

Regulatory Impact Statement

Building Legislation Amendment Regulation 2010 **Subordinate Law 2010–15**

Prepared in accordance with the
Legislation Act 2001, section 34

Circulated by authority of
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Overview

This regulatory impact statement relates to substantive elements of the *Building Legislation Amendment Regulation 2010* (the “proposed law”). The proposed law amends the *Building (General) Regulation 2008* (the “building regulation”) and the *Water and Sewerage Regulation 2001* (the “water regulation”). Some of the amendments are substantive, some are consequential, others are for clarification or for drafting consistency, format or structure purposes.

Substantive changes to the building regulation

Problem

Changes to energy efficiency parts of the Building Code of Australia 2010 (BCA 2010) are not consistent with the building regulation, as the scope of BCA 2010 has become wider than the scope of the correlating provision in that regulation.

Substantive changes that the proposed law makes to the building regulation are largely a consequence of, or in response to, BCA 2010 prescribing requirements for energy efficiency and environment sustainability at a level substantially above and wider than its 2009 predecessor edition. Existing stricture and the scope of matters regulated by the BCA has increased in BCA 2010. The *Building Act 2004*, s 49 (Compliance with the building code) establishes an offence for non-compliance with the BCA.

BCA 2010’s relevant increased levels of stricture were the subject of a comprehensive regulatory impact statement prepared for the Australian Building Codes Board (the “ABCB”). The ABCB regulatory impact statement is available from www.abcb.gov.au. That site also provides information about the impetus for the BCA 2010 changes, including directive from the Council of Australian Governments (COAG).

The main increased levels of regulation that BCA 2010 will provide for include—

1. For class 1 buildings, including a single dwelling, row house, terrace house, town house, villa unit, small boarding house, small guest house, small hostel—required energy efficiency of the building increases from a minimum 5 star energy efficiency rating equivalence, to a minimum of 6 star equivalence. Further, building services such as artificial lighting, water heaters, space heating and cooling will be regulated in certain cases to place limits on maximum energy use and on energy source (‘renewable’ energy source verses ‘non-renewable’, greenhouse gas intensity etc).
2. For class 2 buildings, including blocks of flats, apartments or ‘units’—required average energy efficiency of all the units in a building increases from a minimum 4 star energy efficiency rating equivalence, to a minimum average of 6 star equivalence, with the minimum for each individual unit increasing from 3 to 5 star equivalence. Further, building services such as artificial lighting, water heaters, space heating and cooling will be regulated in certain cases to place limits on

maximum energy use and on energy source ('renewable' energy source verses 'non-renewable', greenhouse gas intensity etc).

3. For other classes of building, [except class 10 non-habitable buildings and structures], including backpackers accommodation, hotels, motels, schools, accommodation for the aged, health-care buildings, detention centres, office buildings, shops, cafes, restaurants, bars, hairdresser's or barber's shops, showrooms, service stations, carpark buildings, warehouses, laboratories, factories, workshops, churches, public buildings, assembly buildings—increased energy efficiency structure generally targeted at achieving a 2:1 benefit to cost ratio.

The three main consequences of the BCA 2010 that the proposed law responds to are—

1. BCA 2010 does not provide transitional arrangements, but it provides that it will be adopted in the ACT from 1 May 2010, whereas the statutory planning approval processes for construction cannot readily adjust to an instantaneous increase in regulatory structure. For example, it can take up to 1 year for plans for a proposed building progress from application for development approval through to receiving building approval. The increased stricture of BCA 2010 could in many cases therefore require redesign of such buildings already in that statutory planning approval system. Such redesign could see the time already spent in the system wasted, and the approval process restarted for the new design. Hence, the proposed law provides a transitional arrangement for proposals already in the approval system before 1 July 2010.
2. BCA 2010 and its predecessors historically only prescribe the technical standards for construction of new buildings. They do not intentionally cater for alterations, additions or extensions to pre-existing buildings, nor for bringing a pre-existing building into compliance with the current BCA. Whereas, the *Building Act 2004*, s 49 requires all ACT building work to be done in a way that is likely to produce a building that compliance with the BCA, unless exempted from that requirement. Only minor non-habitable buildings and certain minor alteration to other buildings are exempted. That Act also requires certain pre-existing buildings to be brought into compliance with the current BCA, in certain circumstances (see the 50% rule explained below at appendix 1). It is not practical or cost-effective to bring old houses into current BCA full compliance, so the building regulation prescribes alternatives to, and concessions to, full BCA compliance when the BCA is applied to pre-existing buildings. The proposed law adjusts and enhances those alternatives and concessions to take account of BCA 2010's increased stringency.
3. The BCA is given legal force in the ACT by the *Building Act 2004*. The building regulation exempts the parts of that Act that deal with BCA compliance from applying to certain matters that are in BCA 2010's widened regulatory scope, including domestic artificial lighting and domestic space heating and cooling. So in order to give that widen BCA scope legal force, the proposed law disapplies those kinds of exemptions in the circumstances where the statutory approval system would otherwise not capture those matters.

Substantive changes to the water regulation

Problem

The water regulation contains provisions about the regulation of water heaters but have problematic wording, anomalies, and provisions that require a substantial administrative burden that is impractical to comply with.

Substantive changes that the proposed law makes to the water regulation relate to resolving ambiguities and anomalies in the prescription of water heater performance requirements appropriate to the ACT's climate, and to remove a requirement for the Minister to determine a list of all compliant water heaters.

Information required by section 35 of the *Legislation Act 2001*.

This regulatory impact statement deals with the information about the proposed law as required by section 35 of the *Legislation Act 2001*

(a) The authorising law

The proposed law's provision in relation to the building regulation are authorised by the following sections of the *Building Act 2004* ("the Act"):

- section 29 (2) (Approval requirements)
- section 12 (Exempt buildings)
- section 15 (Application of pt 3 to building work)
- section 136 (4) (Building code)
- section 152 (Regulation-making power).

The proposed law's provision in relation to the water and sewerage regulation are authorised by the *Water and Sewerage Act 2000*, s 49 (Regulation-making power).

(b) Policy objectives of the proposed law

Policy objectives of the substantive provisions of the proposed law are—

1. To ensure that the relevant provisions of the building regulation increase their scope commensurate with the increased scope of BCA 2010, both in terms of—
 - a. ensuring the building regulation's regulatory scope is wide enough; and
 - b. the building regulation's concessions and exemptions are adequate to ensure the widened regulatory burdens are sufficiently tempered to avoid significant costs to society that produce no, or disproportionately small, net benefits.
2. To avoid undue construction delays that would otherwise arise from having to redesign and reapprove proposed buildings already in the approval system, to make them comply with BCA 2010.
3. To optimise Water and Sewerage Regulation provisions about the greenhouse intensity and energy efficiency of certain hot water heaters, ensuring they are appropriate for the ACT's climate.
4. To reduce Water and Sewerage Regulation administration burden from Government where the administrative burden is not appropriately proportionate to net benefits.

(c) Achieving the policy objectives

Amendments to the building regulation

New section 6A—clarifies the inter-relationship between exempt building work and building work required to be done under the 50% rule, which is explained below at appendix 1. This is to clarify intent only, in line with how the 50% rule and exemptions have been administered by Government and accepted by industry etc. Without clarification, it is not abundantly clear if exemptions can over-ride the application of the 50% rule. New section 6A makes it clearer that that is not the case, and work required under the 50% rule is not exempt from the Act. However, other provisions make certain subsequent changes to work finished under the 50% rule, exempt from various parts of the Act, subject to the 50% rule no longer applying and the work not causing non-compliance with the building code.

New section 24 (1) (fa)—where the Act requires a pre-existing class 1 or class 10 building to be brought into compliance with the current code, the building regulation prescribes the inclusive list of the parts of the BCA that must be complied with. The unamended list does not include the BCA's part about draft-sealing of roof lights (otherwise known as skylights or roof windows). BCA 2010 has new provisions about required natural light, which are expected to encourage greater use of roof lights instead of large windows in walls. That is because wall windows provide a much lower degree of natural light than roof lights, and contribute significantly to the building's energy inefficiency as they can provide poor thermal insulation and excessive summer solar heat gain. An intended outcome of new section 24 (1) (fa) is to require the relevant roof lights to be draft-sealed in accordance with the BCA's energy efficiency part that requires such draft sealing. Cost of such sealing is generally negligible, comprising mainly an hour or so of labour costs to fit draft seals or to fill gaps with a mastic sealant. Benefits include reduced winter heat loss and summer heat gain with flow-on benefits or reduce heating and cooling energy costs.

New section 24 (1) (j)—where the Act requires a pre-existing class 1 or class 10 building to be brought into compliance with the current code, (see the 50% rule explained below in appendix 1), the building regulation prescribes the inclusive list of the parts of the BCA that must be complied with. The list does not correlate with new parts of BCA 2010 covering the energy efficiency of services of a building, such as hot water services, electrical services, air-conditioning services. That is because those matters were not previously covered by the BCA. BCA 2010 has new provisions about those services, aimed at increasing their energy efficiency and reducing their greenhouse gas emissions. Therefore, an intended outcome of new section 24 (1) (j) is to require the relevant services to be brought into compliance with the BCA's energy efficiency part. Costs of achieving compliance will vary on the physical arrangement of relevant components of the pre-existing building, and typically will range from nil for a pre-existing building that already meets requirements, to several thousands of dollars for a pre-existing building that needs substantial work to bring into compliance. The initial costs of achieving the compliance will be substantially or totally offset by reduced energy use costs in operating the building and possibly by increased property value or rentability.

New sections 24 (3) (d) to (f)—where the Act requires a pre-existing class 1 or class 10 building to be brought into compliance with the current code, (see the 50% rule explained below in appendix 1), the building regulation prescribes the inclusive list of the parts of the BCA that must be complied with. It also prescribes, in some cases, alternative things that need to be done where it is impractical to make part of the pre-existing building comply with a part of the BCA. For example, it would not be practical to have to destroy and rebuild a substantial part of a building merely to make it fully comply with the BCA's energy efficiency provision, if there is no appropriately proportionate net benefit. The cost of partly destroying pre-existing buildings and then making good the destruction is generally a particularly expensive exercise as it usually requires protection of unaffected parts of the building and its fittings, furnishing and occupants, and matching new materials and finishing's to surrounding older ones.

Therefore, an intended outcome of new sections 24 (3) (d) to (f) is to prescribe limitations on how much destruction is needed in those cases, and if more than that limitation is necessary to achieve full compliance, prescribes that compliance is not required, or prescribes a lesser degree of required compliance commensurate with expected net benefit. Those prescribed limitations cater for BCA 2010's increased scope in respect of barriers to prevent convection between wall cavities and areas enclosed underneath a suspended floor, insulation of a heating water piping service, or a heating or cooling ductwork service and electric resistance space heating elements cast into concrete or set under tiles.

The latter, (in-slab or under-tile electric heating) is a good example of intended outcome. In-slab heating usually encompasses attaching electrical cabling (the heating elements) to reinforcing mesh for a house's concrete slab floor, and encasing the mesh and heating elements in concrete. The elements heat the slab and mesh, the steel mesh helping to conduct the heat throughout the slab. Once heated, the slab acts as a massive thermal storage unit slowly dissipating heat for long periods after the heating elements are turned off, and subsequently not using significant energy to maintain comfortable heat during daily cycles. They are an efficient method of heating spaces as the heat starts at the lowest point (the floor) and convects up, rather than starting higher leaving the floor level colder.

BCA 2010 prescribes energy limits to electric resistance space heating of 110 W/m^2 for living areas and 150 W/m^2 for bathrooms. If a pre-existing house that is required by the Act to be brought into BCA 2010 compliance has old in-slab heating capable more than 110 W/m^2 throughout, it would be an inappropriately proportioned regulatory intervention to require the slab to be destroyed to remove the non-compliant heating elements, particularly considering that floor slabs often provide support to internal walls of houses and have floor coverings or finishes attached.

The proposed law provides a concession to the effect that in such cases the elements do not need to be removed. That does not necessarily mean that the slab heating can continue to be able to operate at in excess of the 110 W/m^2 limit if its control equipment can be modified so as the heater can not draw more than 110 W/m^2 , but still operate efficiently and effectively.

New section 24 (4) also prescribes limitations that do not need to be exceeded in order to achieve compliance. They relate to limitations on safe and practical access to install things like thermal insulation.

Substituted section 28 (1) prescribes concessional alternatives to full BCA compliance for relevant parts of the BCA 2010. The alternatives for walls, roof and floors merely restate existing provisions, but the provision covering the convection barrier for the interface between a wall cavity and a suspended floor is new, because it is a new matter in BCA 2010's widened scope.

Changes to section 29 respond to the construction industry's concerns that arose in 2006 when BCA 2006 raised regulatory stricture for energy efficiency. The concern was that in applying the BCA to windows in new extensions to houses, the BCA requires the energy performance of other windows in the storey to be taken account of when assessing the performance of the new windows. That is practical for new construction as all new windows can be readily designed to suit, but it is impractical for many extensions to old houses, particularly where the location of the old windows is too remote from the new windows to impact on them.

The building regulation has dispensation provisions to cater, but industry has shown that in some cases further dispensation is needed, particularly considering that BCA 2010's increased energy efficiency provisions will exacerbate the problem. The problem is most acute where a small extension is proposed, say enlarging (extending) a kitchen by moving an outer wall out under the roof eave. Under the Act, s 49, that extension must fully comply with the BCA. But that requires the windows in the extension to compensate for poor performing old windows in the unaltered part of house. Even using the most thermally efficient glazing system often will not make all the new windows comply because of the effect on the extension of old windows in the unaltered part of the house.

The alternative, without any concession, is to replace the windows in the unaltered part of the house with better performing windows. However, industry has demonstrated that that can almost double the cost of such a small kitchen extension, and that has caused many homeowners to cancel their house extension plans. Such cancellations encourage some homeowners to instead build a new house in a new suburb, adding to new-housing demand and avoiding the opportunity to enhance existing building stock.

The section 29 changes enhance the current concessions for old windows by providing that they do not need to be taken account of in assessing new windows if the old windows are thermally isolated from the new windows. In the case of the kitchen example mentioned above, the new window's performance would need to take account of old windows in the unaltered part of the house if they are not isolated from the new windows by a wall and door. An intent is to encourage the creation of thermal zones, so that the new extension can be efficiently heated and cooled without having to heat and cool all of the rest of the less thermally efficient house.

For example—

a house is to have a family room added, opening onto the existing kitchen, to form an integral kitchen-family room. External windows in the new family room must comply with the building code. There is to be no barrier between the kitchen and the new family room so the existing kitchen window is not an isolated window. Its impact on the new family room must be considered when considering how the new family room complies with the building code, volume 2, part 3.12.2. All other windows in the unaltered part of the house are in fully enclosed rooms, with close-fitting doors so they are isolated windows. In applying the building code to the new family room's windows, the isolated windows do not need to be considered.

See appendix 1 below for explanations how the 50% rule requires pre-existing parts of houses to be brought into compliance with the current code if the house's floor area is extended by more than 50%.

New part 21 provides for a transitional arrangement to prevent projects that are in the planning approval system from having to be redesigned and resubmitted for approval if they were in the system by 1 July 2010. A national awareness campaign has alerted industry to the BCA 2010 changes, so it is expected that industry ought not need to rely the transition other than for a small number of projects. The transitions in effect delay the application of BCA 2010's energy efficiency parts to the eligible projects for a period of 7 months for houses etc and certain apartments, and 12 months for other buildings and for apartments that would need a development approval change in order to comply with BCA 2010.

The above-mentioned consultation about BCA 2010 comprised—

- **Throughout 2009** - industry represented at high level on ABCB (publisher of the BCA) and at technical "expert" level on Building Codes Committee (which provides technical advice to the ABCB of content of the BCA, acting on an expectation of a COAG announcement that BCA 2010 will have increased energy efficiency stringency).
- **30 April 2009** - COAG announcement that BCA 2010 will have increased energy efficiency stringency.
- **28 May 2009** - ABCB office meeting to consult with key stakeholders on proposed BCA 2010 provisions.
- **8 July 2009** - BCA 2010 proposals released nationally for public comment.
- **17 July 2009** - National webcast explaining BCA 2010 proposals publically released by ABCB office.
- **July 2009** - ACTPLA implemented local awareness campaign seeking public comment on BCA 2010 energy efficiency proposals - included article in ACTPLA industry newsletter, "the Zone" and information packages emailed to all ACT licensed building surveyors and all ACT registered architects.
- **5 October 2009**- RIS on BCA 2010 energy efficiency increased stringency provisions released nationally for public comment.

- **7 October 2009** - National webcast explaining RIS on BCA 2010 energy efficiency increased stringency provisions publically released nationally by ABCB.
- **January 2010** – Building Ministers Forum decision to proceed with publication of BCA 2010 with increased energy efficiency provisions as fine-tuned in response to substantial public comment.
- **early February 2010** – Electronic BCA 2010 published.
- **early March 2010** – Hard copy BCA 2010 published and distributed.
- **early March 2010 ongoing** – industry inquiring of ACTPLA about transitional arrangements for 1 May 2010 adoption of BCA 2010 in ACT, including inquiries from local HIA and MBA so they could advice their members.
- **3 March 2010** – Joint meeting of Minister for Planning's reps, ACTPLA reps and ACT Greens reps to consult on 1 May 2010 adoption of BCA 2010's increased energy efficiency stringency, and resolving anomalies in water heater regulations, including transitional arrangements.
- **4 March 2010** – Meeting of ACTPLA's "Industry monitoring group" included several agenda items about BCA 2010 including consultation with local MBA, HIA and property council on the 1 May 2010 adoption, transitional arrangements and concession when upgrading pre-existing buildings. Local industry supported 1 May 2010 adoption with transitional arrangements similar to those made for the 2006 BCA increased energy efficiency stringency to avoid industry disruption.
- **March & April 2010** - National BCA 2010 public awareness seminars being held in all capital cities, lead by ABCB office incorporating local jurisdictional focus.
- **25 March 2010** - ACTPLA presentation at National BCA 2010 public awareness seminars focused on 1 May 2010 adoption of BCA 2010 in ACT and the proposed transitional arrangements to avoid the need to redesign buildings already in the planning approval system prior to 1 July 2010, and concessions for upgrading pre-existing buildings to BCA 2010 compliance.
- **April 2010** - ACTPLA public awareness campaign about BCA 2010 energy efficiency provisions and transitional arrangements.

Changes to, schedule 1, have the effect of partly removing exemptions from aspects of building work that were formerly not within the scope of the BCA but are now in the scope of BCA 2010—heaters (including space heaters and water heaters), and alterations to pre-existing buildings. An intended effect is to ensure that when buildings are being built or altered under the Act's statutory approval, inspection and certification provisions, items like space heating and artificial lighting are inspected and ultimately certified as BCA complaint. But when the statutory processes are completed, certain changes can be made without triggering the process again.

For example, under the Building Act part 3, it is intended that artificial lighting installed during non-exempted construction and alteration is to be done in

accordance with a building approval given by a building certifier, and only by or under the supervision of an appropriately licensed builder, and inspected and certified by the certifier. Those requirements generally apply to such construction in any case—the amendments merely ensure new matters like artificial lighting are also covered by those requirements. However, once the lighting is installed, approved and certified, an intention is to not require them to be captured by the statutory approval system when light bulbs need changing etc. An intention in that case is that changing the bulbs is deregulated, but only if doing so does not bring the building's lighting out of BCA-compliance.

For example, BCA 2010 prescribes a maximum limit of 5 W/m² for lighting in houses. Changing a light bulb would be deregulated after the statutory approval process had been complied with during construction, in that after that the bulb could be changed outside of the regulatory system provided the new bulb does not cause the house's lighting limit to exceed 5 W/m².

This measure is important to help ensure that a recent trend in new up-market housing of installing more than 100 recessed down lights of the comparatively inefficient ≥50W dichroic halogen type is kerbed in favour of more efficient substitutes—such as compact fluorescent inserts for downlights—and that homeowners don't subsequently replace the efficient inserts with the inefficient units beyond what BCA 2010 permits.

Amendments to the water and sewerage regulation

Apart from amendments to omit the requirement to declare a list of water heaters and to require water heaters to work in the ACT's frost-prone climate, the proposed law makes the changes necessary to give effect to the legislation as intended by the Legislative Assembly. The effect of the relevant changes are to—

- name climate zones
- fix unclear or anomalous terminology
- ensure water heaters will work in frost conditions
- remove regulatory burden.

Schedule 2, sections 2.4 and 2.5—make the most substantive changes, to remove the regulatory burden of Government having to determine water heater compliance for every water heater available, and to require that water heaters function properly in the ACT's frost-prone climate. While suitability for climate is a requirement of the relevant water heater standards, those standards are not sufficiently clear to ascribe particular performance requirements to specific geographic areas.

(d) Consistency of the proposed law with the authorising law

The proposed law does not introduce new regulatory matters into the laws it amends, other than the transitional arrangement mentioned above. Rather it, extends, enhances, clarifies or optimises existing provisions and concepts, or removes administrative burden.

The above-mentioned transitional provision only operates until 1 May 2011, and will then expire. It is based on a similar transitional arrangement used in similar circumstances in 2006, when BCA 2006 increased energy efficiency provisions. The 2010 transitional arrangement is virtually the same as that 2006 transition, except it provides less transition time for certain class 2 apartment buildings, and takes account of recent significant expansions in kinds of developments exempted from development or building approval requirements. The 2006 transition provisions were provided in the *Building Amendment Regulation 2006 (No 1)*.

(e) The proposed law is not inconsistent with the policy objectives of another territory law.

The proposed law is not inconsistent with the policy objectives of any territory law.

(f) Reasonable alternatives to the proposed law

Alternative ways of changing the way buildings and water heaters are provided can be achieved through a variety of methods including education, non-regulatory guides, incentives, voluntary codes etc. However, no Australian jurisdiction has found a satisfactory method of achieving compliance with plumbing technical standards or the BCA without regulatory intervention that mandates compliance and provides persuasive sanctions for non-compliance. Therefore, alternatives to the proposed law will undoubtedly be ineffective in preventing certain home-owners, builders and plumbers from doing work to lesser than standards than prescribed by the proposed law, to save costs.

(g) Brief assessment of benefits and costs of the proposed law

The bulk of the proposed law relates to BCA 2010's relevant increased levels of regulation for energy efficiency, which were the subject of a comprehensive regulatory impact statement prepared for the Australian Building Codes Board (the "ABCB"). The ABCB regulatory impact statement is available from www.abcb.gov.au. It includes detailed information about the benefits and costs of the proposed law's BCA provisions.

The water heater provisions in the proposed law do not substantively change regulatory burden, other than to help ensure water heaters will be suited to the ACT's relevant climatic conditions. Plumbing standards require that an installation is 'fit-for-purpose', which assumes that an installation will consist of materials and technology that allow it to function in the climate conditions in which it is installed. In effect, the new provisions clarify that climate-appropriateness for the ACT includes adequate frost protection. That is unlikely to have a net cost, as any additional cost of providing an appropriate water heater over and in appropriate one are expected to be negligible, and to be offset in the long term by reduced maintenance costs and increased efficiency.

Where the proposed law enhances concessions on BCA compliance in relation to pre-existing buildings, significant costs saving flow from not having to destroy significant parts of buildings to make them BCA-2010-compliant, where those costs will be unlikely to be offset in the long term by reduced heating and cooling costs. However, another significant benefit that flows from those concessions is that they encourage home-owners to upgrade existing housing stock. Without concessions, industry has demonstrated instances of home-owner's cancelling plans to extend or

alter their houses when they find out the cost of having to bring the old part of the house into full BCA compliance, where the 50% rule (explained in appendix 1 below) is triggered.

Experts from the ABCB secretariat report that traditional materials and brick-veneer construction techniques are nearing the limits on being physically suited to cater for any further increase in energy efficiency stringency beyond 6-star equivalence, (for example traditional brick-veneer wall cavities are lacking further room for thicker glass fibre batts, and traditional domestic plasterboard ceilings construction is close to its limits on supporting glass fibre batt weight). Trying to retrofit an old house to a 6 star equivalence is even more difficult as walls may have to be cut into to install insulation etc. For that reason it is often not feasible in terms of cost benefit or practicality to always bring every old ACT house into full BCA 2010 compliance. Therefore, the concession provided in the building regulation since 2006/7, as enhanced by the proposed law, are intended to strike an appropriate balance between the objectives of the BCA (eg energy efficiency and greenhouse gas reduction) and cost effectiveness and physical practicality.

That balance is intended to be achieved through the concessions which for the worst-case parts of the BCA, require full BCA compliance where that can be achieved with minimal destruction to the old house, or if that is not achievable, a reduced scope of BCA compliance but in some cases within limits, such not needing to knock access holes larger than 1m² through walls to insulate a water pipe inside the wall.

Water regulation amendments

The proposed law is not expected to impact on ACT Government budgets. It removes a considerable regulatory burden placed upon government to determine compliant water heaters, which needs a new declaration annually to be complied with. For this to be effective there would be a need to:

- Declare which provisions of the regulation the water heater is compliant with as there are differing requirements depending on the type and size of the water heater. To be useful and effective the declaration would have to state for which category the water heater is compliant, which increases the time and cost of producing the declaration. This would require assessment of each water heater for compliance against the relevant Australian Standards, including broader product performance standards listed in the regulation, the RECs register and the differing standards within the regulation.
- Develop verification or other approval mechanism for technical requirements. There is no third party accreditation or verification required to demonstrate compliance with the majority of test standards. Therefore to effect this provision ACTPLA would need a verification method and the resources to apply it.
- Update the lists as new products come on to the market and remove them when they are no longer compliant or available. If this list is to become the basis on which compliance is determined by the public and practitioners then it must be continually maintained as per the ORER list to avoid accusations of anti-competitive practices where new products released during the year are

not included in the list (eg around 1000 products have been added to the register since the beginning of the 2010).

- Include gas water heaters in the determination. The RECs list does not list gas water heaters, therefore additional research and verification would need to be completed to compile those water heaters compliant with the standard for gas water heaters.

Subsequent benefits are quantified as follows, in relation to savings arising from removal of the following administrative burdens. To adequately comply with the requirement to determine a list of compliant water heaters would take at least 2.5- 3 full-time staff to develop and maintain this list, even if only done annually. There are approximately 5200 water heaters on the Commonwealth's RECs list for solar water heaters and heat pumps. All of those 5200 heaters models would need to be assessed against compliance with the relevant standards, and against the 3 installation categories for the relevant technology type in the regulation. Allowing a conservative 1 hour per unit for administration, verification and addition/ongoing inclusion on the register this would total 5200hrs or 141 37hr weeks.

To have all work completed annually would mean that approximately 3 full-time staff would be required to maintain the list of compliant water heaters. This is consistent with the staffing levels within the Commonwealth Government area that keeps the RECs register. This would require a minimum of \$250,000 in recurrent budget funding, or in excess of a minimum of \$300,000 at full cost-recovery. This is conservative as it assumes ASO3 officers will undertake the task, whereas verification of technical claims is likely to require a greater degree of specialisation.

Removal of this requirement does not leave consumers with no information. Manufacturer's specifications include information on compliance with various standards and information about RECs and star ratings of gas water heaters is publically available. This level of information-gathering is no more onerous than that to determine compliance with numerous product standards prescribed in construction occupations legislation. Suspicion of non-compliance where claims are being made that a water heater meets the required reduction in energy demand can be investigated in individual circumstances.

The proposed law makes a further substantive change by requiring water heaters to operate adequately in the ACT's climate, which may exclude the use of some water models from being used in the ACT if they cannot operate in the ACT's frost conditions. Apart from the fact that water heaters that do not operate or break down in the climate in which they are installed should not be installed under general 'fit-for-purpose' requirements, it is not expected that clarifying specific requirements for frost protection will have significant impact on water heater suppliers as water heaters they would otherwise have been able to sell in the ACT might be able to sold in nearby NSW areas not so frost-prone. Benefits include a more reliable supply of hot water on mornings on heavy frost in the ACT, and potentially less maintenance problems arising from water heaters not suited to such cold climates.

(h) Brief assessment of the consistency of the proposed law with Scrutiny of Bills Committee principles

The proposed laws will only have application to the way that building work is done under the Building Act, and plumbing work is done under the Water and Sewerage Act. That kind of work is clearly within the ambit of those Acts. The proposed law are made under those Acts respectively, within the heads of power those Acts provide for regulations to prescribe specified matters for the Acts, and so is in accord with the general objects of those Acts.

The proposed law merely enhances and refines existing technical provisions and thereby does not unduly trespasses on rights previously established by law.

The proposed law's provisions do not relate to powers to make decisions, and thereby does not make rights, liberties and/or obligations unduly dependent upon non-reviewable decisions.

The proposed law is a regulation and only contains matter that the respective authorising laws explicitly permit a regulation to prescribe relevant matters for. It is therefore proper that a regulation deal with such matters, and there is no need for an Act of the Legislative Assembly to deal with those matters.

The proposed law is explained in an associated comprehensive explanatory statement to be tabled in the ACT Legislative Assembly. This regulatory impact statement is intended to meet the technical or stylistic standards expected by the Standing Committee on Legal Affairs (when performing the duties of a scrutiny of bills and subordinate legislation committee) and complies with the requirements for a subordinate law as set out in Part 5.2 of the *Legislation Act 2001*.

The ABCB regularly reviews the BCA, and published a new edition each year. The ACT is represented on the ABCB and therefore does not need to independently review the relevant provisions of the BCA. The Plumbing Code of Australia is foreshadowed to be integrated into a new code incorporating the BCA from 2011. That will present an opportunity for water heater regulation to also be regularly revised.

Appendix 1 Explanation of “50% rule” (*substantial alteration*) provisions under the *Building (General) Regulation 2008*.

The following explains certain provisions that relate to what is informally known as the 50% rule, some regulation-prescribed-provisions of which are modified or extended by the proposed law. An intention of the 50% rule is to require pre-existing building to be upgraded to bring them into compliance with the current building code, to avoid old building stock falling far behind contemporary technical requirements for buildings. The ACT has had 50% rule provisions for several decades, as have several other Australian jurisdictions.

Under the *Building Act 2004*, s 29 (1) the 50% rule is triggered if plans of proposed building work to alter or extend a pre-existing building meet the prescribed requirements of a **substantial alteration**, as follows—

29 Approval requirements

- (1) Each of the following is an **approval requirement** for plans:
 - (a) if the plans are for the substantial alteration of a building—the building as altered will comply with this Act and the building code;
Note 1 **Substantial alteration**—see s (2).
Note 2 A reference to an Act includes a reference to the statutory instruments made or in force under the Act, including regulations and the building code (see Legislation Act, s 104).
 - ...
- (2) A regulation may declare that—
 - (a) an alteration of a building is or is not a substantial alteration; or
 - (b) a part of a building (the **unaltered part**) that has not been altered need not comply with the building code despite subsection (1) (a).

If the 50% rule is triggered, the above-recited s 29 (1) requires the plans to show all the work necessary to make the building as altered comply with the current building code, including work to bring the pre-existing part (which might otherwise be altered) up to current building code compliance. Other provisions of the Act require work to only be done in accordance with the approved plans.

The following explains the provisions of the *Building (General) Regulation 2008* that prescribe key provisions for the Act’s 50% rule.

Section 23 contains criteria to be used to determine if plans are for the **substantial alteration** of a building, as referred to in section 29 (2) of the Act. An intention is that if the floor area of the proposed building work on a class 2 to 9 building, when added to the floor area of building work carried out on the same building in the previous 3 years, comprises more than 50% of the floor area of the building, then under the Act the plans ought to also reflect any work required to ensure the entire building will meet current requirements of the Act (and not just the otherwise proposed work). The same applies for a class 1 or class 10 building except that internal alterations carried out on the pre-existing building do not need to count towards the altered floor area.

The anticipated outcome is that in the long term many old buildings will be upgraded to better keep pace with changes in building code requirements.

Section 23 also gives 5 examples of the effect of those provisions to endeavour to illustrate the intent of the section.

Sections 24 to 29 set out alternatives to the requirement to comply with respective provisions of the Building Code, where it is not always practical to bring pre-existing buildings fully into compliance with that code. For example, section 23 of the regulation and section 29 (2) of the Act apply the code to pre-existing buildings in certain circumstances. For example where a pre-existing house is to be significantly extended, and that amounts to a **substantial alteration** under section 23 of the regulation, then under section 29 of the Act the whole house as extended must be brought into compliance with the code.

However, sections 24 to 29 of the regulation provide alternative methods of compliance, as it is often not practical to retrofit certain items to a pre-existing building to bring the building up to current code requirements. For example, it might not be cost effective to retrofit termite barriers to a pre-existing house that has no such barriers built into its brickwork.

It is intended that instead of complying with the code, the pre-existing part of the building need only comply with the alternative provisions prescribed by section 24 to 29. Those provisions deal with fundamental building and fire safety.

The alternative compliance provisions of sections 24 to 29 include coverage of—
in section 24 (1) (a) and 25—glazing where there are human impact safety requirements. This is because retrofitting windows in older houses is not always cost effective, but safety can be addressed by instead applying safety film to the glass at less cost than glass replacement. Section 25 stipulates the alternative compliance method of using safety films;

in section 24 (1) (b)—installation of smoke alarms. This provision does not provide dispensation, but requires full compliance with the relevant provisions of the code, as provision of smoke alarms is relatively inexpensive and are fundamental life safety measures;

in section 24 (1) (c)—building in bush fire areas. This provision does not provide dispensation, but requires full compliance with the relevant provisions of the code, as construction to resist bush fire attack does not substantially add to the cost of normal construction and is a fundamental life safety measure;

in section 24 (1) (d) and 26—stair construction. This is because it is often not cost effective to bring a noncompliant flight of stairs into compliance, particularly if they are too steep to comply and there is not enough room in the building for a longer, less steep, flight. Section 26 stipulates the alternative method of compliance using extra grab rails where stairs are too steep, for example;

in section 24 (1) (e) and 27—construction of balustrades. This is because it is often not cost effective to bring a noncompliant balustrade into compliance. Section 27 stipulates the alternative compliance method of which dispenses certain currently non-compliant balustrades if they complied with the relevant law when they were constructed and have not since been altered, for example;

in section 24 (1) (f)—swimming pool access. This provision does not provide dispensation, but requires full compliance with the relevant provisions of the

code, as provision of barriers to prevent young children from drowning in pools is a fundamental life safety measure;

in section 24 (1) (f) to (i)—sealing of buildings. This provision does not provide dispensation, but requires full compliance with the relevant provisions of the code, as sealing of buildings with draft excluders etc is relatively inexpensive and is fundamental to reducing a building's use of energy;

in section 24 (2) and (3), 28 and 29—energy efficiency of roofs, external walls, floors, and external glazing. That is because it is often not cost effective to bring certain noncompliant roofs, walls, floors and windows into compliance, particularly if doing so requires removal of linings to insert bulk thermal insulation or replacement of windows or window glass.

Section 28 stipulates the alternative methods of energy efficiency compliance for pre-existing roofs, external walls and floors. They are alternatives to complying with the relevant provisions of the building code, and only apply to pre-existing buildings. The alternative provided by the section is to bring the roofs, walls and floors up to a specified level of thermal performance, which approaches to the code's respective energy efficiency requirements for roofs, external walls and floors. That is necessary to reduce the building's use of energy, and to avoid the impracticalities of bringing pre-existing buildings into compliance with the code.

Section 29 stipulates the alternative method of compliance for external glazing. The provision permits energy performance films to be attached to glazing rather than having to replace windows or glazing or to provide shading, as the stated film can achieve energy efficiency performance approaching those required by the code. That is necessary to reduce the building's use of energy and to avoid the impracticalities of bringing pre-existing buildings into compliance with the code.