different stakeholders offered competing views in some instances. For example, some were concerned that climate zones were too coarse, failing to resolve subtle differences in the prevailing climate conditions (such as sea-breezes), while others offered the view that the NatHERS tools make too much effort to distinguish minor climatic differences which may not be material from an energy performance/building design perspective. Some argued that shading from trees and garden structures should be taken into account, while others viewed these as temporary and unreliable. Many noted that the very same flexibility that is necessary to resolve detailed design features in buildings may also be used to ‘push’ poor designs, to give them the appearance of compliance. While some noted that behavioural factors are extremely important for modelling expected energy consumption, others argued that it is not possible to anticipate these behaviours, particularly over the whole life of a building, and that therefore they are not material.</i></p> <p><i>We do draw particular attention to the widespread view that the NatHERS tools perform poorly in hot, humid climates. We consulted informally with some experts in this field, and also attempted to draw out examples and specifics from those offering such views, in order to try and validate them. No stakeholder was able to provide us with specific examples of problems, while several experts in this field noted that this is very largely myth, but also a hang-over from legitimate concerns from the earliest versions of NatHERS, long since addressed. However as with some other concerns, and potential myths, encountered during this review, this one is sufficiently widespread – amongst government policy advisors, regulators, designers and others – that it is contributing to the wider culture of apathy or even hostility towards energy efficiency performance requirements. It is remarkable, for example, that the Northern Territory sets aside the whole of Section J, and BCA2010 requirements for housing, in a context of widespread air conditioning of buildings and high energy costs.</i></p> <p><i>There was widespread concern at the lack of investment in research and maintenance of rating tools, leading to key files being years out of date. One stakeholder claimed, although without providing specific examples or evidence, that there were over 50 known ‘bugs’ within AccuRate. Relatedly, many complained of a lack of transparency, stakeholder engagement and a published and appropriate work program for tool maintenance and development.</i></p> <p><i>Many noted as a major process flaw that the key assumptions or design features necessary to obtain a compliant rating are not made transparent to the building owner or builder. As a result, it cannot readily be checked whether these features have in fact been installed in the finished building. This is likely to be one of the causes of the substitution issue discussed further below. We were told of practices whereby designs with poor solar passive features (for example, excessive glazing areas on a western façade) may be specified with impracticably high levels of insulation, or very high performance (and therefore expensive) glazing requirements, in the tacit knowledge that such features are unlikely ever to find their way into the finished building. Therefore while the rating tools may be faithfully modelling the specifications required to achieve a compliant building, the building itself is unlikely to be compliant. While this review offers a range of recommendations to address this concern, a simple and standard-form ‘fact sheet’, automatically generated by the software tools and certified by the assessor as true and correct, would be a key input into an auditable and accountable system to counter post-approval variations and substitutions.</i></p>

Author	Finding and recommendation
O'Dea (O'Dea, 2016)	<p>O'Dea, in a blog, argued:</p> <p><i>Beneath the hood and focusing on the energy modelling tools, the CSIRO developed Chenath engine has proved suitable for Class 1 buildings and meets the internationally recognised BESTEST protocol (northern hemisphere) for software testing. While tested for Class 1 buildings back in 2004, can we really state that this methodology can be readily transferred to multiresidential (Class 2) buildings with fundamentally different flows and storage of energy? Given the recent Chenath engine updates to account for bugs and improvements, which has taken over a year to integrate into the various software tools, should we not have seen a BESTEST update illustrating continual compliance against the protocol? Paid for by the tax payer, should this not be an open source engine, as the equivalent (Standard Assessment Procedure) is in the UK?</i></p> <p>...</p> <p><i>Another technical question that cannot be ignored is the simplified treatment of windows or glazing systems. Using the supporting technical compliance documentation to ensure all NatHERS modelling is undertaken under the same assumptions, we are directed to use a default database for window performance; the Window Energy Rating Scheme (WERS). Representing a list of default values within the NatHERS modelling software that enables windows to be rated and labelled for their annual energy performance, WERS neither reflects the custom window products being procured on most Class 2 multi-residential projects nor their performance as it is primarily a function of the frame quality. As such, we are adding values to models to 'make it work' for glazing systems that are not those used in the built form. We don't make up values for lighting, HVAC, walls or other features, so why do we do this for windows?</i></p>
CSIRO (Ambrose, 2013):	<p>The CSIRO report commented on the performance of the Chenath Engine:</p> <p><i>More research is also required to compare the energy performance of individual houses using the Chenath thermal modelling engine, which forms the basis of the rating tools accredited under NatHERS. Predictions from the Chenath engine should be done under as-occupied assumptions, rather than rating assumptions. This would help to further validate the NatHERS benchmark calculation engine and provide a basis for identifying key house design sensitivities.</i></p> <p><i>The data should also be used to explore a range of industry issues, such as:</i></p> <ul style="list-style-type: none"> – <i>quantifying the impact of thermal loads, such as cooking appliances, entertainment and home office electronics, standby loads and human metabolism, which may favour heating efficacy in winter over cooling efficacy in summer</i> – <i>identifying the variety of human behaviour (e.g. opening windows) and thermal comfort factors (e.g. thermostat settings) affecting energy consumption, and informing the Australian public about improving thermal comfort and saving energy in their houses</i> – <i>using this information to better understand which house design solutions are most appropriate for summer cooling-dominated climates</i> – <i>identifying the relationship between the peak cooling demand predicted by the Chenath engine and air-conditioner sizing, and informing the residential air-conditioning industry of opportunities for improving energy efficiency and reducing costs</i>
Sustainability House (Sustainability House, n.d.)	<p>The Sustainability House report stated that the FirstRate5 and BERS pro rating tools produced different outcomes to the AccuRate tool and that many of the differences could be attributed to features designed to simplify the rating process but limit the user's choices or set default values. The report recommended that this should be referred to the NatHERS Administrator for further examination (Sustainability House, n.d.).</p>

Author	Finding and recommendation
Accuracy of assessors' assessments	
Pitt and Sherry (Pitt & Sherry, 2014):	<p>There were a number of comments made on the accuracy of energy efficiency assessments made by accredited assessors. There were also comments made on the impacts of accredited assessors competing with unaccredited assessors to make energy efficiency assessments using NatHERS.</p> <p>Pitt and Sherry observed that a study of NatHERS assessors found that "On average, assessors answered 65% of questions correctly."</p> <p><i>The Department of Industry commissioned a study to measure the accuracy and consistency of energy rating assessments performed by Nationwide House Energy Rating Scheme (NatHERS) assessors. The resulting report has been published, and the NEEBP team has been briefed on the preliminary findings by Department officials.</i></p> <p><i>Several hundred of the estimated 1400 assessors practicing in Australia participated in the benchmarking study. As part of the study, participants completed a randomly assigned assessment of one of four plans of Class 1 and 2 homes. They also answered a series of questions relating to data entry techniques and understanding of requirements. Key preliminary findings of the study include:</i></p> <ul style="list-style-type: none"> – About 21% of assessments were exactly correct, with another 45% achieving a score within the regulated tolerance for accuracy. About 15% were too high by 1 or more stars. Around 21% were too low by 1 or more stars; – On average assessors answered 65% of questions correctly; – Zoning errors were made by 60% of assessors in the zoning of house plan 1. 85% of assessors assigned house plan 4 made errors; – Design complexity correlated with error rates. House plan 1 had simple design and documentation and 57% of those assessing that plan were within a quarter of a star. House 4 was an apartment on the 15th floor of a class 2 building and only 19% of those assessing that plan were within a quarter of a star; – 20% of assessors made errors concerning net conditioned floor area; – Errors in modelling the impact of overshadowing was made by 75% of those assessing house 1; – 22% of participants used Accurate, 43% used FirstRate5 and used 35% BERS Pro; – Use of a particular tool was correlated with error rates – but not to a statistically significant rate at 95% confidence; – Assessors belonging to different accrediting organisations (ABSA and BDAV) participated, as did a smaller number of unaccredited assessors. Error rates and ranges did differ along those lines with each type represented in most error bands – but differences were not to a statistically significant rate at 95% confidence.
Floyd Energy (Floyd Energy, 2014):	<p>Floyd Energy did a benchmarking study of NatHERS assessors' assessments.</p> <p>Floyd Energy made the following recommendation:</p> <p><i>It is important that NatHERS assessments are consistently accurate to ensure compliance with building regulations, effectiveness in saving energy, for the reputation of the industry and to ensure consumers get the service they pay for. The requirement that all assessors complete the Certificate IV in NatHERS Assessment by 1 July 2015 is an important step towards improving the skills of assessors.</i></p> <p>Floyd Energy found that:</p> <p><i>"...around 21% of assessments obtained the correct rating around 37% of ratings were within 0.25 stars, 58% within 0.5 stars and 77% were within 1 star (Table 1). Alternatively, 64% of assessors had an error greater than 0.25 of a star".</i></p> <p>They argued:</p> <p><i>This study highlighted areas where enhancements could be made to NatHERS to increase the accuracy and consistency of NatHERS assessments. These can be grouped into four broad categories:</i></p> <p>1.3.1 Mandatory accreditation of assessors</p> <p><i>This study found that there was a high level of error in NatHERS ratings irrespective whether assessors were accredited or not. The quality assurance (QA) processes of accreditation is a mechanism that could contribute to more accurate assessments, however, there is no process available to improve the accuracy of unaccredited assessors. Making accreditation mandatory for all assessors is essential to ensure to improve the accuracy of assessments.</i></p> <p><i>The error rate showed that there are benefits for further CPD training for assessors in Technical Notes 1 and 2. This additional training should incorporate evaluation to ensure that the content is understood by assessors. The Technical Notes could be improved by providing detailed examples to better explain the principles.</i></p> <p>1.3.2 NatHERS tool improvements</p> <p><i>NatHERS Software Tools could be further improved to minimise error rates. This includes improvements such as automatic calculation of ceiling penetration area, better guidance on the allocation of zone occupancy types and the application of heating and cooling, automatic calculation of waffle pod slab R values and simplifying data entry for overshadowing. The calculation of NCFA is not consistent across tools and should be harmonised as the rating is determined on the basis of this area.</i></p> <p>1.3.3 New resources for assessors</p> <p><i>A number of new resources for assessors would help to increase accuracy:</i></p> <ul style="list-style-type: none"> – The NatHERS assessor industry has no standard data entry and error checking procedures. Development of such procedures would facilitate a more systematic approach to rating. This would help to eliminate many of the errors found in this study; – A comprehensive technical manual for assessors which explains how to model all the design and site features which assessors may encounter in the field; and – Work with product suppliers to develop trade literature which better meets the needs of assessors (69% reported that they had difficulty finding the information they needed in trade literature).

Author	Finding and recommendation
	<p>1.3.4 Improving future NatHERS assessor benchmark studies</p> <p><i>The proposed Universal Certificate extracts data from the rating file and displays this on the Certificate. A similar tool which extracts a larger set of data than the proposed Universal Certificate from NatHERS rating files automatically would have significantly reduced the extent of analysis required, facilitated analysis in greater detail and made participation in this study faster and easier for assessors. It would also avoid issues of assessor misinterpretation of questions. The proposed universal certificate generator could be modified to do this. It would also significantly reduce the resources needed for QA checking by AAOs and assist in the marking of exams and tests for trainers.</i></p>
CIE (Centre for International Economics, 2009)	<p>In 2009, the CIE critiqued the performance of the CSIRO energy efficiency software (Centre for International Economics, 2009)</p> <p><i>The mandated rating software used throughout Australia for residential construction is variously based on the CSIRO developed thermal calculation engine Chenath, and implemented through the 'second generation' software AccuRate, BERS Pro, and FirstRate. The settings and assumptions of AccuRate, and in particular its predecessor, NatHERS version 2.32 have been a subject of considerable debate—the modelled energy use has not generally corresponded well with existing energy use data from the limited surveys undertaken.</i></p> <p><i>No methodology has been established to reliably correlate simulated household energy use for heating and cooling with actual likely use, either on individual dwelling, or aggregated basis. Only a very few discrete studies addressing this problem can be found in the literature. Energy Partners (2001) and Energy Efficient Strategies (1999) used simple constraint factors, which were employed for the cost-benefits studies of the introduction of energy efficiency measures into the BCA. They would normally be considered to represent unacceptably over aggregated data to be applied to estimates of the kind proposed in this evaluation, and in any case vary unacceptably between the studies.</i></p> <p><i>The third, a study of a small number of dwellings of diverse design, Williamson et al (2001) has shown that it is possible to achieve an acceptable statistical correlation by incorporating appliance efficiencies and fuel type considerations into NatHERS predictions. But while the study suggests a regression for the relationship, it is not suggested that the predictive power of the model is appropriate for the use required here.</i></p> <p>And in relation to the exclusion of seasonally redundant heating or cooling operation:</p> <p><i>In the two climate zones for the Sydney region, as required for the Landcom study (ibid.), aggregated heating loads for November to March, and aggregated cooling loads for May to September, were discarded. This overcame the problem that NatHERS (AccuRate) allows 'redundant' cooling in winter and heating in summer when the thermostat settings are reached. There is no specific citation from the literature that may be employed for designating such periods of discounted heating and cooling, for other climate zones. That has been the position for some time, and was the advice of CSIRO to TAC during the final stages of development of AccuRate, as an explanation for why the anomaly persists in the second generation software. Notwithstanding that problem, provisional heating and cooling seasons for each of the climates subject of the current study could have been identified by expert opinion. However, the database in the ABCB's energy efficiency rating calculator (EER calculator) does not include the relevant hourly detail to allow the filtering and deduction of 'redundant' heating and cooling from the predicted aggregated loads.</i></p>
Heaton, (Heaton, 2016)	<p>Heaton, in a 2016 blog, referred to some industry views that the NatHERS rating software is "generally robust as a benchmarking tool":</p> <p><i>Clare Parry, principal sustainability consultant at Grun Consulting and CEO of the Australian Passive House Association, says the system is generally robust as a benchmarking tool to inform decisions about energy consumption. She added, however, that it suffers as a result of a lack of verification regarding the performance of the as-built product matching up with the design upon which the rating was based.</i></p> <p>Heaton also referred to other views in industry about inaccuracies in the three software packages:</p> <p><i>Darryl Hargreaves, a director of outer-Melbourne based house design and energy rating outfit Harvan Design, ...</i></p> <p><i>As well as the lack of checking with regard to the as-built product, he says there are inaccuracies within the FirstRate software program (one of three software programs accredited by NatHERS for use by NatHERS assessors) and that the system can be manipulated in many ways to achieve what you want to achieve. For instance, even when loading plans into the program (from a PDF) and subsequently scaling it to size, there can be inaccuracies as there are no points to pick on and you are not given the size of the room and therefore left to guess where the corners are, he said.</i></p> <p>Darryl Hargreaves also referred to the efficacy of the tool:</p> <p><i>Finally, he said, there are limitations with the tool as an overall rating of household energy efficiency in that the NatHERS tool revolves around a rating of building fabric, and does not take into account heating and cooling or the energy efficiency of appliances within the home. Put evaporative cooling into a home, Hargreaves says, and the energy rating essentially goes out the window.</i></p> <p><i>Others, however, defend the system. CSIRO Energy for Buildings manager Dr Stephen White, for example, acknowledges that there are genuine issues associated with implementation and verifying that the as-built product lives up to the rating given by the NatHERS design, but says many criticisms of the tool stem from either misunderstandings of the role of the scheme or from people with an 'axe to grind.'</i></p> <p><i>Whilst some critics had wanted the tool to better represent airtight houses, he said, others had criticised it for supporting 'sealed and insulated boxes.' The industry cannot have it both ways, he said.</i></p> <p><i>As for arguments about the system could be 'gamed,' White says NatHERS was largely designed to eliminate poor practice as opposed to enforcing best practice. Moreover, builders should be using the flexibility of the tool to look for ways to build compliant homes as cheaply as possible, he added.</i></p>

Author	Finding and recommendation
	<p><i>As for notions about the system being taxpayer funded, White says in fact the system is user paid and is funded by a small charge to enable assessors to use the software.</i></p> <p><i>"I think NatHERS is working well," White said. "Builders are voting with the feet (over 70 per cent of houses use NatHERS to comply with the code) and evidence shows that consumers are getting better quality houses at a more affordable price."</i></p> <p><i>White acknowledges that the system did suffer from under-investment in continuous improvement in its first decade of use, especially in terms of the fact that it has only recently gone into the cloud. He adds that interfaces are not yet as they could be and integration of the software with CAD has only recently started to occur.</i></p> <p><i>Nevertheless, he says any alternative system will require ongoing investment to ensure it remains relevant and responsive to industry.</i></p>
Governance regime for building energy efficiency performance	
Pitt and Sherry (Pitt & Sherry, 2014)	<p>While not directly relevant to this review, the governance arrangements relating to the energy efficiency performance of buildings received comment from Pitt and Sherry.</p> <p>Recommendation:</p> <p><i>That governments clarify the governance arrangements for the energy performance requirements in the Code, and communicate these arrangements clearly to stakeholders.</i></p> <p>They argued that:</p> <p><i>ABCB is overseen by a Building Ministers Forum comprising relevant ministers from each jurisdiction. The Building Ministers Forum is unusual in that it falls outside the Committee structure agreed by the Council of Australian Governments (COAG). This governance arrangement is problematic in that it is unclear what authority the BMF has and, as noted, it has in practice deferred to COAG in the past when it comes to setting energy efficiency performance levels in the Code. This process sets a high hurdle to changing stringency levels through time, regardless of the economic cost effectiveness of doing so. The COAG agenda is often taken up with larger issues, against which building energy regulation issues may struggle for attention. Further, it has long been unclear which ministers accept accountability for building energy performance. While Building Ministers are generally responsible for the Code, in some jurisdictions this responsibility falls to Planning Ministers. However, energy performance requirements, and energy efficiency matters more generally, are overseen by Energy, Industry or sometimes Environment Ministers. This confusion makes it unclear what processes or should apply to changes in energy performance requirements, who is responsible for funding and undertaking the necessary research and consultation, or where stakeholders should look for leadership (or indeed, to lobby against change). In practice, much of policy leadership and at least half of the funding has come from the Australian Government, despite the fact that it plays no direct role in building regulation.</i></p>
Assessing building performance on as "as built" basis	
Pitt and Sherry (Pitt & Sherry, 2014):	<p>While not part of this review, there were many comments that building energy efficiency performance should be based on an "as built" basis as opposed to an "as designed" basis.</p> <p>Pitt and Sherry recommended:</p> <p><i>That governments agree to identify opportunities to progressively shift the energy performance requirements in the NCC to an outcomes, 'as built' basis.</i></p> <p>They argued:</p> <p><i>A fundamental issue raised by some stakeholders – generally architects and designers but also building surveyors and energy assessors – is the Code's focus on assessing the energy performance of building designs rather than actual buildings. The advantage of the current approach is that it enables builders to know in advance of construction that the building, when completed according to the approved design and specifications, is at least very likely to comply with the Code. This reduces the risk of expensive rework. The current approach also abstracts from the actual usage conditions of the building, such as occupancy levels, fit-out, hours of operation, etc, all of which may affect actual energy consumption. Designers and developers may see these factors as outside of their control, even if these factors should, and may indeed, inform design and specification choices.</i></p>
O'Dea (O'Dea, 2016)	<p>In a 2016 blog, O'Dea expressed concern about the costs of complying with regulatory requirements and that the requirements miss real-world concerns about the assessment process.</p> <p><i>After five years of development and consultation, from July 1, 2015, all existing accredited assessors have been required to upgrade their skills to the Certificate IV in NatHERS Assessment. The aim of this professional development has been to achieve 'consistent and reliable outcomes' by assessors that require a minimum level of understanding of building construction, building thermal performance and applicable building regulations.</i></p> <p><i>Early feedback from the NatHERS modelling community suggests that this onerous undertaking - expect two to three weeks of full-time training at a significant cost to your business through lost revenue - fails to engage in developing an understanding of how to improve sustainable design skills. Rather, it achieves 'consistent and reliable outcomes' by teaching the assessor how to game the system to 'make it work' within assessment scenarios that are fundamentally detached from commercial reality. With an unclear outcome for our built environment, this process represents a very real risk that it will harness resentment of the NatHERS assessment process rather than engaging our industry and further reduce the body of assessors nationally.</i></p>
SOURCE: VARIOUS	



This appendix details the list of stakeholders consulted during this project.

TABLE B.1 STAKEHOLDER INTERVIEWED

Name	Title/Organisation	Interview date
Jennifer Harlock	Manager, Building Sustainability, NT Government	8 April
Kate Bell	CEO, BDAV	11 April
Philip Alviano	Sustainable Building Advisor, MBA	12 April
Dennis D'Arcy	ICANZ	13 April
Jesse Clarke	CSR	13 April
Talis Krumins	FI	13 April
Craig Walker	Manager, Demand Management Policy, SA Government	13 April
Steve Storer	Department of Housing & Public Works, Qld Government	13 April
Sharnie Makinson		
Mark Davis	ABCB	14 April
Heather Neilsen		
Tracey Gramlick	Executive Director, AFRC	15 April
Kristin Brookfield	Senior Executive Director, HIA	15 April
Bryn Dellar	Software Producers	18 April
Dennis Claridge	Energy Inspection	
Rob Enker	Manager, Building Innovation & Sustainability, Victorian Building Authority (Also ASBEC Housing Task Force)	18 April
Mary O'Neill	BASIX	19 April
Kevin Yee		
Scott Wilson		
Ray Hutt	General Manager (Central Vic), ABSA	19 April
Kevin Douglas	Chair	
Clyde Anderson	TAC Chair	
Rebecca Robins	Technical Advisor	
Sally Moxham	Manager, Households, Sustainability Vic (Also ASBEC Housing Task Force)	20 April
Wasim Saman	Research Leader, CRC LCL	20 April

Name	Title/Organisation	Interview date
Gary Davis	Group Manager, Department of Industry	21 April
Rodger Hills	ASBEC Housing Task Force	21 April
Francesca Muskovic		
Chris Jensen		
Deo Prasad		
Robert Milagre		
Shaila Divakarla		
Stefan Preuss		
Sally Moxham		
Greg Ryan		
Vanessa Morris		
Rachel Haley		
Suzanne Toumbourou		
Anthony Wright	CSIRO	27 April
Vanessa Morris	Environment and Planning, ACT Government	29 April

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