



## FOR GENERAL CONSIDERATION

### >>OUTLINE

## Establishment of a New Residential Building Energy Rating Scheme and Governing Organisation

**November, 2014**

A range of peak bodies and building sector organisations have formed the Building Verification Forum to collaborate on the establishment of a new national organisation called the Building Verification Council (BVC) by mid 2015. The BVC is intended to be a quasi-regulatory body (a self- and co-regulation arrangement) where government influences business to comply and assists with the development of codes of conduct, certification, verification schemes and participates in an ongoing dialogue with industry. The focus would only be on the residential sector of the building industry. While governments have responsibility for enforcing building regulations, the objective of the BVC is to close the gap between the designed and as-built performance of residential buildings. It will do this by addressing three significant industry problems:

- The systemic limitations of the current building regulations and the Nationwide House Energy Rating Scheme (NatHERS) on encouraging more environmentally sustainable housing.
- The endemic occurrence across Australia of building regulation non-compliance and compromised building performance.
- Lack of consumer demand for sustainable housing.

### **Systemic Limitations of Building Regulations and NatHERS**

This extraordinary step is being proposed in order to overcome widespread industry concerns regarding building energy efficiency standards and ongoing frustration with the NatHERS Administrator's actions. It is generally felt that the current building standards are not truly realising the potential of encouraging more sustainable building design. The decision by several jurisdictions not to adopt the current building energy efficiency standards in the National Construction Code (NCC), or to only partially adopt them, has also led to a piecemeal application of NatHERS star ratings across States and Territories rather than national consistency. Other major issues with the NatHERS scheme that have emerged since its inception include:

- Complex, inefficient and ineffective governance arrangements that separate the scheme's decision-makers (state and federal energy/environment departments) from those who are supposed to administer it (building authorities).
- The inability of building regulators to check as-built dwellings and their ongoing performance.

- Failure of governments to foster rating tool innovation and development.
- The lack of inclusion in building regulations and consequently in the NatHERS tools of the effects of fixed services, fixed equipment and fixed appliances as well as the management of rainwater and stormwater.
- The proliferation of non-accredited assessors in the market place (from 500 in 2012 to a projected figure of 1100 in 2015) and a corresponding reduction of the number who are actually accredited (from 1100 in 2012 to a projected figure of 500 in 2015) due to some states and territories not requiring assessors who undertake ratings for building approval purposes to be accredited by NatHERS.
- The focus in the NCC on regulatory minimum building fabric standards that does not facilitate rating tools and assessors moving to higher standards on a voluntary basis.
- Failure of the scheme to retain brand integrity and gather widespread industry support and homeowner trust.
- Inability of NatHERS tools to inform decision-making on, or reward the specification of efficient heating and cooling systems to maintain comfort levels in proposed houses.
- Inability of NatHERS tools to address energy, water and building sustainability issues other than space heating and cooling loads.
- Inability of NatHERS tools to inform a designer's iterative approach, because there is no linking of these tools to CAD databases through information transfer capabilities.

Furthermore the Administrator has not taken sufficient steps to protect the NatHERS logo and brand from inappropriate and fraudulent use in each Jurisdiction, resulting in some elements of the market treating the scheme with disregard.

### **Building Regulation Non-Compliance and Compromised Building Performance**

Recent research has identified that regulatory non-compliance and poor as-built performance of residential buildings in Australia is a significant problem (National Energy Efficient Building Project – Pitt & Sherry) for both the industry in terms of credibility and liability and for consumers in terms of not getting what they have paid for.

Interestingly, this is not an issue exclusive to Australia and recent research by the Zero Carbon Hub in Britain concludes that the same issues are rife throughout the UK.

With the residential building sector having to meet the demand for affordable housing while also responding to increasingly demanding technical standards, building performance will need to be demonstrated through verification, assurance and testing, rather than prediction alone as currently exists under the NatHERS scheme.

Yet the industry is not currently equipped with all of the means to perform this task. Hence an opportunity exists for the establishment of an organisation focused solely on ensuring that all buildings meet, or perform better than, their designed performance.

### Consumers Not Valuing Sustainable Building

A range of factors have interacted to dampen the demand for sustainable buildings including:

- Lack of targeted, credible and easy to understand information throughout the sales and valuation process.
- Buyers prioritise visible “aesthetic” choices (marble bench top) over hidden “utilitarian” choices (wall insulation).
- Housing affordability concerns blind consumers to ongoing operational and life-cycle costs.
- Wariness by buyers towards “greenwashing”.
- Consumers associate “sustainability” with increased red tape, compromise on quality, lack of durability, and a long list of “Don’ts”.

These factors have led to sustainability features not being valued in the house resale process, so efficient homes attract the same value as those that are inefficient. With demand for sustainable buildings remaining flat, innovative manufacturers struggle to survive in the market, opening the door wider for Non-Conforming Products to be used.

### The Need for the BVC

In 2013, the CSIRO proved that the introduction of 5 star energy efficiency requirements, delivered more comfortable and energy efficient housing stock at construction costs at or below what they were when standards were at 3-4 stars (CSIRO - The Evaluation of the 5-Star Energy Efficiency Standard for Residential Buildings, 2013). However, there is a natural limit on the ability of the NCC building energy efficiency standards to continue delivering these gains through building fabric improvements only, while requiring ever more complex rating tools, and higher levels of competency of assessors. Nor are the current NCC standards truly realising the potential of encouraging more efficient and comfortable building design.

To overcome these major issues, key players in the industry believe that a new approach is needed, one that will springboard off the work done by five previous investigations:

- National Energy Efficient Building Project (by Pitt & Sherry – 2014).
- Building Energy Rating Schemes: Assessing Issues and Impacts (by the International Partnership for Energy Efficiency Cooperation – 2014).
- National Building Energy Standard-Setting, Assessment and Rating Framework (by an intergovernmental working group – 2012)
- An Examination of Leading Practice and Pathways toward Net Zero Emission Homes (by the Institute of Sustainable Futures - 2012).
- An Industry Roadmap for Net Zero Emission Homes (by the Residential Development Council on behalf of ASBEC - 2013).

### Initial Task of the BVC

It is proposed that a self-regulating residential building energy rating scheme is developed by industry within the next 22 months, to coincide with the gazetting on May 1 of the 2016 NCC. The new scheme will sit within the Alternative Solutions compliance pathway of the National Construction Code to meet the performance requirements of the Energy Efficiency sections. The new scheme will unlock the potential of existing rating tools and assessment processes to do much more than that required by the regulatory minimum in all Class 1, 2, 3, 4 and 9 buildings.

As well, the new rating scheme will cover all phases of the building life-cycle - design, construction, and operation - in new and existing housing stock as well as alterations and additions to buildings. This makes the scheme applicable as a means to ensure that houses are being constructed as per initial DA and CA requirements prior to the granting of a Certificate of Occupancy. It also allows the scheme to determine energy efficiency in voluntary disclosure programs being considered various state and territory governments.

The key strengths of the new scheme that will make it a superior administrative framework for energy efficiency and sustainability in the residential sector include:

- Giving industry a 'seat at the table' and the ability to harness industry knowledge and expertise to address industry-specific and consumer issues directly.
- Quick and low-cost complaints-handling and dispute resolution mechanisms.
- Certification of assessors rather than accreditation to bring energy assessment professionals into alignment with other building professionals, thereby removing the systemic cost that is currently incurred by assessors and passed on to homeowners as part of the current NatHERS accreditation process.
- Benchmarking against international standards and guidelines while incorporating the latest research and data from around the globe.
- Creating an, industry-led and non-profit governance structure that can be recognised by government and is responsive to industry needs, changing technologies, government regulation and consumer expectations.
- Stringent replicability of results from tools, encouraging new software versions that enable the creation of add-on products and services that provide interoperability with CAD and drafting software.
- A step-change in reducing the time taken to produce accurate assessments from tools so that assessors are not forced to cut corners in order to work within the amounts the industry is prepared to pay for their services.
- Addressing key market failures in the building sector, such as information barriers where information on the performance of buildings is not available or hard to interpret, and the split incentives that exist between designers, builders and owners.
- Reducing the regulatory burden on industry and increasing productivity by ensuring those building energy efficiency standards and the systems used to assess and rate buildings are well

designed, transparent, nationally (and internationally) consistent and clearly communicated to industry and the community.

- Enhancing the ability of industry to plan ahead and develop innovative, practical and cost-effective sustainability solutions, which will also lower compliance costs for households and businesses.
- Preparing the building sector for changes to building standards that will adapt to predicted future climate conditions and more extreme weather events.
- Offering builders and designers an efficient and effective choice in the methodology they use to attain compliance with building regulations.
- Ensuring that the actual energy efficiency of buildings post-construction, matches the energy performance requirements in the National Construction Code determined pre-construction.
- Focusing on outcomes rather than inputs and setting ways to measure these.
- Being self-funding and not a drain on the public purse.
- Contracting with Jurisdictions to include benchmarks and outcomes to be delivered while offering flexibility for regions to meet agreed targets in locally appropriate ways.

The BVC has the potential to not only address verification issues surrounding the residential Energy Efficiency provisions of the National Construction Code (NCC), but in time, the verification issues associated with other key parts of the NCC such as Structure, Damp and Weatherproofing, Health and Amenity as well as Safe Movement and Access. Each verification scheme would require the certification of assessors, the use of certified assessment tools and the use of a centralised assessment/verification data collection system so that regulatory documentation output exactly meets the specific needs of each Jurisdiction.

### **The Structure of the New Verification Scheme**

The new energy efficiency verification scheme will sit within the Alternative Solutions compliance pathway of the NCC, and address all phases of the building life-cycle - design, construction, and operation. The scheme will also be designed to manage new and existing housing stock as well as alterations and additions to buildings. Underpinning the scheme will be certified rating tools and certified assessors all linked to a sophisticated data capture and processing system. Development or construction approval will be granted on the production of an Initial Verification Report, and once built, the building certifier will refer to a Final Verification Report before issuing a Certificate of Occupancy for the building.

At the same time, a Building Performance Label will be permanently fixed on the outside of the power or switch box of each new house at or just before the homeowner receives the keys to the dwelling. Data from the Initial and Final Verification reports can further be used as a reference point for Property Sale or Mandatory Disclosure assessments done some years after construction when the building ownership changes or new tenants take up residence.

The new scheme will be supported by dedicated websites, a call/e-ticket service, social media and other channels, coupled with comprehensive promotional efforts to maximise public and industry



engagement with the BVC and the verification scheme. The building thermal performance scheme will be benchmarked to ensure that intended outcomes are being met and that changes to the scheme are implemented to keep up with technological change, consumer expectations and Jurisdictional requirements. A regular program of research will be undertaken to ensure that the scheme has a positive and measurable impact on improving housing stock and asset values, while reducing energy consumption, resource use, pollution, water use and other negative community outcomes. Market surveys will determine consumer awareness and confidence.

### **Governance of the BVC**

Initially the BVC will operate on income from membership fees, funding and sponsorship for the first 22 months of its operation until it begins producing verification reports and can then move to a self-funding business model.

The BVC will be established as a limited by guarantee public company, a common structure for not-for-profit organisations. This model offers participants flexibility while imposing rigorous obligations in terms of reporting, accountabilities and auditing. The BVC's policies, direction and oversight will be governed by a Council of member representatives including Jurisdictions, local government associations, building surveyor organisations, assessor membership organisations, as well as representatives of the real-estate and property industry peak bodies, along with consumer and strata community groups to ensure broad input, sharing of information and diversity of views.

In addition there will be a small Board of up to five members to ensure that company activities are responsive to the needs of its stakeholders and the community and comprising:

- Member Representatives (3)
- Independent Directors (2)

Board members will be elected by Council members and appointed for a fixed term. The BVC will have a full-time CEO who will report to the Board and Council, and who will be supported by several professional support staff.

The bulk of the BVC's activities will be carried out by a series of specialist Task Groups that will research and develop processes for the certification of tools, certification of assessors, development of data systems, regulatory compliance, assessor training and marketing. These Task Groups give individual subject matter experts from both inside and outside the BVC, the opportunity to provide input and expertise. The Task Groups also give commercial businesses such as building material suppliers, consultants and other 'for-profit' entities, a way to interact with the BVC without manipulating or biasing outcomes, enabling them to host meetings, contribute to research and report writing costs, sponsor venues and support other Task Group activities and expenses.