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Submission to

Productivity Commission

Reform of Building Regulation

Submission from:

ANZSES

The Australian & New Zealand Solar Energy Society Ltd

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ANZSES

Our mission:

Empowering Our Future,
through environmentally responsible and sustainable use of renewable energy

The Australian and New Zealand Solar Energy Society aims to promote the use, research and development of environmentally responsible and sustainable renewable energy applications; to generate and disseminate information and knowledge on renewable energy developments to our members and the broader community; and to assist and influence governments and government policies for a positive and proactive impact upon renewable energy applications.

ANZSES Ltd is incorporated in the State of Victoria, Australia and is governed by a committee elected by its members. To enhance member contact and activity the Society has an active Branch in New Zealand and every Australian State and Territory. ANZSES is an affiliate Section of ISES, the International Solar Energy Society.

Reform of Building Regulation

ANZSES welcomes the opportunity to have input into the Productivity Commission's review of Building Regulation. From ANZSES' perspective, with an emphasis on sustainable energy, it is hoped that the ultimate outcome of the review will be to ensure that regulations both enable and encourage the use of renewable and sustainable energy supplies into building design, as well as incorporating high levels of energy efficiency.

Australia is currently one of the highest per capita greenhouse gas emitting countries, and as such needs to take active measures towards alleviating these emissions. Energy efficient building design, and the greater use of renewable and sustainable energy supplies, will contribute significantly towards this goal. Whilst current regulations address in part issues of energy efficiency, they do not address the greenhouse gas contribution of fuel sources, nor the merits of renewable and alternative sources. A Building Regulation that enables, encourages, and if necessary mandates such activities, can only be a positive move for Australia.

Any such changes that result in the regulations, however, need to have both the flexibility to ensure that regional differences can be accommodated, whilst still enabling an overall approach towards positive energy efficient and energy use outcomes.

Contribution of ANZSES members

The members of ANZSES are actively involved in ways and means to reduce greenhouse gas emissions and counteract global warming. Many of ANZSES' members are actively involved in the Renewable Energy industries and/or implement the benefits of such technology in their own daily lives.

Building Regulation that enables and encourages the implementation of such technologies into the Building Industry will in turn help the industry to develop and grow, making it more accessible to all involved in building – whether it be a simple house or major commercial development. The proactive contribution of ANZSES members would assist in making delivery of such Building Regulation achievable and therefore viable. A win-win situation for both the Government and the community.

In regards to the Issues Paper, ANZSES has provided comment and response to those areas relevant to its mission and purpose. Areas outside of the direct focus of ANZSES, such as process for planning and building approvals, effectiveness of local government, private certification and so on, have therefore not been addressed at any length in this submission and listed as 'Not applicable for comment' accordingly.

Issues Paper:

2. The Commission's Approach

2.1 Effectiveness

Is the mission statement of the ABCB the appropriate one for the intergovernmental body responsible for the reform of the building regulation?

ANZSES supports the ABCB's mission "to provide for efficiency and cost effectiveness in meeting community expectations ……through the creation of nationally consistent building codes, standards, regulatory building requirements and regulatory systems." However, assessment of efficiency and cost effectiveness needs to be taken over a long term view, rather than in the notion of up-front and short-term savings. The incorporation of improved regulation for energy efficiency and energy use will ultimately be more efficient and more cost effective in years to come, rather than as a short-term saving. Similarly, 'community expectations' needs to be balanced with the good of the community in terms of the good of the environment, not just what is deemed fashionable at the time. Whilst national consistency is highly desirable, there must still be flexibility to allow for regional variations – refer later comments.

What are community expectations for health, safety and amenity in the design, construction and use of buildings? Has the ABCB been able to adequately determine what the community's expectations are, including preferred cost-quality tradeoffs?

Is the definition of amenity in the BCA adequate? Should the term refer to the basic needs of a building or to anything that impacts on the comfort, pleasure and aesthetic qualities of a building? Does it give sufficient attention to factors that impact on those not occupying the building? Alternatively, should the term be interpreted more narrowly to provide greater focus?

Whilst ANZES acknowledges that current industry practice is a focus on amenity for personal comfort and benefit, the broader issue of amenity to the community must be addressed, and even broader again to the protection and enhancement of the environment. Taking this further, is the issue that what the community itself perceives as acceptable for the time being may be inadequate in the longer term (such as the long-term impact of increasing greenhouse gas emissions as a result of poor building design).

Of relevance to ANZSES are therefore the issues of energy efficiency and energy sources in regards to the construction and operation of buildings. There is a current groundswell of understanding and request for energy efficiency in house design, and to some degree for efficiency in large-scale commercial buildings. To a lesser degree is a growing awareness of the opportunities and benefits of renewable and sustainable energy sources. With ongoing education, such demand will continue to grow, and a regulatory system that encourages and enables such practices in buildings will go hand-in-hand as a result. Nonetheless, regulatory reform has the opportunity to work towards such goals now, and should not be dependant on waiting for a public request to do so.

Why is national consistency considered to be the crucial means by which to meet community expectation for health, safety and amenity in a cost effective and efficient manner?

How can more progress be made in adopting uniform administrative legislation?

Regardless of local climate, demographics, economics, etc, there is an overarching need to preserve and protect our environment. Uniform legislation within Building Regulation can ensure a consistency in setting benchmarks and standards, allowing the flexibility of differing State and Territorial regulations to deem how to achieve those benchmarks and standards. Of relevance to ANZSES, such benchmarks may involve achieving a reduced level of greenhouse gas emissions, specific building energy or ecological ratings, and/or allowances for connections to alternative energy supplies. These objectives will be obtained in different ways in different locations, but the uniformity of the benchmark

will enable consistency in achieving the same ultimate outcome, namely a reduced impact on the environment.

Is it feasible for all communities and individuals to use the national standard as their baseline, with the option of altering the standards where this better meets community or individual preferred tradeoffs between price and quality? How difficult/desirable is it for individuals or communities to enforce a higher standard than that in the Code?

Why are some differences in regulation intractable?

ANZSES believes that uniformity can be achieved if the right baselines are implemented. To regulate for energy efficiency is easily achieved if generic but practical issues are included with the appropriate flexibility to then adapt to location, climate, demographics, social context and so on.

For example, national regulation may require a minimum energy rating for domestic individual housing in order to achieve a high level of energy efficiency in all new housing, nationwide. For this to work, a national scheme of rating needs to be adopted as a baseline, with appropriate and adequate variances for not only location and climate, but lifestyles (such as free-running houses in warmer climates), social and demographic issues (larger/smaller poorer/richer families/towns) and/or cultural issues (religious, indigenous).

To achieve this, the national Code must be thoroughly researched prior to implementation, and whilst regulatory in its outcomes, must be equipped with suitable flexibility to allow the necessary variances. In this way, there would not be the need for individuals or communities to enforce a higher standard than that outlined in the Code.

What quantitative and qualitative indicators would facilitate assessing performance against some or all of the ten objectives of the ABCB?

ANZSES whilst not the appropriate body to suggest the relevant key performance indicators for the Board's objectives, believes that if appropriate regulation was in place to ensure a higher commitment to energy efficiency and sustainable energy use, the appropriate indicators of success would be the evidence of more buildings readily and easily achieving these outcomes. Specific to each objective –

1. The ABCB's objective to achieve consistency, and base a code on modern and efficient building practices would therefore reflect the broader technologies now available;
2. Minimum, least-cost solutions would reflect a real-term cost in relation to ongoing costs (economic) and health and amenity (environment) generally;
3. Opportunities for deregulation should ensure that this is only where appropriate to prevent 'cop out' solutions; This can only be achieved in a society that is inherently comfortable with such measures and where issues of energy efficiency and sustainable energy use are commonplace;
4. Success in research will be reflected by the ongoing incorporation and adaptation of new systems and products as they come on board; A Code that is flexible enough to adopt these changes will be one that is performance-based rather than prescriptive;
5. Transparency and consultation will similarly be reflected by ready acceptance of the industry and stakeholders of proposed changes to the Code; Further education in areas of energy efficiency and renewable and sustainable energy provision is essential for the industry to understand the critical issues, and for the Board to be able to implement them;
6. Simplification of wording will be obvious when there are less instances of misinterpretation or ambiguity; The areas of renewable and sustainable energy in particular need clear and precise definitions to avoid misunderstandings as to nature and intent;
7. Coordination and integration with other agencies again will be reflected by enhanced cooperation and clearer understanding all round; ANZSES would welcome greater involvement from the Board with the Renewable Energy Industry, as well as a higher commitment to energy efficiency in buildings generally;

8. International competition, particularly in regards to renewable energy products, is more likely to be enhanced and encouraged with a supportive regulatory environment; Increased overseas demand would be the positive outcome of this;
9. Ancillary matters, whilst not directly applicable to ANZSES, may entail an emphasis on greater commitment to the issues at hand, increased consultation and involvement with the Renewable Energy Industry, and greater information sharing between the different industries as a result;
10. Increased marketing and awareness of the Board will surely come as a result of the Code being the optimum and ultimate guideline for quality and responsible building design, and could therefore become the major source material for implementation of Energy Efficiency and Renewable Energy sources for buildings.

2.2 Productivity

In what ways has reform of building regulation affected the various measures of productivity of the building industry? Which is the best measure of productivity or should more than one be used?

What factors, other than regulation reform, have impacted on productivity? Is it possible to weight their relative importance?

Of relevance to ANZSES, regulatory reform that encourages energy efficiency and renewable energy sources as intrinsic to good building design, will result in increased awareness and capability by those in the industry. As such processes become the norm rather than the alternative, products and systems become more readily available, less costly, and there is less time-wasting with inexperienced designers, builders and tradespersons as best practice is understood more broadly. Education across the board, coexistent with changes to the regulations, are essential to achieve this.

2.3 Efficiency

Should the IGA objectives of the ABCB be changed, or would it be more appropriate for the ABCB to focus on consolidating the changes that have already been put in train? Or are there problems which have neither been fully recognised nor addressed as yet?

Ideally ANZSES would like to see an overarching emphasis within the building industry on issues of sustainability. This would include greater commitment to energy efficiency in the design, construction and operation of buildings, as well as enabling and encouraging the use of renewable and sustainable energy supplies into buildings. Ultimately, if the environment and the future are not protected, other issues of productivity, access, deregulation, costs, marketing and so on, pale considerably into the background.

3 Institutional arrangements

What processes involved in developing and implementing building regulations are most likely to deliver outcomes that are effective and efficient, and meet community objectives at least cost?

Not applicable for comment by ANZSES;

How well do planning and building approvals processes operate together in each jurisdiction? How do councils interact with the Code? How difficult would it be to delineate between areas of responsibility for planning approval and building approval?

Not applicable for comment by ANZSES other than to comment that other bodies such as utility suppliers may need to be included in the equation (as in supply of energy).

Is there a sound rational for local councils to impose additional building requirements above those contained in the BCA? Do they have the resources to do this?

Whilst not overly applicable for comment by ANZSES, it is our belief that a nationally consistent hierarchy of precedence is necessary. That is, that a national Code has highest ruling to take precedence

over any local regulation, but so designed that it does not negate the flexibility of any local regulation. This would allow for the implementation by local councils, for instance, to encourage or even legislate for use of local energy technologies that may not be available nationally, are site specific, and should be encouraged for use. The national Code would need to have the flexibility to legislate for a performance use or outcome, whereas the local jurisdiction may provide the specific prescriptive technology. Further such streamlining would reduce the costs incurred at a local level to implement the necessary local variances, as these would be an extension of, rather than alternative to, the national Code.

3.1 The ABCB

Are ABCB funding and charging arrangements appropriate?

Is the ABCB structure and membership appropriate for achieving its objectives? Are there other institutional models that would improve the effectiveness of national reform?

How important is the direct involvement of the Australian Government in achieving national reform to building regulation? Should the ABCB be more independent?

Not applicable for comment by ANZSES other than to ensure body representation includes those from all areas of industry, including such as those representing the Renewable Energy Industry, and those involved in energy efficient building design, products and systems.

3.2 Code-making processes

Do the processes by which standards are made, ensure that standards contained in the Code are well based?

Would greater alignment with standards from other countries be desirable?
Are the level and type of consultations by the Board and its advisory committees appropriate and transparent (in order to fulfil the ACB's objective 5)? Are there adequate mechanisms for interested parties not directly represented on the ABCB or its advisory committees to provide input into the development and reform of building regulations? Are there other consultation strategies that would facilitate greater transparency for stakeholders? Does the ABCB have the necessary representation to determine what meets community expectations for health, safety and amenity?

What are the advantages and disadvantages of the majority voting rule used by the Board and its Committees versus the consensus based approach used by the Standards Australia technical committees?

Again, whilst some of the above is not applicable for comment by ANZSES, it is reiterated for the need to include adequate representation and input from the players within the Renewable Energy industry and those involved with energy efficient building design, products and systems. Whilst not necessarily represented at the main board level, consultation should be kept close and highly involved to ensure a holistic approach to the implementation of energy efficient issues and the use of renewable energy sources.

Do the different approaches across the jurisdictions in implementing changes to the BCA inappropriately erode achieving national consistency? Is there a better approach?

ANZESES believes that a national approach is needed, working alongside an improved national environmental policy at Federal government level, and that for this to work, adoption processes should also be consistent from state to state, but again with appropriate flexibility built in to allow for state, regional and local variances that therefore do not erode the principles of the national Code.

Evaluation of the costs and benefits of reform proposals

Is the regulation impact analysis system for changes to the BCA working effectively? In particular, has there been adequate cost benefit analysis of proposals and evaluation of alternatives when considering changes to the Code?

Should there be greater accountability for changes to building regulation through the actions of Local Governments? Should more be done to ensure that these changes are justified and subjected to adequate analysis of costs and benefits?

ANZSES has concern that an impact assessment made purely on economic rational may be flawed, especially in relation to issues of energy efficiency and energy use. There are often perceived increased costs, both real and imagined, incurred with the implementation of energy efficient measures, but when taken in a holistic context of social, environmental and human amenity, the benefits will often outweigh such costs, real or otherwise. Such assessments should clearly indicate what criteria are being assessed – if the objective of energy efficiency regulation is to achieve reduced greenhouse gases which in turn will benefit the community economically (as well as environmentally) to then reject such measure due to short term cost increases would be foolhardy. Such assessment must be clearly identified for criteria and relevance to the particular reform being proposed.

4 Assessing the Code

4.1 Code objectives

Is the BCA effectively achieving the various components of the ABCB's objective, such as those listed above [in the issues paper]?

Do some of the components of the ABCB's objectives conflict? To what extent do the various components contribute to the objective of promoting deregulation (object 3)?

Are 'minimum acceptable' standards and the pursuit of least cost solutions compatible with maximising net benefits to the community?

Refer to 2.1 Effectiveness (page 4 & 5) for a general response to each of the 10 objectives. More specifically, ANZSES has concern that a least-cost and minimum acceptable standard may not, in fact maximise net benefits to the community. When such costs are assessed purely from a financial perspective, without taking into account the longer-term benefits, especially environmental ones, a false concurrence as to benefits may be arrived at.

This is most relevant to ANZSES in regards to issues of energy efficiency, with a perceived resistance from some sectors of the building industry against implementation of such measures. As a result, where regulated, the absolute minimum and lowest standard permissible is sometimes sought, and consequently fails to achieve the promised long-term benefits. This further creates the perception that the whole area of energy efficiency 'doesn't work' and in turn further fuels the resistance of some sectors of the industry as well as the ill-informed public. Any directive for least-cost needs to be carefully assessed in the overall context of the longer-term, for not just financial, but also social and environmental benefits.

4.2 Coverage of the Code

Building access for people with disabilities

Is the proposed Premises Standard (and associated revisions to the BCA) the most efficient and effective means of meeting building access requirements under the DDA?

Not applicable for comment by ANZSES other than to state that an energy efficient house is less costly to run, and for some people with disabilities, issues of comfort take higher priority than for able-bodied persons. Thus reduced energy bills are more significant in their case than might otherwise be taken into account.

Is the Administrative Protocol likely to be effective in ensuring that decisions are consistent with the DDA and in minimising the need to resort to DDA disputes processes? Will it provide greater certainty and consistency in determining unjustifiable hardship? Are there better ways of achieving these objectives?

Not applicable for comment by ANZSES;

Energy efficiency

To what extent should energy-efficiency objectives be addressed in the Code? Is variability by climatic zone, rather than jurisdiction, the appropriate way to cater for differences across Australia? Is it more effective and efficient to use performance or prescriptive based standards to achieve energy-efficiency objectives?

ANZSES is fully supportive of regulation that encourages and enables the implementation and use of energy efficient measures in buildings. Future energy efficiency amendments must include a broader range of criteria, with sufficient lead-up times to allow the industry to adopt the necessary changes. This includes those at the first stage who are involved in the design process, where much misinformation is currently leading to worse rather than better building design. On the other hand, there are qualified and competent designers with correct and expert skills in this area, and more recognition by the ABCB and State / Territory regulators would improve industry confidence.

Whilst the current proposals have not yet been fully adopted nationwide, this perhaps reflects the need for greater flexibility within the regulation to adapt to different climatic, local and demographic situations, as well as the adoption of appropriate and acceptable rating systems, and sufficient lead-time for education. Such flexibility must be a reflection of the location, not the jurisdiction, as even within some larger regions, different climatic and/or demographic situations may occur (even within the same postcode area in some instances). The current rating systems need further input to ensure that the climatic regions are accurately reflected and dissected – further research into Solar Data and Weather records is needed to provide adequate statistical analysis to ensure the accuracy of these rating systems.

Again, performance based standards are more appropriate for such adaptation as they more readily take into account the different approaches to achieve the same solution. Prescriptive codes can only attempt to minimise worst practice whilst all the factors that affect energy efficiency are not included. Ultimately, energy efficient design will result in reduced greenhouse gas emissions. How that is achieved will vary for a building in high altitude, low temperature conditions to one in coastal, high humidity and high temperature conditions.

Fire Safety

Is there a conflict of objective between the BCA and the fire authorities' regulation in the States and Territories? If so how could this be resolved?

Not applicable for comment by ANZSES;

Other Areas

Plumbing: Not applicable for comment by ANZSES other than to ensure that tradespersons are suitably trained to install the newer and continually upgraded technology as it becomes available (such as solar hot water systems).

Electricity: ANZSES believes that any new regulations should be broad enough to enable, and ideally encourage, the use of renewable and sustainable energy sources, rather than just focusing on the current grid-connected and supplied system. This should include grid-connected renewable, as well as stand alone systems, and allow for a variety of sources, such as solar, wind, hydro and biomass. Additionally, the incorporation of energy-saving appliances, wiring, systems and the like should be the norm rather than the option.

Sustainability requirements: Again, ANZSES fully supports any moves to encourage systems or processes that reduce the impact on the natural environment. Some of these are easily achieved – appropriate levels of wall and roof insulation is mandatory in some local councils already – whilst others are more complicated but of greater urgency – such as water conservation for drought affected areas. These should be assessed with an holistic approach, as no one thing is necessarily the preferred option. Rather, issues of energy efficiency, recycling, sustainability, water conservation, and insulation standards should all work together collectively to provide a better built environment.

As well as energy efficiency, what other aspects of building design, construction and use could potentially be subject to sustainability considerations? What is the most useful definition of sustainability? Is there community consensus over what is a desirable level of sustainability for buildings?

As noted above, ANZSES believes in an holistic approach to a sustainable built environment. One aspect will feed on another – a well-insulated building will be more energy efficient, which will require less energy, which in turn may be sourced from renewable energy. Whilst there has been considerable discussion of energy efficient issues in relation to building design, the area of energy sources has not been addressed to any great degree.

ANZSES would like to see building regulation take into account the options for the provision of energy supply from other than grid-connected supply, as well as the ability to feed renewable sourced power back into the grid. At present some Councils do not allow, let alone encourage such approaches – whereas a nationally driven directive towards such an aim would in turn, with the appropriate flexibility, allow Councils to also include such options. For regional locations where grid-connected supply is expensive and/or unreliable, such alternatives would be more readily considered with the backing of regulation that enabled and encouraged such connections.

Ultimately, ANZSES would like to see a Code that encouraged and enables renewably sourced energy as the norm, rather than the off-beat option.

Quality and durability:

Maintenance:

Does the existence of performance-based regulation tend to transfer the costs from the construction to the maintenance of buildings? Does it increase the need for maintenance provisions to be included in the Code?

Not applicable for comment by ANZSES other than to ensure the quality of products generally (as enforced by Australian Standards generally) and reiterating that educating the public to 'use' their buildings correctly will ultimately benefit them in the long run.

Are there any other possible areas (that may not be listed above) that could be incorporated appropriately into the BCA?

ANZSES again reiterates the need for greater emphasis on energy efficiency of building design, products and systems, as well as regulation that enables and encourages the use of renewable energy sources as detailed above.

5 Delivering outcomes

5.1 Implementing the Code

Accessibility of the Code
Is it appropriate to charge for access to the Code? How does this impact on the transparency and accessibility of the Code? Are any changes warranted in the way in which charges are calculated?

What activities or strategies could improve accessibility to the Code?

Not applicable for comment by ANZSES other than to recommend a system that reduces paper wastage (contrary to the new bound hard-copy which prevents regular updates) and promotes electronic usage where applicable. Such a system also allows for greater cross-referencing (eg via the internet), and could possibly provide links to other sites which would assist a designer or builder in selecting appropriate deemed-to-comply systems or products (again, hot water systems being a good example where there are many different non-electric systems, other than straight-forward solar hot water systems, that may be more appropriate to a particular climate, such as heat pump systems).

Administration and enforcement

What is the nature and extent of differences in the administration of building regulation across the States and Territories? What are the costs of non-uniformity in administration of the Building Code?

Not applicable for comment by ANZSES other than to reiterate that lack of appropriate legislation or regulation continues to allow for badly designed, energy-inefficient buildings to be constructed. This is by default a major cost to the industry, the environment and the community at large.

Why have not all the States and Territories adopted the model building legislation? Is it appropriate to have a nationally consistent administrative framework? What would it take for regulatory systems to be consistent?

Not applicable for comment by ANZSES;

How effective are these compliance checks? Do they impose necessary or unnecessary costs and delays? Have delays improved or worsened recently? What improvements could be made?

Not applicable for comment by ANZSES;

Are there problems with dispute resolution processes and, if so, what are the main causes?

Has private certification reduced clarity over allocating responsibility when addressing complaints?

Would the establishment of a Building Appeals Board address existing weaknesses or would other mechanisms be more effective?

Not applicable for comment by ANZSES;

5.2 Reforming the risk and liability landscape

Liability reforms

Not applicable for comment by ANZSES;

Certification of buildings

Not applicable for comment by ANZSES other than to ensure that Private Certifiers are well versed in all options, especially those of alternative technologies which may be the provided solution for performance-based requirements (such as solar hot water systems, alternative energy sources and so on).

5.3 Awareness and research

Have these strategies been effective in raising awareness and usage of the Building Code? Do they contribute to transparency in the reform process?

Are there other strategies and initiatives that might be more effective?

Not applicable for comment by ANZSES;

Are current education and training strategies adequately equipping building practitioners to operate efficiently and effectively in the performance-based environment? Is training on changes to the Code effective? Is there adequate input from industry, academics and regulators on the competencies to be attained? Is the level and quality of training adequate to maintain expertise in the industry? Do these strategies compare well with international best practice?

Ongoing training and education is essential to keep building practitioners up to date on appropriate regulations as well as newly available technologies and products. Of particular relevance to ANZSES, is cooperation with the ABCB to ensure that new technologies and products relating to energy generation and energy efficiency are readily and easily incorporated into building regulation, and that there is no significant time delay in the development of new systems and the ability for them to be

legally implemented. Again, a performance-based rather than prescriptive system allows more flexibility in this area.

Are the ABCB research areas appropriate? Are resources allocated appropriately? Is the research being used to develop the most appropriate and cost effective Code solutions? What benefits have the Board's research delivered? Is the research being well managed and conducted cost effectively? Is the ABCB the appropriate body to conduct and coordinate such research?

ANZSES fully supports ongoing research into the ever-changing building climate, in terms of products, design and construction issues, systems and innovation. The areas of energy efficiency are of high priority to ANZSES, and the areas of energy sourcing and energy supply also need to be expanded to incorporate and encourage renewable and sustainable energy supply. The process of adoption and refinement of such regulations must be properly funded with a long-term perspective to ensure its effectiveness.