

# Minimum Standards for Rental Properties and Rooming Houses Regulatory Impact Statement

AGIG Submission

## Executive Summary

AGIG is one of Australia's largest gas infrastructure groups with distribution, transmission and storage assets across Australia. Our Victorian gas distribution network has been significantly upgraded and is one of the safest and most reliable of anywhere in the world, supplying over 1.4 million residential, commercial and industrial customers in the state. On average, these customers, including vulnerable Victorians, experience an unplanned outage for one hour once every 60 years.

We are working to decarbonise gas supply and have delivered a range of projects to demonstrate this low carbon future. One such project is Hydrogen Park Murray Valley, which is currently under construction in Wodonga. Hydrogen Park Murray Valley will be one of the largest of its kind in Australia and will provide a 10% renewable hydrogen blend to over 40,000 customers in Wodonga and Albury. The community has warmly embraced this low carbon project for their region.

This submission provides AGIG's response to the Regulatory Impact Statement (RIS), prepared by Deloitte Access Economics, and the Exposure Draft of the proposed regulations on the Victorian Government's proposed minimum standards for rental properties and rooming houses. AGIG has focused on those elements of the RIS concerning residential space heating and hot water services, albeit our comments do extend beyond these areas where it is relevant to do so.

AGIG believes that the proposed regulations are beyond the power of the governing legislation. AGIG submits that regulations under the Residential Tenancies Act cannot restrict the use of appliances otherwise lawfully and commonly available for sale and compliant with law. This is addressed in the submission, but would have the effect of making these regulations invalid. (Section 2).

Further, the quality of the RIS has been significantly impacted by a lack of genuine consultation in its preparation. In part, this reflects that no early consultation was undertaken with stakeholders prior to its release. Further, the RIS was released initially with the minimum 28 days consultation, suggesting that no genuine consultation was intended. As outlined in our submission, the RIS contains numerous material errors, omissions and mis-specifications.

Overall, AGIG's view is that any decision-makers relying on this RIS will be significantly and materially misinformed. The result will be poorer outcomes for Victoria's renters and rental providers, removing choice and amenity for renters, while making renters fund Victorian energy policy - at a time when rental and other cost of living pressures continue to challenge Victorians. Specifically:

- The RIS contains numerous and material apparent errors, omissions and mis-specifications, which AGIG identifies in this submission. Much of the detail of the underlying modelling is not made available, which is not ideal given the significance of the recommendations made. AGIG has therefore had to infer the approach taken in some areas, or to back-solve the assumptions adopted by the RIS. Combined with the short period allowed for submissions, even with a subsequent extension, this has limited AGIG's ability to delve into some aspects of the cost-benefit calculations (Section 4).
- The RIS does not demonstrate the split incentives problem it claims to address. Indeed, it fails to consider evidence that raises doubt about the nature of the claimed problem. For example, data indicates that rental properties have a slightly higher rate of use of electrical air conditioners than non-rental properties (Section 4.1.1).
- Energy usage rates and costs for alternative options are either erroneous or mis-specified, skewing the results significantly. Savings from preferred options for hot water systems are

potentially overestimated by 91% (by \$586 million) and space heating by more than 200% (by \$393 million) (Section 4.4.1).

- The cost of upgrades is underestimated repeatedly with categories of actual costs omitted or understated. For example, switchboard or connection upgrade costs quoted are at the bottom end of the range (\$3,500) when the same report indicates these costs could be up to \$12,000. Moreover, this does not include associated construction, installation and building costs either (Section 4.4.1 – Estimation of costs).
- The RIS cites a lack of impacts on rental property supply. These are selectively misquoted from a small number of articles which, conversely, find that there is a negative impact on rental property supply and prices. For example, a study is quoted finding there is no impact from tenancy laws on investors leaving the market; the next sentence in the same report finds that there is an impact on investors entering the market, impacting net number of properties.
- The minimum rental standards may result in a poorer heating outcome for some renters – for example, the new minimum standard for a house with gas ducted heating to all rooms is one split system in the living room (Section 4.1.1).
- The impact on affordable rental housing stock is ignored, especially in the regions; Victorian Government data indicates there is a decrease in affordable rentals, with particular volatility being experienced in regional Victoria.
- The impact on low to medium income rental property providers is not analysed; Australia's rental supply is primarily provided by households, with analysis indicating that 68% of landlords have one investment property, and most rental providers report a taxable income of less than \$100,000 p.a.
- There is also an overstatement in emissions benefits of \$303 million (approximately 20%) arising from the use of higher Intergovernmental Panel on Climate Change (IPCC) values rather than the Ministerial Council on Energy (MCE) methodology for greenhouse gas emissions valuation. The Victorian Minister for Energy and Resources is a member of the MCE.
- The RIS ignores impacts on regional towns entirely. Impacts are likely to be even more acute in regional towns with natural gas supply, many of which are part of AGIG's supply area (such as Echuca and Wodonga). Regional towns experience greater volatility in rental prices and experience different climates from metropolitan Melbourne. Remarkably, the RIS manages to ignore such regional impacts completely.
- The RIS makes little to no effort to consider impacts on significant cohorts such as women, children, domestic violence victims, First Nations renters, vulnerable, the elderly and low-medium income rental providers. Already tighter rental markets in regional areas mean that any impacts on costs, affordability and rental supply on these groups in regional areas may be even more acute.

**AGIG recommends that the most appropriate way forward is to revisit this RIS process.**

The proposed regulations themselves should be reconsidered to ensure they are within the power conferred by the Residential Tenancies Act.

The analysis is insufficient and needs to be re-done to address the flaws identified in this submission, such that it presents reliable analysis as envisaged in the Victorian Guide to Regulation.

# 1. Introduction

The *Minimum energy efficiency and safety standards for rental homes – Regulatory Impact Statement* (the Regulatory Impact Statement or Rental Standards RIS), prepared by Deloitte Access Economics for the Victorian Government's Department of Energy, Environment and Climate Action (DEECA) has significant deficiencies which we believe result in an inadequate basis for government decision making.

This submission outlines our concerns with the Rental Standards RIS and draft regulations and focuses on two elements in particular: the minimum efficiency standards for hot water and space heating for rental properties.

While the submission does not substantively address the proposed minimum standards for ceiling insulation and draught sealing or shower heads in rental properties, the submission does reflect on these minimum standards in so far as they affect energy consumption by hot water and space heaters. Likewise our submission does not address requirements surrounding rooming houses, although some aspects of our assessment will likely carry over.

Overall, our concern is that, in respect of space and water heating appliances, the proposed regulations and RIS does not sufficiently demonstrate a problem exists, imposing a solution which would not solve that problem if one did exist, motivated by a flawed impact assessment that, if corrected, would point to a different solution, and implemented via a regulatory change which appears to be beyond the power of the governing legislation.

We outline our basis for these concerns in this submission.

Section 2 focuses on the legal basis for the proposed regulations, and our concern that the proposed approach is beyond the power conferred by the *Residential Tenancies Act 1997* (Vic).

Section 3 focuses on a key element missing from the Rental Standards RIS; an assessment of consumer attitudes towards gas, gas appliances and the choices consumers currently have in respect of fuel and appliances.

Section 4 details our views on errors and omissions at each stage of the RIS process, with a particular focus on the benefit cost analysis.

Section 5 concludes with our views on appropriate steps forward in respect of this RIS.

Our key points, developed through this submission are that:

- The legal basis for the proposed approach is unclear and the regulations may be invalid if they are introduced.
- Consultation has been wholly inadequate. To the best of our knowledge, industry was not approached at any point in time about the content of this RIS and the impacts of the proposed Regulations, and hence the Rental Standards RIS was prepared without pertinent information. Given the impact of the proposed regulations on Victorians, full and proper consultation is imperative. The time allowed for public consultation is the minimum 28 days, subsequently extended by 2 weeks following the request of several stakeholders, rather than the recommended best practice of 60 days in the Subordinate Legislation Act Guidelines.
- The fact that many Victorians place an amenity value on gas itself, and on the choice they currently have is ignored entirely. This means that not only is the cost benefit analysis incomplete, but on a more fundamental level, the Rental Standards RIS fails to recognise a key aspect of our value proposition to customers.

- There is no examination of the simplest aspect of heating appliances; thermal value and, more specifically, how this might differ between current appliances and the preferred options in the Rental Standards RIS. This risks creating situations where tenants are worse off than at present.
- Split incentives and informational asymmetries are relied upon as the market failures (the key problem alluded to above) which prevent markets from creating positive outcomes for tenants and thereby necessitate regulation, but these theoretical points are not tested with actual data. We have done so, and show that, in practice, the proposed market failures simply do not exist in this market. This suggests that the market failure the Rental Standards RIS seeks to address does not exist.
- The distributional impacts of the changes are entirely unexplored. There is no discussion of which sectors of the rental marketplace actually require Government intervention, and no discussion of how limiting choice might affect different types of renters.
- The assessment of competition impacts is cursory at best, and narrowly focused on rental markets, largely ignoring, for example the manufacturing, plumbing and gas distribution markets. We fail to see how this assessment could be signed off by the responsible Minister as is required.
- The assessment of the impact on rental markets is superficial and misquotes several of the sources it uses to assert that there is no impact on rental markets. A balanced assessment of the evidence presented would have shown a significant rental market effect – for example, on investors entering the market, affecting total rental stock, and on dwelling and rental prices.
- The space heating option provides no real options which include efficient gas appliances. The Victorian Government's Gas Substitution Roadmap undertook to test options for phasing out gas in future RIS processes. This Rental Standards RIS is the first such future RIS, but it presupposes the removal of efficient gas space heating appliances for renters without any of the testing foreshadowed in the Gas Substitution Roadmap.
- The assessment of hot water and space heating is inconsistent in that the assessment of hot water appliances assumes that shower heads have been replaced, but the space heating assessment assumes that ceilings and draughts remain unfixed, leading to greater overall energy use. This significantly overstates the net benefits put forward.
- The details published on the modelling lacks transparency. There is no way any stakeholder can sufficiently assess a RIS when the provision of information is lacking. At a minimum, the model should be published. Limited information on aspects of the modelling was provided four weeks after the RIS was released, however this was not sufficient for calculations to be assessed.
- The benefit cost analysis has several material errors and mis-estimations. Several costs are missed entirely and many of the included costs and benefits have been mis-estimated. We estimate that the costs have been understated by \$2.7 billion for hot water systems and space heating together, and that the benefits have been overstated by \$1.4 billion. These are conservative estimates.

Our recommendation for the most appropriate way forward is to revisit this RIS process. As it stands the Rental Standards RIS is incapable of informing appropriate policy to promote energy efficiency or deliver benefits to rental providers or their tenants. In particular, we consider that:

- The proposed regulations should be reconsidered to ensure they are within the power conferred by the Residential Tenancies Act.
- The analysis should be re-done to address the flaws we identify in this submission, in particular:

- The problem of market failure needs to be informed by actual data on appliance uptake, which we suggest will change the nature of the problem entirely, and thus point to different solutions.
- The analysis of hot water appliances should, at a minimum, correct the mathematical error in one of its source documents which leads to a significant over-estimate of the energy requirements of gas appliances. Doing so would mean efficient gas appliance options not only have the highest benefit cost ratio (as at present in the Rental Standards RIS) but also that they would have the highest net benefit.
- The analysis of space heating appliances should include assessment of high efficiency gas appliances as options for customers. This analysis should be done in a manner consistent with hot water (correcting first for addressing ceiling and draught leakage issues) and should also look to correcting what look like over-estimates of both gas and electricity use.
- Consumer choice should be central to the analysis, and made an explicit part of it. This does not mean just in the benefit cost analysis, but also as a focus for options which should be assessed on the degree to which they empower and give agency to consumers.

As a final point we note that, due to a lack of suitable public data, we have engaged the services of two experts, Opteon and energyFit, to analyse several issues in our response. If DEECA or DGS would like to discuss these issues directly with either expert, we would be happy to facilitate meetings, and for the interaction between the two departments and the experts to be independent of us.



## 2. Invalidity of Proposed Regulations

A fundamental principle of administrative and constitutional law is that delegated legislation is invalid if it purports to deal with subject matter that is beyond the power conferred by the enabling or authorising Act and that delegated legislation must be made consistently with the powers conferred in the authorising Act.

We consider that the Proposed Regulations are invalid because:

1. They deal with subject matter that is beyond the power conferred by the authorising Act, being the Residential Tenancies Act 1997 (RTA); and
2. They are repugnant to the provisions of the RTA and deal with subject matter which is properly the domain of other statutes.

As to the first ground, that delegated legislation must not exceed the scope of the authorising Act.

The purposes of the RTA are set out in section 1, with ten sub-sections set out in sections 1(a) - (j) prescribing the purposes of the RTA. Engage Victoria's website states that the Proposed Regulations are made "*in line with the Victorian Government's commitments under the Gas Substitution Roadmap Update and the transition towards net zero emissions by 2045*". However, none of the prescribed purposes set out in section 1(a)-(j) of the RTA extends or relates to the making of standards for purposes related to the net-zero transition.

The Proposed Regulations purport to be made pursuant to sections 142C and 511 of the RTA. Section 142C states that regulations for rooming houses may be made for or with respect to prescribing privacy, safety, security and amenity standards. Section 511 provides regulations may be made for or with respect to (among other things) prescribing rental minimum standards, including the amenity of rented premises and requiring compliance with any other standards prescribed under any other Act or law<sup>1</sup> in relation to, or applicable to, the condition of any residential premises, including energy and water efficiency standards; and generally prescribing any matter or thing required or authorised to be prescribed by the RTA.

Section 142C permits regulations to be made with respect to privacy, safety, security and amenity standards. Banning the use of gas appliances readily available in Victoria, which sale is authorised by legislation specifically relating to gas, has nothing to do with privacy, safety, security or amenity standards.

Section 511 does not broaden the scope of allowed regulations (relevant in this context). It again just refers to amenity and where it refers to standards (including efficiency standards) it is limited to standards prescribed under another Act or law. That is, the regulations can only give effect to standards already prescribed by other laws, they cannot be used to create new standards. In any event, it is impossible to see how a reference to minimum standards and efficiency standards could extend to grant a power to effectively ban rental providers from buying appliances readily available in Victoria and whose sale and use is expressly authorised by other statutes.

There is other legislation in Victoria dealing with safety, efficiency and environmental impacts - such as the Gas Safety Act 1997 and the Environmental Protection Act 2017. Regulations under an Act appear an invalid forum to prohibit activities permitted by other Acts, particularly where the

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<sup>1</sup> *Emphasis added.*

authorising Act does not expressly state that it can be used for such purpose. AGIG submits that regulations under the RTA cannot restrict the use of appliances otherwise lawfully and commonly available for sale and compliant with law.

For these reasons, we do not consider that the Proposed Regulations are authorised by the RTA, and as a result, the Proposed Regulations if made will be ultra vires and invalid. They should be reconsidered.

As to the second ground, delegated legislation must not be repugnant to, or inconsistent with, the authorising Act.

Various sections of the RTA expressly contemplate gas connections, with such sections relating to liability to pay for gas services, installation costs, and assigning responsibility for various safety aspects. Given that the RTA contains various provisions regulating gas supply to tenants, it seems repugnant to the RTA for regulations to seek to ban the use of gas appliances. On this basis the Proposed Amendments are considered invalid.

Considering the purpose, meaning and scope of the Proposed Regulations and the RTA (the enabling or authorising Act), the Proposed Regulations are beyond the power conferred by the RTA, and are repugnant to the RTA. The Proposed Regulations are invalid and should not be enacted.



### 3. Lack of Consideration of Consumer Choice

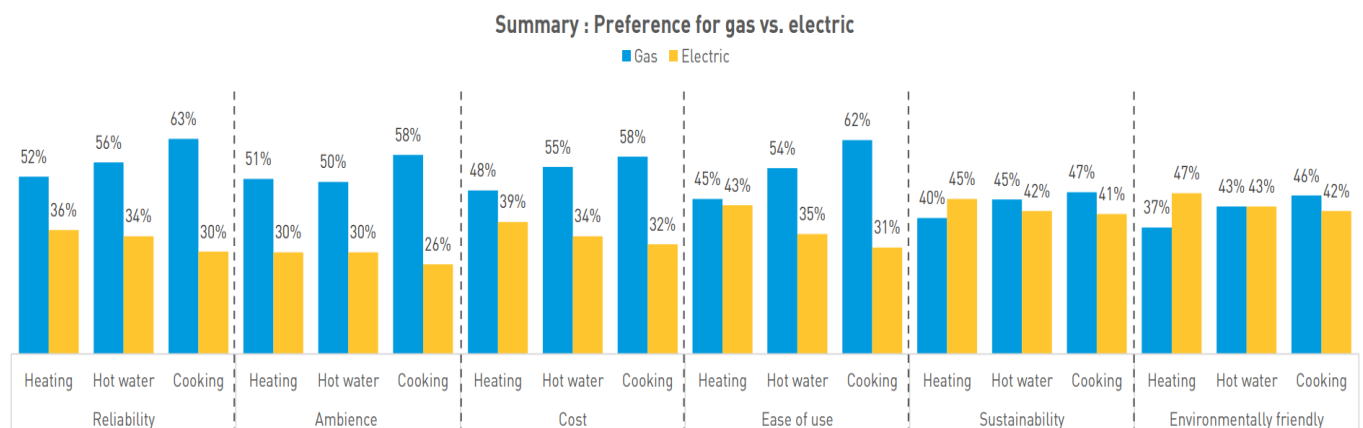
An important conceptual concern we have with the Rental Standards RIS is that it misses one key point; gas is a fuel of choice (unlike electricity which must be provided to all homes, gas is an option that is not mandated by law), which consumers choose because they like the services and amenity it provides. In short, gas has value for consumers.

It is distinguishable from other forms of energy because of various factors, qualitative and quantitative, including cost and these characteristics give it value.<sup>2</sup> In particular, customers at present have a choice as to how they get their household energy (particularly in times of electricity outages), and this choice has value.

Even though appliance choice is ultimately made by a rental provider, tenants can and do influence this choice for the properties they rent,<sup>3</sup> and currently have the option of moving to a property with gas space and water heating if they wish. Removing this choice represents a cost for customers which must be included in a benefit cost analysis. More fundamentally, it is an issue which should drive the development of options.

The fact that customers value gas is borne out in our customer surveys. Some of the reasons why our customers prefer gas are summarised in Figure 1.

**Figure 1: Preferences for gas and electricity**



Source: AGN Voice of Customer Q1 Jan-Mar 2024

None of the values summarised in Figure 1 are reflected or acknowledged in the Rental Standards RIS. Nor even are very basic issues, such as levels of thermal comfort and any differences between current appliances and those which replace them, despite thermal performance being in all five of the objectives of the Rental Standards RIS (see Section 2 of the RIS).

Where people are not connected to gas, the primary reason is that they are renting (35 percent of respondents to our Voice of the Customer Survey). A further 25 percent have no gas available; only 25 percent do not connect because they prefer connecting to electricity. Amongst those who are either renting or who have no gas available, less than half suggested they were unlikely to

<sup>2</sup> Including, it would seem to the Victorian Education Minister who apparently has no immediate plans to remove his own gas connection, despite government policy on electrification (available [here](#)).

<sup>3</sup> See, for example, Lang, M et al, 2022, "Energy Efficiency in the Private Rental Sector in Victoria: when and why do small-scale private landlords retrofit?"; Energy Research and Social Science (88) 102533, available [here](#).

connect to gas within the next 12 months<sup>4</sup>. This strongly suggests, given the choice, both our customers in general and renters in particular, do place a value on gas.

Where consumers have a choice removed, as is the case in the Rental Standard RIS for most options, the removal of that choice should be included in the benefit cost analysis as a matter of course. This has not been undertaken in this RIS, or even acknowledged, despite it being clear in surveys around the Gas Substitution Roadmap (see quote above).

We believe that customer choice, and the choices of tenants, should be central to any consideration of policies which affect them. This goes beyond assessing costs when choices are taken away as the Rental Standards RIS does. It rather should directly inform the development of options to improve the agency of customers and to improve the way they make choices.

The definition of “choice” appears to be narrowly limited to the desired outcome of the Rental Standards RIS; there is a focus in the Rental Standards RIS on allowing tenants to exercise the “choice” of switching to electricity in a new way. Notwithstanding that tenants can already choose a rental house that offers electric appliances if they wish to do so, this does not acknowledge that choice to continue with gas is taken away. We consider that the RIS should properly consider improving the ability of customers to make both choices.

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<sup>4</sup> *AGN Voice of Consumers: Q1, Jan to March 2024*

## 4. Stages of Impact Assessment

The *Victorian Guide to Regulation* outlines the role of a RIS in supporting Government decision making, noting an impact assessment that ‘presents a sound analysis based on credible evidence enables the Government to consider all relevant information before making a decision’.<sup>5</sup> When weighed against the guidance provided by Better Regulation Victoria and against the requirements of the *Subordinate Legislation Act 1994*, the Rental Standards RIS has significant deficiencies that call into question its adequacy and suitability as a basis of sound policy.

This section outlines deficiencies regarding the requirements of section 10 of the *Subordinate Legislation Act 1994* and the *Victorian Guide to Regulation*.

The deficiencies relate to both the analysis and evidence, some of which has been provided by DEECA, used by Deloitte Access Economics throughout the Rental Standards RIS which serve to inflate the benefits of the preferred options, ignore viable options capable of achieving the objectives set out and increase costs of the base case.

An impact assessment for a legislative instrument requires the following minimum requirements, each of which are addressed in the sections that follow:

1. Why is the government considering action? (problem analysis).
2. Which outcome(s) is the government trying to achieve? (objectives of action).
3. What are the possible different courses of action that could be taken (identify feasible options).
4. What are the expected impacts (benefits and costs) of options and what is the preferred option? (impact analysis).
5. What are the characteristics of the preferred option, including small business and competition impacts? (summarise the preferred option).
6. How will the preferred option be put into place? (implementation plan).
7. When (and how) will the government evaluate the effectiveness of the preferred option in meeting the objectives? (evaluation strategy)

We use this structure to order our responses in this chapter, pointing out important inadequacies in the Rental Standards RIS at each of these stages.

### 4.1. Problem analysis

The Rental Standards RIS identifies several general problems (see Rental Standards RIS pp14-18). For the purposes of this submission five of the problems identified are of particular interest:

- (2.4) A significant volume of Victoria’s rental building stock lacks basic thermal performance and appliance efficiency measures;
- (2.5) The rental relationship undermines provision of housing with adequate thermal control or efficient appliances;
- (2.6) Adverse financial impacts associated with inefficient thermal performance and appliances;

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<sup>5</sup> *Better Regulation Victoria (2016) Victorian Guide to Regulation: a handbook for policy-makers in Victoria, p.2*

- (2.7) Adverse health and societal impacts associated with inefficient thermal performance and appliances in homes;
- (2.8) Adverse environmental impacts associated with inefficient thermal performance and appliances in homes.

Of these, Problem 2.5 is key because it posits “barriers” which prevent any of the other problems from being addressed. The reason why Victorian rental stock lacks basic thermal performance (Problem 2.4), which then causes adverse financial (Problem 2.6), health and societal (Problem 2.7) and environmental (Problem 2.8) issues is because barriers exist in the rental market which prevent these other problems from being addressed.

These “barriers” relate to split incentives and information asymmetries which prevent solutions which would solve the other 4 problems from being deployed, and the regulatory options discussed by the Rental Standards RIS are intended to address these barriers. This is such a key issue that we address it in Section 4.1.1 below, because the Rental Standards RIS has not sought any evidence that this problem exists in reality, rather than as a potential problem based in economic theory.

If this problem does not exist then, although the other problems may exist, regulatory action aimed at addressing problem 2.5 will do nothing to alleviate them.

A problem analysis is also required to identify who is affected by the problems identified.<sup>6</sup> The Rental Standards RIS effectively suggests all renters are equally affected by the problems identified but this is not the case. Many rental properties have strong thermal performance. Recently built rental properties can be assumed to meet the standards of the National Construction Code (NCC) that applied at the time (from 2019 to 1 May 2024, the NCC required homes achieve a whole of home rating of 6 stars), while even older properties may have more efficient appliances.<sup>7</sup> Properties may also have heating/cooling systems that deliver comfort or amenity that exceeds what is likely to be achieved by the proposed minimum standards.

The Rental Standards RIS uses evidence from the 2019 Victorian Residential Efficiency Scorecard, noting 75 per cent of properties had low or very low thermal performance—pointing to a high proportion of properties lacking appropriate insulation and draught sealing. The same study suggests only 29 per cent of properties included low or very low efficiency heating, meaning 71 per cent of properties used a higher efficiency heater.<sup>8</sup>

The Rental Standards RIS fails to differentiate between rental properties affected or not by the specific problems identified, with consequences for the feasible options identified and the impact assessment to follow. Only a subset of existing rental properties suffer from both low or very low thermal performance and low or very low efficiency heating appliances. The same is true (see below) of air-conditioning.

Because the Rental Standards RIS does not identify how different segments of the rental market are affected by the problems identified, it fails to consider policy options that might have greater net benefits. For example, for a rental property with poor thermal performance (no ceiling insulation and draughts), but with a relatively efficient gas heating system, it may be sufficient to address the problems identified in the Rental Standards RIS (lowering costs and reducing emissions) by improving thermal performance. However, because the Rental Standards RIS fails

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<sup>6</sup> *Better Regulation Victoria (2016) Victorian Guide to Regulation, p.17*

<sup>7</sup> *The Rental Standards RIS (p82) states that it has assumed that all houses have a 2-star NATHERS rating, but the only source for this is an internal DEECA model from 2019 which has not been made available, so we are unable to gauge how accurate this assumption is.*

<sup>8</sup> *Deloitte Access Economics (2024) Rental Standards RIS, p.14*

to identify segments of properties affected by each problem identified, the analysis that follows does not identify feasible options or appropriately assess the impacts.

The examples above demonstrate that there are costs unrecognised in the Rental Standards RIS. This is because of a failure to appropriately specify the problems and segments of the rental market specifically affected by each problem identified.

#### 4.1.1. Barriers to action absent of regulation

As noted above, problem 2.5 is a key issue for the Rental Standards RIS due to the “barriers” it represents creating a greater incidence of the other identified problems than would be socially optimal. The Rental Standards RIS notes two key barriers in the rental market; split incentives and information asymmetries.<sup>9</sup>

Put simply, a split incentive can exist because the rental provider incurs the capital cost associated with an appliance but the tenant reaps the benefits. Since the costs and benefits are incurred by different people, it is suggested that investment is less likely to occur, even if the benefits outweigh the costs. Informational asymmetries means simply that the rental provider knows more about the property than the tenant; a tenant renting in summer, for example, might not know how well the house performs in winter.

#### Evidence on split incentives and informational asymmetries

Whilst split incentives and informational asymmetries form part of the corpus of economic theory, they are by no means the sole theoretical perspective. Ronald Coase, pointed out decades ago that markets are actually very adept at finding solutions to situations where costs and benefits are borne by different parties, creating transaction costs.<sup>10</sup> Not only did he win the Nobel prize for his own work, but it went on to inspire an entire field of economic analysis with both theoretical and practical implications.

Theory is insufficient to guide appropriate policy, particularly where differing theoretical perspectives exist; theory must be tested against data. This has not happened in the Rental Standards RIS.

We test whether the data support a theoretical view that split incentives and informational asymmetries exist as problems in the context of space and water heating appliances.

Although the ABS no longer collects information on air-conditioning in homes (and does not, to our knowledge, collect information on heat pumps for water) which can be examined down to the level of rental properties, we note that in 2011, slightly over half of rental properties in Victoria had at least one air-conditioner.<sup>11</sup> We note that air-conditioners were, at this time, much more expensive and less efficient than they have subsequently become.

To overcome the issue of a lack of more recent ABS data, we sought data from Opteon, a specialist provider of real-estate data, and they provided us with data on air-conditioners (that is, reverse-cycle air-conditioners, not evaporative) and heat pumps (for hot water), from 2017 until the end of 2023. We provide the results of this analysis in Figure 2 below.<sup>12</sup>

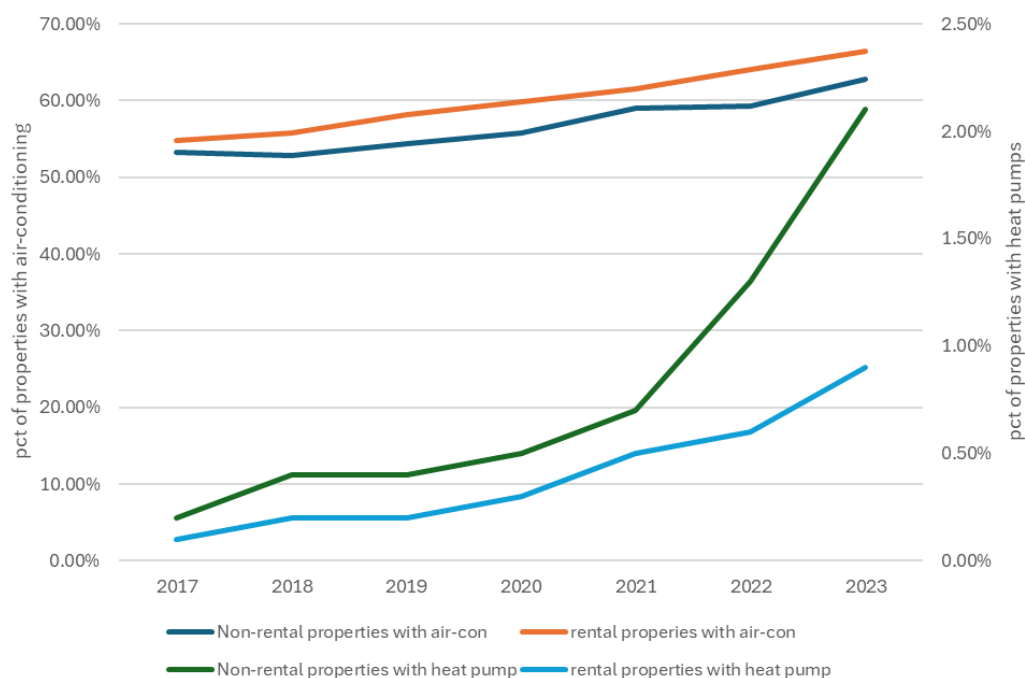
<sup>9</sup> See *Rental Standards RIS* pp15-16.

<sup>10</sup> See Coase, RH, 1960, “The Problem of Social Cost”, *Journal of Law and Economics*, 3, 1-44. Details on his Nobel Prize are available [here](#).

<sup>11</sup> ABS Ref 46022D0001\_201208 Household Water and Energy Use Victoria, Oct 2011, Table 6a

<sup>12</sup> Opteon notes that its analysis is based on the complete population of data gathered from full internal inspections as defined by the Australia Property Institute. Opteon includes all properties regardless of location, type of dwelling or value range and therefore the dataset is unbiased and statistically significant for the observed trends.

**Figure 2: Air conditioner and heat pump use 2017 to 2023 Victoria**



Source : Opteon data

Rental properties are slightly ahead of non-rental properties in respect of the penetration of air-conditioners, at roughly two-thirds of properties. It is therefore unclear how rental markets could somehow be failing where the owner occupier market (which, by definition, does not exhibit split incentives or information asymmetries) performs at roughly the same level. That is not to say that there are no sub-sectors of the rental market where problems exist (or indeed of the owner-occupier market). However, these have to be uncovered, and the particular issues associated with those sub-sectors addressed with targeted policy.

**The RIS imposes costs to solve a problem that doesn't exist**

If the “split incentive” problem exists, that is, rental providers will not invest in appliances because they incur capital costs but the tenant reaps the benefits, there should be a significant difference in rental and non-rental properties with electric air-conditioning and heat pumps.

However, Victorian real estate valuation data obtained from Opteon indicates that from 2017 to 2023, the percentage of rental properties with electric air-conditioning increased from 54.8% to 66.4%. Non-rental properties during the same period went from 53.3% to 62.4%.

Similarly for heat pumps (a relatively new technology), the percentage increase for rental properties was 0.1% to 0.9% from 2017 to 2023; for non-rental properties this increase was 0.2% to 2.1%.

The evidence suggests the “split incentive” problem does not exist – rental providers are already installing appliances without any intervention. Furthermore, a blanket policy may prevent issues at the lower-end of the market being discovered.

A blanket policy, applied to the whole market, including the parts that are not failing is mis-directed. Worse, it prevents issues which do exist from being seen because the evaluation stage of the policy assessment (see Section 4.6) will focus on whether the blanket ban is being implemented, not on outcomes in sub-sectors of the rental market, which the Rental Standards RIS does not even recognise exist and so, therefore, cannot monitor.

In respect of hot water heat pumps, neither rental nor owner-occupied homes have very high penetration. This is clearly an emerging technology which is slow in being adopted; perhaps because of its high cost. It seems excessive to mandate all rental properties be fitted with an emerging technology significantly ahead of its adoption in the broader property market. This will have the result of inflating penetration rates in rental markets. In the first year of the policy, penetration rates would be three times those in owner-occupied markets at present<sup>13</sup>. In particular, it is not clear how moving ahead of other markets to this degree represents solving a market failure. It is also unclear what the overall impacts of this accelerated adoption of heat pumps beyond the market adoption rate are.

It may be the case that the proposed market failures of split incentives and information asymmetries have some salience in some rental sub-markets in respect of space and water heating, and that they may have some salience in the overall rental market for ceiling insulation draught sealing and low-flow shower heads. However, in respect of the overall rental market, in the context of space and water heating appliances, the data collected by Opteon suggest that neither market failure exists. We suggest rather that:

- Both air-conditioners and, in particular, hot water heat pumps, are still moving towards their “equilibrium” levels of penetration via market forces which still have some way to go before they are played out;<sup>14</sup> and
- Once this equilibrium is reached, the issue of social optimality should be re-examined to understand if certain sectors of the market are failing. At that point, policy solutions should then be developed to address those issues.

The case for intervention now, particularly in emergent markets such as hot water heat pumps, on the basis of a theoretical market failure is not supported by the data. There is, therefore, little reason for the Rental Standards RIS to have gone beyond the problem identification stage in respect of space and water heating appliances; at least without significantly re-framing the problem to parts of the market where it might exist, and then developing responses to deal with those problems, whatever they may be.

### **Other issues associated with split incentives and information asymmetries**

There are two additional practical issues associated with the use of the untested assumptions of information asymmetries and split incentives in the Rental Standards RIS. Both pertain to how these untested assumptions have informed the benefit cost analysis.

#### *The base case causes net benefits to be overstated*

Turning to the first issue, key in any benefit cost analysis is the “base case” which describes what will happen if the proposed regulatory intervention does not happen. In this, Deloitte Access Economics suggests:<sup>15</sup>

<sup>13</sup> There are roughly 700,000 homes in the Rental Standards RIS (see p82) and a 12-year assumed life for appliances applied to the proportion of those the RIS assumes would be liable for upgrades produces roughly 44,000 homes installing heat pumps per annum. That is roughly 6 percent of the total.

<sup>14</sup> Since 2017, air-conditioner penetration rates in rental properties have increased by roughly 3 percent per annum. Although growth is unlikely to be linear at higher levels of penetration, if this same level of growth continues, one could expect 85 percent of rental homes to have an air-conditioner by the time the proposed regulations subset in 2031 with no government involvement whatsoever.

<sup>15</sup> See Rental Standards RIS p24.



*It is also assumed that under the base case, the proportion of appliances, including the share of electric and gas appliances, will remain constant as all appliances will be replaced on a like for like basis (i.e., there is no assumed voluntary uptake/switching to higher energy efficient appliances). Similarly, there is no assumed voluntary installation of ceiling insulation or draught sealing measures. This is considered to be a conservative, yet reasonable assumption, given the split incentives problem described in section 2.5.*

This approach implies that, absent of government action, not one rental provider will shift away from gas appliances to the preferred options. Figure 2 makes it clear that this has been untrue in the past and it is difficult to see why it would suddenly be true in the future.

A false assumption of zero voluntary uptake of higher efficiency appliances has some important consequences because of the way in which the Rental Standards RIS assesses options.

In practice, the costs and benefits estimated in the analysis will both be larger than they should be because they will ascribe to government action appliance switches that would have occurred in any case due solely to market forces. As the Rental Standards RIS points out in respect of compliance costs, if both costs and benefits increase by the same amount, benefit cost ratios stay the same.<sup>16</sup>

However, the Rental Standards RIS does not rely primarily on benefit cost ratios, but on net benefits; indeed rejecting options which have higher benefit cost ratios because the net benefits are greater.<sup>17</sup> Net benefits, unlike benefit cost ratios, do increase when both costs and benefits rise,<sup>18</sup> so the assumption of zero switching without government intervention, just like the assumption of 100 percent compliance costs, has important consequences for the selection of preferred options.

#### *Market failure assumptions have been applied inconsistently*

The second issue is associated with what appears to be inconsistent application of the market failures of split incentives and information asymmetries.

If split incentives and informational asymmetries exist, they must apply equally to any capital investment made in a rental property where the rental provider pays for the investment but the tenant reaps the benefits. Applying the logic of split incentives and information asymmetries used in the RIS to appliances supported in each option, a rental provider will only provide the minimum standard of appliances to tenants it is mandated to, and not a more expensive appliance that might have lower running costs or greater amenity for a tenant.

For example, in Option 4, the minimum standard is either a non-ducted system in the main room, or a ducted system, but a 2 star room cooling system costs only \$2,190 (multi-systems cost \$6,531) whilst a 3 star ducted system costs \$10,863. For a rental provider, the room-only option is clearly the minimum which would be chosen as there is no advantage to the rental provider in installing anything better.<sup>19</sup> A room-only option, however, would not be optimal for a tenant who previously had ducted gas heating.

By contrast, assuming like-for-like replacement of ducted gas with ducted space-heating, rather than the rental provider taking whichever is the cheapest option would be illogical, as this would

<sup>16</sup> See Rental Standards RIS p25. This is not a reason to avoid estimating both benefits and costs correctly, in any event.

<sup>17</sup> See Rental Standards RIS p23

<sup>18</sup> If costs are 5 and benefits 10, the benefit cost ratio is 2 and the net benefits are five. If costs double to 10 and benefits double to 20, the benefit cost ratio is still 2, but the net benefits have now doubled to 10.

<sup>19</sup> One might argue that better standards would allow the rental provider to provide higher rents, but the Rental Standards RIS (see p70) asserts that increased costs do not generally get passed through to tenants on average, so it unclear how this analysis could make such an argument. In any case, if it did, this would need to be included in the assessment of costs, and has not been.

mean that the relevant market failures exist in appliance choice now, but not in the appliance choice a rental provider makes in future in response to the proposed regulations.

Our understanding is that like-for-like replacement was assumed for appliances; specifically in the case of space heating that ducted gas is assumed to be replaced with ducted electric space heating, which is illogical, and means that market failure assumptions have been applied inconsistently at different stages of the analysis.

If the Rental Standards RIS is going to assume like-for-like replacement, it should make it clear why the market failures it assumes exist at present do not exist when rental service providers are offered a choice between two different options to replace current appliances, and these options have significantly different costs.

### **Market failures in sub-markets have been ignored**

As a final point, we note that whilst there is no evidence to suggest that split incentives and information asymmetries are market failures which exist in the rental market as a whole, it may well be (our data are not sufficiently fine-grained to check) that they exist in certain sub-markets. For example, low-quality rental stock, earning low returns may not be able to support more expensive upgrades to make sure the thermal efficiency of an electric replacement is the same as the gas appliance it replaces, and rental providers who themselves are not wealthy may have limited means to put up the requisite capital.

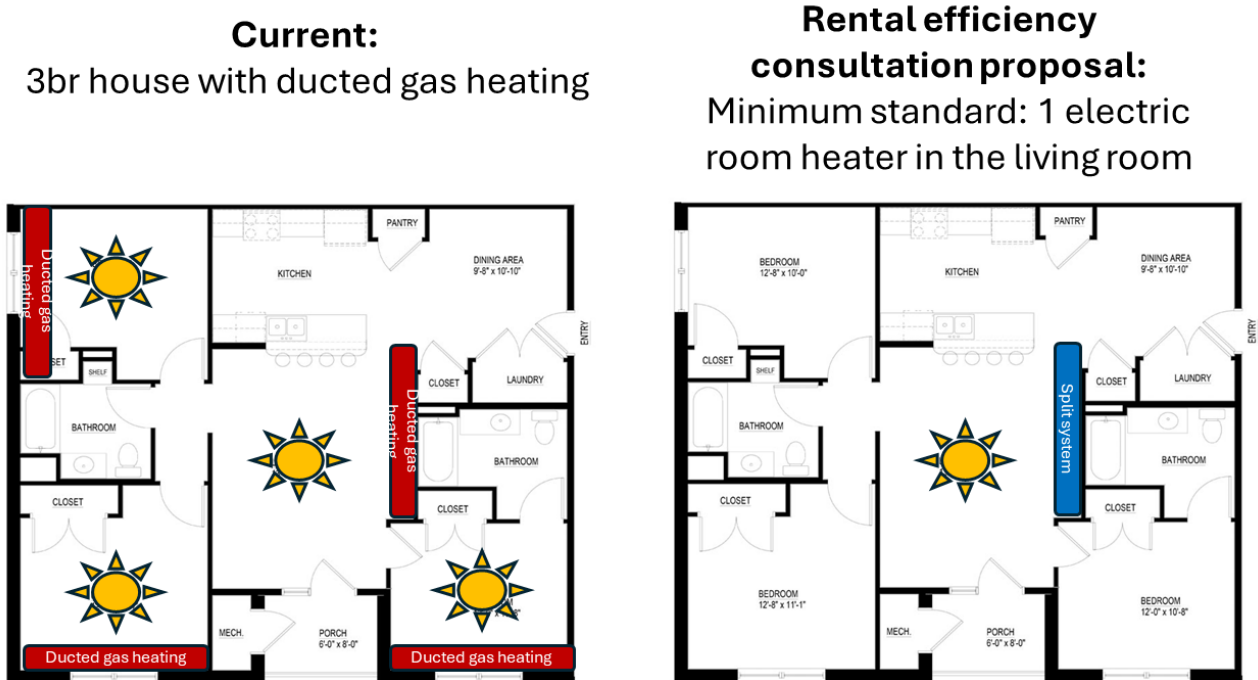
In this instance, a tenant who currently has a gas system may well find that it is replaced, when it breaks down, with a single-room air-conditioner (or indeed, simply removed if the house already has a conforming air conditioner). This tenant will either be cold in winter, with all the health issues this causes,<sup>20</sup> or incur costs to install inefficient portable heating to overcome the issue. In this instance, policy would need to be developed which protects the regulatory failures that the minimum standards have created. The policy in the Rental Standards RIS does not do so; indeed it does not even recognise that the issue could arise.

In Figure 3 below, we follow the logic of split incentives (that is, that the rental provider will not invest in appliances because the rental provider incurs the capital cost associated with an appliance, but the tenant reaps the benefits), showing how a 3 bedroom house with ducted gas heating would be replaced with 1 electric room heater in the living room (and not like-for-like). To the extent that this happens, we believe it is more likely in lower quality rental housing, where the returns from extra investment, as well as the capabilities to invest in the first place, are likely smaller.

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<sup>20</sup> See Rental Standards RIS pp17-18 for a summary of some of these.

**Figure 3: Example of “logical” appliance replacement for space heating.**



## 4.2. Objectives of action

The Rental Standards RIS identifies three objectives for action:

- improve renter health, wellbeing, safety and comfort;
- reduce renter energy bills; and
- reduce greenhouse gas emissions, supporting the energy transition and decarbonisation of the rental sector.

We support the broad intent of these objectives, though we note that the Rental Standards RIS has far more focus on the latter 2 than on showing how its solutions address the first.

However, it is important to note the objectives can conflict with one another. Ordinarily a RIS would account for these conflicts by fully identifying costs and benefits associated with the options identified. However, as outlined below in Section 4.4.1, the RIS does not appear to account for several material costs associated with the feasible options identified and analysed. Because of this, the Rental Standards RIS does not appropriately account for conflicts among the objectives and does not account for the costs and benefits of achieving one objective in preference to another.

### 4.3. Identify feasible options

A RIS is required to identify practicable means of achieving the identified objectives, including other regulatory as well as non-regulatory options,<sup>21</sup> with Better Regulation Victoria looking for ‘options that address the underlying problem’ in its assessment of adequacy.<sup>22</sup>

The Rental Standards RIS outlines only a range of broad intervention types (regulation of minimum standards, information campaigns, mandatory disclosures) and goes on to identify regulation as the most appropriate means of achieving the objectives identified.<sup>23</sup> What it does not do is examine particular non-regulatory options with particular regulatory options; the detailed option development is undertaken only once the choice is made to favour regulatory options.

This is important for the impact assessment that follows. For heating, no gas heating option (other than the base case) is analysed—the option considered is a departure from the current NCC which imposes pure efficiency standards within a home energy budget and can be met by gas and electric appliances. However, after the implementation of the ceiling insulation and draught sealing regulations, a gas heater will be used less, consume less energy and produce fewer greenhouse gas emissions (indeed in the future it could feasibly burn biomethane or hydrogen producing no net emissions). The potential for this and other options to address the problems identified and to achieve the objectives outlined has not been considered. The Rental Standards RIS does not adequately identify feasible options.

A related issue pertains to the Gas Substitution Roadmap, which foreshadowed using the then forthcoming RIS processes to test the phasing out of gas appliances.<sup>24</sup> However, the Rental Standards RIS, for space-heating at least, assumes no efficient gas options for space heating from the outset, meaning that the testing foreshadowed by the Gas Substitution Roadmap has not been undertaken. Rather, what has been tested, for space heating, is the benefits of replacing an existing gas appliance only with a more efficient electric appliance, without considering the possibility just of improving the efficiency of gas.

Finally, we note that the Rental Standards RIS states that a future RIS will “consider the costs and benefits of requiring existing gas appliances in homes and relevant commercial buildings to be replaced with electric appliances when the current appliance reaches end-of-life”.<sup>25</sup> However, this RIS pre-empts this by forcing this change for rental properties without assessment.

Further, the exposure draft of the proposed legislation includes exemptions for rental providers where the cost of the switch to electric appliances is “significantly above average” (which is not defined). It is not clear whether the forthcoming RIS, which will apply to appliances in all homes, and not just rental properties, provides the same exemption for costly appliance switches. If it does not, then:

- Rental providers will be captured by a requirement to use electrical appliances in the forthcoming RIS regardless of what the proposed regulatory change associated with the Rental Standards RIS allows; and
- The benefit cost analysis in the Rental Standards RIS, which assumes that significantly costly appliance switches do not occur will need to be redone as the forthcoming RIS will require more costly appliance changes. This also means that the cost estimates in the Rental Standards RIS are much too low.

<sup>21</sup> *Better Regulation Victoria (2016) Victorian Guide to Regulation, p.28*

<sup>22</sup> *Better Regulation Victoria (2016) Victorian Guide to Regulation, p.27*

<sup>23</sup> See Rental Standards RIS pp21-22.

<sup>24</sup> See the Gas Substitution Roadmap Update, p45, available [here](#)

<sup>25</sup> See Rental Standards RIS p6.

## 4.4. Impact analysis

The core of the Rental Standards RIS is its analysis of impacts. We focus on Chapters 6 and 7 of the Rental Standards RIS which deal with hot water systems (although we do not address the issue of efficient showerheads) and space heating respectively.

The first thing to note is that assessing the impact analysis in the Rental Standards RIS is extremely challenging because so little detail is provided in respect of the modelling.<sup>26</sup> Some limited inputs are provided in the appendix but basic information like what portion of renters have what kinds of appliances now and what they switch to are missing; even the number of properties in the analysis for appliance changes is not mentioned. This makes it impossible for any stakeholder to challenge an input to the modelling and follow through the consequences of changing that input on the overall results.

For a public consultation on policy that has a material impact on Victorians and Victorian industry, this severely limits AGIG's ability to engage with the proposal, and we cannot see how other stakeholders could engage with the benefit cost analysis and provide meaningful submissions.

The *Victorian Guide to Regulation* suggests departments 'consider placing calculations, modelling and technical discussions in appendices or make them available on a website or on request'.<sup>27</sup> We do not believe there is any reason the actual model used for the Rental Standards RIS should not be released. While there are obvious errors and omissions in the Rental Standards RIS, publishing the model would allow affected stakeholders to re-create and assess options, and thus contribute better to a robust options development and assessment process. Publication of models that underpin a RIS, along with all of the assumptions that inform that model, should be a matter of course for all RIS analyses, in our view.

With the inadequacies of the explanation of the modelling process that the Rental Standards RIS process in mind, we proceed to our assessment of the benefit cost analysis itself. We focus first on some over-arching issues, and then on some aspects specific to the assessment of costs and benefits, which we quantify where possible.

### 4.4.1. Benefit cost analysis

In this section, we focus on issues associated with the benefit cost analysis. We focus first on a number of over-arching issues which affect the whole analysis, and then focus on specific costs and benefits.

#### *Methodology to estimate water and space heating are inconsistent*

One key over-arching issue is the inconsistent way in which water and space heating have been assessed. The Rental Standards RIS notes that the results in Chapter 4 to 9 have been undertaken in isolation; that they have assumed when determining the benefits of each intervention that it happens in isolation.<sup>28</sup> Confusingly, this does not appear to be the case for hot water systems (Chapter 6 of the Rental Standards RIS):<sup>29</sup>

*Shower heads with a higher efficiency have a lower flow rate, resulting in reduced use of hot water, which has been accounted for in the analysis in Chapter 6.*

<sup>26</sup> We sought some information in aspects of the modelling soon after the RIS came out and received answers four weeks later. This provided only limited extra information that was unable to be tested, especially so in the limited consultation timeframe; where we asked for numbers, for example, we were told the methodology used to derive them, which was of limited use as several steps involved sources we cannot access or manipulations and aggregations of sources which were not explained.

<sup>27</sup> *Better Regulation Victoria (2016) Victorian Guide to Regulation*, p.15

<sup>28</sup> See *Rental Standards RIS* p72

<sup>29</sup> See *Rental Standards RIS* p73

That is, it appears that the Rental Standards RIS estimates the benefits of changing to a low-flow shower head after the hot water system has been changed to their preferred option, which more than halve the net present value of the net benefits of changing shower heads. By contrast, space heating options appear to have been assessed assuming no changes are made to ceiling insulation and draught sealing.

The way that the benefits of hot water systems are estimated is correct, because the change in shower heads is proposed to happen when a rental contract is renewed (on average, every 2 years<sup>30</sup>) whilst the hot water system is assumed to be upgraded only when it fails (once every 12 years - RIS p88). This means that, when the vast majority of hot water systems are replaced, they will be replaced in a home which already has a new shower head.

The way the Rental Standards RIS estimates the benefits of space heating systems is inconsistent with the way in which it has estimated the benefits of hot water systems, because ceilings and draught sealing also occurs at each new lease, whilst space heaters, like water heaters, need to be replaced only at the end of their life.

Doing the space heating analysis in this way significantly overstates the benefits of changing space heating solutions, as it counts as benefits a reduction in cost of units of energy that most houses will not in fact consume because they have already fixed ceiling and draught issues.

There is a "sensitivity" analysis which purports to examine the "interaction" between ceiling and draught sealing on the one hand and space heating on the other.<sup>31</sup> However this, as is the case for hot water systems, should be the main analysis, not a sensitivity analysis. Moreover, the "sensitivity analysis" was only undertaken for the preferred option, which means that the actual impacts of the various options have not been tested against each other.

Compounding the error, despite having data on how many properties require ceiling and draught sealing treatment and having data on how much of a reduction in energy use this translates to (with which they cannot determine the benefits of these proposals), an arbitrary 30 percent gain in energy efficiency is chosen as an average. It is unclear from the data provided in the appendices what the answer should be, but if we proxy some different values we get the results in Table 1. This suggests the net benefits of the preferred option may be significantly overstated.

**Table 1: Benefits and costs of space heating with different efficiency gains from ceiling replacement and draught sealing (\$ mil, Option 4)**

	Core assumption	30% reduction in energy use	40% reduction in energy use	50% reduction in energy use
Cost of appliances	\$697.96	\$697.96	\$697.96	\$697.96
Quote/admin costs	\$13.30	\$13.30	\$13.30	\$13.30
<b>Total costs</b>	<b>\$711.26</b>	<b>\$711.26</b>	<b>\$711.26</b>	<b>\$711.26</b>
Avoided portable cooler costs	\$175.39	\$175.39	\$175.39	\$175.39
Avoided energy costs	\$1,366.68	\$956.68	\$820.01	\$683.34
Avoided GHG emissions	\$560.19	\$392.14	\$336.11	\$280.10
Avoided air pollution costs	\$12.49	\$8.74	\$7.49	\$6.25
<b>Total benefits</b>	<b>\$2,114.75</b>	<b>\$1,532.95</b>	<b>\$1,339.01</b>	<b>\$1,145.07</b>
<b>NPV (20 years)</b>	<b>\$1,403.49</b>	<b>\$821.69</b>	<b>\$627.75</b>	<b>\$433.81</b>
<b>BCR 20 years</b>	<b>2.97</b>	<b>2.16</b>	<b>1.88</b>	<b>1.61</b>

Source: Adapted from Table 10.7 RIS p73 (core assumption is multiplied by 1 minus reduction in pct)

<sup>30</sup> The median tenure for Victorian rental properties is 23 months, See Homes Victoria, 2024, Rental Report, March qtr 2024, available [here](#), p15

<sup>31</sup> See Rental Standards RIS p72.



### *Other issues with cost benefit analysis*

Other issues which affect the whole analysis as distinct to affecting individual costs or benefits include:

- The assumption, flowing from the split incentives issue, that not one gas appliance will be replaced with an electric appliance without government action leads to net benefits being significantly overstated (See Section 4.1.1), as does the similar assumption made that compliance will be 100 percent.
- The Rental Standards RIS examines changes in gas and electricity prices, but notes that, even with prices of zero, the benefit cost ratio would be above one because the emissions savings are so high.<sup>32</sup> Despite this:
  - No sensitivity analysis is done with different carbon prices. For example the social cost of carbon values currently endorsed by the AER and AEMC are not tested; and
  - No sensitivity analysis is performed on whether coal-fired power stations will close as scheduled and Victoria will meet its highly ambitious net zero by 2045 policies.
- The Rental Standards RIS provides exemptions for “significantly costly” appliance switches.<sup>33</sup> This reduces the costs for rental providers in the Rental Standards RIS analysis and increases net benefits. However, the RIS notes the forthcoming wider RIS which will investigate banning all new gas appliances.<sup>34</sup> If that RIS does not contain a similar exemption based on cost, then rental providers will need to switch appliances regardless of what the Residential Tenancies Regulations says because all gas appliances are banned, and this would mean that the current benefit cost analysis significantly overstates net benefits. DEECA does, but we cannot, know what is contained in the other proposed RIS. If it is a blanket ban, then this benefit cost analysis will need to be re-done.
- The comparison of options is also biased because of the choice of discount rate. While a 4 per cent real discount rate has been a ‘default’ rate used for some regulatory proposals in the past, it is entirely inappropriate for assessing the impacts of these proposals. The DTF guidance that references 4 per cent in fact outlines different scenarios where different discount rates are more appropriate. Where costs and benefits are readily quantified, the established DTF guidance is to use a 7 per cent discount rate. DEECA has previously correctly used a discount rate of 7 per cent for energy/environmental CBAs (such as VEU RISs). Importantly, in 2019 DTF provided further commentary on the use of discount rates in cost benefit analysis and recommended 7 per cent be used.<sup>35</sup> The RIS provides no explanation as to the choice of this discount rate, and provides no sensitivity analysis with respect to this choice. Considering the RIS (arguably wrongly) assumes that all costs are only ‘once off’, but that energy and GHG benefits continue over the life of the appliance, the conclusions are very sensitive to the choice of discount rate. A more robust analysis should have used a discount rate of 7 percent, and included sensitivity testing at 4 per cent and 9 per cent as suggested by DTF. This is especially important since most regulatory proposals in Victorias are assessed over a 10-year period, whereas the assessment period in the RIS is 20 years
- There is no assessment of any impacts on the overall electricity market, which should be considered for an intervention of this scale. The generation of electricity (unlike gas) does

<sup>32</sup> See Rental Standards RIS p71

<sup>33</sup> See Rental Standards RIS p54.

<sup>34</sup> See Rental Standards RIS p6.

<sup>35</sup> [https://www.dtf.vic.gov.au/sites/default/files/document/Victorian\\_Economic\\_Bulletin-April2019.pdf](https://www.dtf.vic.gov.au/sites/default/files/document/Victorian_Economic_Bulletin-April2019.pdf)



not respond to demand variability on a 1:1 basis, it must consider the aggregate impact of policy changes on peak demands on the network as a whole. Most costs incurred by DNSPs are not based on throughput energy but on obligations to supply capacity. Even over time, the generation and transmission sectors have fixed costs that flow through to prices. Proper impact analysis should have included robust analysis on energy market dispatch mechanisms, and temporal impacts of the supply and demand balance (as has been done in previous modelling by DEECA in other RISs), that had regard to how the more efficient appliances change the overall peak demand profiles.<sup>36</sup>

- Flowing on from this, the RIS assumes that reduced energy use by an appliance flows directly into lower GHG emissions, as less energy is needed by the appliances. This is not how the generation of electricity is managed. Again, this should be assessed in the manner of the previous Jacobs modelling for VEU, which takes account of load factors. While proper network modelling would be needed to understand the true picture (which should have been done by the department), it is likely that the GHG emission reductions are overstated by at least 10 per cent.<sup>37</sup>
- The costs ignore additional replacement costs caused by the new rules. The Rental Standards RIS does capture a “rebound effect” in respect of energy consumed, but not the consequences of that extra consumption on appliance life.<sup>38</sup>

We now turn to individual benefits and costs, and where these have been mis-estimated. Any such analysis is subject to caveats because of how poorly the analysis has been explained in the Rental Standards RIS.

### Estimation of costs

In this section we summarise a number of mis-estimated and missing costs. We have, where possible, tried to make some estimate of these costs in the context of the overall costs used in the Rental Standards RIS as a whole. We would have been greatly assisted in this regard if basic information, such as the number of properties affected, had been provided.

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<sup>36</sup> These impacts have been incorporated into modelling by DEECA before (such as use of the network models by Jacobs, available [here](#)), but this RIS provides no mention of them, nor any explanation why they have been ignored. DEECA needs to explain why it has estimated benefits in a completely different way for this RIS

<sup>37</sup> The exact percentage would require detailed electricity market modelling, so we base this approximation on previous work such as [this paper](#) (see p31), and [this one](#) from the RIS associated with the VEU programme (see Appendices 11 and 12).

<sup>38</sup> See Rental Standards RIS p28. It is not clear whether the rebound effect is sufficiently large. US research (available [here](#)) suggests that modelled energy savings tend to be around 2.5 times actual realised savings, due largely to rebound effects

**Table 2: Mis-estimated and missing costs (net present costs)**

Mis-estimated cost	Missing costs	Missing cost	Missing cost value
		Appliance replacement cost	\$600 million
		Electrical appliance maintenance cost	\$106 million
		Plinth and additional piping for electrical hot water systems	\$119 million – hot water systems only
Quote/admin costs	\$9 million.		
Disconnection cost	\$193 million		
		Space Constraints	\$1,503 million.
		Supply Outages	\$124 million.
Supply and Switchboard upgrades	\$44 to \$452 million		

We describe below the figures derived in Table 2, in order of the rows in the table.

#### *Replacement of existing appliances*

The Rental Standards RIS assumes that existing appliances are replaced as per the Rental Standards RIS preferred options for a period of 7 years until the proposed regulations sunset and then last for 12 years in the case of new hot water systems and for 15 years in the case of new space heating systems.<sup>39</sup> However, the overall assessment period for benefits is 20 years which would mean that an appliance bought in the first year would need to be replaced in year 13 for a hot water system and year 16 for a space heating system. Appliance replacement cost does not appear to have been included in the Rental Standards RIS. To explore the consequences of this omission, we assume that:

- Gas appliances have the same life as electric appliances (although evidence from GAMAA on the length of warranties suggests gas appliance last longer).
- For hot water, Option 4 requires an electric heat pump, whilst Option 2, which has the highest benefit cost ratio, requires a five-star gas hot water system, and the difference between the two in the Rental Standards RIS is \$1,962.
- For Space Heating, there are no gas alternatives, so we compare, to get a minimal estimate which is at least close to being like-for-like in terms of comfort (if not, we would need to add the cost of the loss of thermal comfort) a multi-split 3-star system with ducted gas heating, giving a difference in costs of \$2,701
- Hot water systems start to be replaced in Year 13 and space heating systems in year 16.
- That 44,036 properties per annum switch to a new hot water system (75% of the total number of properties, as per the requirements of Option 4, divided by the 12-year life of appliances, and 35,979 properties switch to a new space heating system (90 percent of Class 1 properties and 40 percent of class 2 properties as per RIS p91, divided by the 15 year appliance life assumed). We use these numbers of properties throughout our analysis below, unless otherwise specified, as we have no more detailed information about the numbers of properties Deloitte Access Economics have actually used in their analysis.

The net present cost of requiring electrical systems, rather than a gas alternative is \$363 million in the case of hot water systems and \$240 million in the case of space heating. This is conservative because gas systems, with fewer moving parts, last longer. Certainly, given the cost difference between electric and gas appliances, the number will not be zero.

<sup>39</sup> See Rental Standards RIS pp88 and 56 respectively.

### *Maintenance costs*

For maintenance costs, we note that heat pump hot water systems have more moving parts compared to instantaneous gas hot water systems. In particular, the pumps themselves (which instantaneous gas hot water systems do not have) are much more likely to have at least one minor breakdown during their lives.<sup>40</sup> Based upon advice from energyFit, we have costed the replacement and fitting of parts at \$400, once during the life of each appliance. We assume this happens after 5 years. We assume that the same number of heat pumps are replaced each year as appliance replacement above, and that heat pump replacement happens from years 1 to 7, meaning the minor parts replacement happens from years 5 to 12. We assume no differences in maintenance costs between gas and electric space heaters. This gives rise to an overall net present cost of \$106 million, which should be added to the costs of electric hot water appliances in each of the options considered in the Rental Standards RIS.

### *Space constraints*

A hot water system which requires a tank, like a heat pump system, will also require a concrete plinth upon which to place that tank. It is unclear whether this has been included in the costs of the system in the Rental Standards RIS. Advice from expert consultant energyFit suggests this usually costs around \$450. We use the same number of houses per annum as assumed for the replacement of hot water appliances above and multiply this by \$450. The analysis assumes 7 years of appliance switching as per the sunset of the RIS, and the figure of \$119 million is the net present cost over those 7 years using a discount rate of 4 percent. Note that we assume no additional costs for space heating systems in this instance.

### *Time incurred by rental providers*

The Rental Standards RIS assumes that rental providers incur a cost of their time for one hour spent looking for the relevant replacement appliance.<sup>41</sup> However, it ignores the impact on the tenant, who will be without electricity for the time that the new electrical appliance is being installed. We have conservatively assumed that each appliance will take three hours to install, used the annual installation numbers for appliance replacement above, and used the value of guaranteed service level payments for electrical outages determined by the Essential Service Commission in Victoria of \$6.33 per hour.<sup>42</sup> This gives an impact of \$9 million in net present value terms. We believe this is a gross under-estimate because we have assumed, to be conservative, that the rental provider faces no problems when installing the new equipment. In reality, where an appliance fails, and it takes several days to source not only the replacement appliance but also the tradesperson to install it, the tenant will have no space heating or hot water services. Under these circumstances, the property would not meet the requirements of the Residential Tenancies Regulations, and the rental provider would not be able to charge rent. We suspect the costs of incidents like these could prove to be very significant.

### *Disconnection fees*

DEECA assumes that the cost of disconnecting and capping a gas connection once appliances are no longer used is \$300 per property.<sup>43</sup> This is incorrect. In our most recent decisions for our AGN

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<sup>40</sup> From GAMAA, we understand that Rinnai heat pump hot water systems have a parts warranty of 5 to 7 years, whilst their instantaneous gas hot water systems have a warranty of between 10 and 12 years, which supports energyFit's view. We note that, if part of a heat-pump is replaced under warranty, it may not cost the customer, but a benefit cost analysis considers the whole community, and overall, costs increase if more repairs are required to deliver hot water.

<sup>41</sup> See Rental Standards RIS pp25-26.

<sup>42</sup> See <https://www.esc.vic.gov.au/electricity-and-gas/information-for-electricity-and-gas-consumers/guaranteed-service-level-payments-energy-outages>. We use the payment of \$380 for 60 hours of outages per annum as this gives the lowest number.

<sup>43</sup> See Rental Standards RIS p88.

and Multinet networks, although the AER allowed us to charge only \$220 per property for a disconnection service, it recognised that it actually costs us \$950, and determined that this cost should be socialised across all remaining network users.<sup>44</sup> This means that the Rental Standards RIS has under-estimated the social cost of capping connections by \$730 per connection. Taking the number of space heating appliance changes from the appliance replacement assessment above as the annual number of disconnections caused by the requirements of the Rental Standards RIS (noting that the base case assumes not one disconnection in the absence of the RIS),<sup>45</sup> and seven years' worth of disconnections, this gives a net present cost of \$193 million.

#### *Assumptions on appliance mix*

No indication is provided as to what it is assumed a gas heater would switch to.<sup>46</sup> Nor is it indicated whether the analysis assumes that the final appliance mix would produce the same amount of heat. If it does not, the cost of extra heating, via a resistive electric heater, on the part of the renter would need to be included. Without data, we cannot quantify this, but we note the GAMAA submission, which has attempted to do so.

#### *Physical space constraints*

An instantaneous gas hot water system has no footprint and a gas space heater takes up little or no outside space. By contrast, an air-source heat pump takes up to 0.8 m<sup>2</sup> of space outside the house, which can no longer be used for other purposes (particularly where it is mounted on a plinth), and a reverse-cycle air-conditioner takes up 1.3 m<sup>2</sup>.<sup>47</sup> Based on data from the Real Estate Institute of Victoria, we estimate that the average rental property in Victoria is worth around \$923,000.<sup>48</sup> The Rental Standards RIS suggests the average Class 1 dwelling size is around 150 m<sup>2</sup> and we assume half of a residential lot is taken up by the dwelling, making the average rental lot size 300 m<sup>2</sup>.<sup>49</sup> This gives a value per square metre of land of just over \$3,000. We assume the same number of heat pump hot water and space heating appliances are installed as in the appliance replacement assessment above, and assume appliance replacement happens until the regulations sunset after 7 years. This gives rise to the figure of \$1.5 billion. We note that, implicit in this number, is an assumption that every square metre of a residential property has the same value. This may not be true, but neither is it true that the opportunity cost of the space on often quite small blocks that now needs to be devoted to a heat pump or air-conditioner to the exclusion of other uses, is zero. We note further that we have not included any visual amenity issues from having much larger equipment in backyards.

#### *Reliability*

Gas is inherently reliable, with the most recent Network Performance Report published by the AER suggesting that the average customer of a gas network suffers one loss of supply event every 100

<sup>44</sup> See <https://www.aer.gov.au/system/files/AER%20-%20AGN%202023-28%20-%20Final%20decision%20-%20Attachment%209%20Reference%20tariff%20setting%20-%20June%202023.pdf>

<sup>45</sup> See Rental Standards RIS p24; the base case assumes gas is replaced with gas absent of regulation preventing this, which means that there would be no disconnections in the base case.

<sup>46</sup> The "marginal cost" (see RIS Table 10.2) is listed at \$1,790, but it is impossible to link this with any of the differences in costs shown in Table A.5, as it is not linked to any particular appliance being switched. For example, a room gas for a Class 1 property is listed as \$2,705, whilst a Room RCAC is listed as \$2,563 for 3 star cooling. Add the cost of capping the gas (\$300) and the cost of removing the gas appliance (\$139), that is just over \$3000, or about \$300 more. Ducted gas is listed as \$4,943, whilst a multi-split is listed as \$7,644, and ducted RCAC at \$10,863 (without any capping or removal costs; we find it difficult to believe removing a ducted gas system would cost the same as removing a single gas heater), differences of roughly \$2500 and \$6000 respectively.

<sup>47</sup> These sizes have been provided by GAMAA. They reflect the minimum space required around each appliance for air intake and exhaust (as well as the size of a relatively small version of the appliance itself), which we assume cannot be used for any other purpose. We do not include maintenance access space requirements, as these spaces are used very rarely for that purpose.

<sup>48</sup> See <https://reiv.com.au/market-insights/victorian-insights>. The average rent is \$550 per week, or \$28,600 per annum, which REIV estimate represents a rental yield of 3.1percent. This implies a value of the property of around \$923,000 (that is \$923\*3.1%=\$28.6).

<sup>49</sup> See Rental Standards RIS p82 for dwelling sizes. Planning rules will vary greatly, but [this document](#) (see p9) suggests that, in the absence of any other requirements, the maximum amount of a lot a dwelling can take up is 60 percent.

years, whilst an electricity network customer suffers some 350 minutes of outages longer than 3 minutes in a given year.<sup>50</sup> As per the supply interruption from new appliance installation, we use the value of \$6.33 per hour from the ESC. The net present cost assumes 7 years of accumulation of costs and then flat costs from years 8 to 20, based on the same approach as is used for maintenance costs above, because, once a household has gone electric, it will suffer these losses in perpetuity. The total number of houses adding to the total each year (for 7 years) is assumed to be the number of houses in the space-heating appliance analysis above. The NPV over 20 years, at 4 percent, is \$124 million.

#### *Supply and switchboard upgrade costs*

The Rental Standards RIS values supply and switchboard upgrades at \$3,500 and \$1,200 respectively. However, the exposure draft explicitly excludes electrical upgrades from consideration of “significant” costs, and these figures are towards the bottom end of the Frontier values, which range from \$1200 to \$5000 per switchboard, and \$4,500 to \$10,000 for electricity supply upgrades.<sup>51</sup> We make the same per annum appliance number assumptions as with appliance replacement costs above, and seven years’ worth of upgrades assuming, as per DEECA’s assumption that 19 percent of properties require switchboard and supply upgrades.<sup>52</sup> This results in the range from \$44 to \$452 million in net present cost terms.

### Estimation of Benefits

We now turn to the mis-estimation of benefits. Here we focus just on benefits which have been over-estimated; we do not consider that the Rental Services RIS misses any benefits associated with the options provided. The underlying issue is that the Rental Standards RIS significantly overestimates the amount of energy used; just for gas in the case of hot water systems and for gas and electric appliances when it comes to space heating. The former appears to be a simple mathematical mistake in one of the source documents and the latter an assumption error made in DEECA’s model or by Deloitte Access Economics. Since running costs for electric appliances are lower than for an equivalent gas appliance, if more appliance use is assumed, then the running cost savings are greater. Since electric appliances cost much more than equivalent gas appliances, greater running cost savings in turn give more likelihood of net benefits from a switch from gas to electricity.

There is also a distributional element to this. Lower income users, in general, tend to use less energy than higher-income users, and thus would be less likely to have the running cost savings. We note that the Rental Services RIS has no analysis on this issue, which is a severe limitation, given that that they are more likely to currently have poor quality housing options.

**Table 3: Mis-estimated benefits**

Mis-estimated benefit	Excess benefits
Error in hot water calculations – hot water	\$586 million (for Option 4)
Over-estimate of space-heating energy requirements	\$393 million (for Option 4)
Emissions savings	\$389 million.

#### *Error in hot water calculations*

For hot water systems, the Rental Standards RIS relies upon estimates by Energy Efficiency Strategies (EES), but the basis for this assessment is unclear in respect of the estimation of

<sup>50</sup> AER, 2023, *Electricity Network Performance Report*, available [here](#), with the gas version available [here](#), see p40.

<sup>51</sup> See Frontier Economics 2022, *Costs of Switching from Gas to Electric Appliances in the Home*, available [here](#)

<sup>52</sup> See Rental Standards RIS p92.



energy usage for a controlled load electric hot water storage system, which then flows through to the rest of the analysis. The average number of people in a home is 2.5 (ABS 2021<sup>53</sup> and, according to GAMAA, whose members also manufacture electrical hot water systems the typical tank size for off-peak is 250L but using these figures results in a lower energy use than is provided in the RIS. energyFit have examined the data in the Rental Standards RIS and can come close to the consumption figures published in the appendices if they either assume the typical tank size of 250L and between 3 and 4 people in the home or assume the Rental Standards RIS uses a tank of 400L with three or fewer people in the home. Given the ABS data is public, and the information from GAMAA is not, energyFit have assumed that the Rental Standards RIS assumes a 400 litre tank with three or fewer people in the home. If this is the case, there appears to be a mathematical error for gas hot water systems' energy use. This mathematical error flows through the cost benefit analysis resulting in Option 4, being incorrectly identified as the option with the largest net present value. When the mathematical error is corrected the option with the largest net present value is an all-gas, instantaneous water heater option.

The error can be understood by following logic and regulatory requirements on appliances. If we compare the EES stated energy use for controlled load electric storage and high efficiency gas instantaneous water heaters on page 89 of the Rental Standards RIS we see controlled electric storage water heaters consuming 12,470 MJ and high efficiency gas instantaneous water heaters consumes 13,633 MJ.

An important point to understand is electric storage water heaters have a tank of hot water which loses heat continuously and instantaneous gas water heaters do not have a tank, so the energy demand on an electric storage water heater will always be higher than an instantaneous water heater because the electric storage system need to replace the heat that is lost.<sup>54</sup>

The amount of heat that is lost out of an electric storage water heater is regulated by the Greenhouse and Energy Minimum Standards Act 2012 so we know what this is. For a 400L water heater, which is the most common size for a controlled load water heater, the regulated heat loss is 3.33 kWh per day. Adjusting for the Melbourne climate, this is around 3.6 kWh per day (energyFit conversion). Converting this to MJ and an annual figure, we get 4,730 MJ.

Subtracting the tank losses from the electric storage energy use (12,470 – 4,730) results in 7,740 MJ in energy demand to heat water without the tank. This is the same water heating demand a gas instantaneous water heater will have to serve. Now when water is heated by gas there are losses, however these losses are understood and also regulated by the Greenhouse and Energy Minimum Standards Act 2012. The average efficiency for a high efficiency instantaneous water heater is 94%. If we divide the energy demand to heat the water by the efficiency we get the energy consumption for an instantaneous gas water heater, which is 8,234 MJ. This is much less than the 13,633 MJ reported in the Rental Standards RIS. The energy use reported in the RIS would require a gas burner efficiency below 60% which is not allowed under the Greenhouse and Energy Minimum Standards Act 2012. This means that the 13,633 MJ for gas consumption is wrong.

These figures can also be checked using established tools that have proven to be accurate in simulating residential energy use on an individual basis and a national level. energyFit, is a tool used to simulate the energy use of residential properties and has an average accuracy of 94% and has been used by the Australian Renewable Energy Agency (ARENA) in the development of its Net Zero Energy Homes project<sup>55</sup> and was used by the Commonwealth Department of Climate

<sup>53</sup> [2021 Victoria, Census All persons QuickStats | Australian Bureau of Statistics \(abs.gov.au\)](#) – under All Private Dwellings

<sup>54</sup> Unlike a heat pump, but like a gas system, and electric storage system creates heat, rather than simply capturing it from the environment. This means it has a much lower coefficient of performance.

<sup>55</sup> [Mirvac Net Zero Energy Homes - Australian Renewable Energy Agency \(ARENA\)](#)

Change, Energy, the Environment and Water to develop the Trajectory for Low Energy Buildings where energyFit accurately estimated statewide hot water use to 99.15% accuracy<sup>56</sup>.

energyFit aimed to replicate the energy use figures for water heaters used in the RIS. The results for electric storage, heat pumps and high efficiency instantaneous gas are provided in the table below. Please note that the instantaneous gas water heater energy use in Table 4 is less than in the simple maths above. This is because energyFit selects the optimum efficiency gas instantaneous water heater which is more efficient than the average and energyFit uses a heat loss factor from the tank that is slightly larger than the standard to account for insulation degradation over time.

**Table 4: Energy use errors in Rental Standards RIS (MJ)**

Source	Electric Storage	Heat Pump	Gas Instantaneous
ESS	12,470	4,334	13,633
energyFit	12,105	3,830	7,140
Difference (%)	-3%	-13%	-91%

energyFit and ESS estimates are very close for electric storage, within 3%. However, energyFit suggests typical heat pumps consumer 13% less energy than was assumed in the RIS, although this does vary by the make and model chosen. Instantaneous gas water heaters consumed 91% more energy in the ESS estimates compared to energyFit. This suggests an error has been made in respect of instantaneous gas hot water systems, and that this error is significant. This also points to an error within the ESS estimates which appears to be a mathematical mistake rather than a difference in assumption.

Option 4 in the cost benefit analysis hinges on the estimate of gas used to heat water because all the benefits flow on from the reduction in gas use. The energy savings, emissions and health all come from the assumption that there are savings from switching from a gas water heater to a heat pump or solar electric water heater. The table below shows that, if the mathematical error in the estimate of gas energy use is corrected, all savings are reversed and there is instead a saving in energy cost, emissions and health from converting heat pump water heaters over to gas instantaneous. These figures are presented for an average single user buying either a high-efficiency gas unit or a heat pump, and then operating each for a period of 12 years, which is the appliance life used in the RIS.

**Table 5: NPV consequences of hot water energy use errors in Rental Standards RIS (single household over 12 years)**

	Heat Pump	High Efficiency Gas Instant	Saving switching from a Heat Pump to Gas Instant
Capital Cost	\$4,518	\$3,235	\$1,283
Energy Cost	\$2,803	\$2,091	\$713
Emissions Cost	\$797	\$636	\$162
Health Cost	\$67	\$9	\$58
Total 12 year cost	\$8,186	\$5,970	\$2,216
Emissions (tonnes)	6.6	5.1	1.47

<sup>56</sup> [Report for Achieving Low Energy Existing Homes \(archive.org.au\)](#) (page 130)



If we assume, as per the Rental Standards RIS, that some 44,000 properties switch hot water systems each year (see discussion on appliance replacement under cists above), and that replacement continues for 7 years until the regulations sunset (as the Rental Standard RIS assumes), with each household having an NPV saving of \$2,216, the consequences of choosing an electric option as per Option 4 rather than an efficient gas option is a loss of \$586 million in net present value terms. Adding this value to either of the gas options would give them a net present value significantly in excess of the net present benefits of \$569 million for Option 4 in the Rental Standards RIS.

### *Space heating requirements*

In respect of space heating, it is more challenging to understand what Deloitte Access Economics and DEECA have done, because there is so little data on the model; even at the basic level of how much gas is used (the figures for energy use in Appendix A for gas are far too low – less than for electric appliances - to be gas use turned into kWh, and we assume they must be use of electricity by gas heaters for starters and the like). However, our expert consultant energyFit has been able to make some headway by examining other Regulatory Impact Statements with which they are familiar.<sup>57</sup> energyFit has been used for previous government policy such as the Trajectory for Low Energy Buildings, where energyFit's heating models predicted state wide residential heating energy use with 84% accuracy and predicts individual household energy use with 94% accuracy.

energyFit believes that the demand for space heating appears to be overestimated. They have simulated the energy use of several Victorian households with various roof types, exterior walls and floors, different orientations and different external shading on glass in previous work for CoAG (see above). These homes had single glazing, no wall or floor insulation and R1.5 roof insulation. The average floor area for the homes was within 7% of the floor area of the average floor area assumed in the RIS, providing a similar surface area to volume ratio.

The results were compared to what appears to be needed for heating in the RIS on a per square meter basis. It was found that the heating demand used in the RIS was around 210% higher than energyFit's models (RIS Central, R1.5: 326.8 MJ/m<sup>2</sup> [90.8 kWh/m<sup>2</sup>].<sup>58</sup> energyFit central, R1.5: 105 MJ/m<sup>2</sup> [29 kWh/m<sup>2</sup>]). It is not actually clear if the figures used in the Rental Standards RIS on page 84 are electricity or gas energy use per square meter for heating or the demand for heating. If the figures are energy use, it would show heating is more than 200% over estimated.

energyFit's model assumed a typical renter that heats the home in the early morning, turns it off before leaving for work and then has it timed to come back on and have the home warm before getting home, and leaving the heating on until midnight. To get energy use for space heating some 210 percent higher than the energyFit results, the Rental Standards RIS must assume much longer running times. It is not clear what these could be; even when energyFit assumes the tenant is home all day, the Rental Standards RIS still has 67 percent more heating demand than energyFit's own models.

This suggests that the Rental Standards RIS has made some excessive assumptions about the operation of space heaters, which further motivates our call for the model to be made public so that issues like this can be clarified. At the very least, we would have expected some sensitivity on different heating profiles to show how results could differ given the scale of both the costs and the benefits of this part of the Rental Standards RIS.

For renters that only heat in the evenings which is very common, particularly for lower income households in energyFit's experience, the Rental Standards RIS heating demand is more than 10

<sup>57</sup> See for example, COAG Energy Council 2019, *Report for Achieving Low Energy Existing Home*, available [here](#).

<sup>58</sup> These models have been used in CoAG, 2019, *Trajectory for Low Energy Buildings*, available [here](#).

times the heating demand reported by energyFit. This points to some important distributional considerations unexplored in the Rental Standards RIS, and suggests that running cost savings for these customers are likely to be minimal, putting them at risk of net loss even in cases where rents increase only slightly to pay for the new appliance required under the proposed regulations.

In the revised cost-benefit analysis results shown in Table 6 below, energyFit assumes that the typical tenant turns on their space heating shortly before waking, turns it off when they leave for work, and turns it back on again in the evening until midnight. The analysis assumes as close to like-for-like in terms of thermal efficiency amongst the appliances in the Rental Standards RIS, rather than adding a cost as the tenant uses portable appliances to compensate for the loss of thermal efficiency. The analysis also includes a refrigerant charge loss which reduces efficiency and increases the cost of emissions<sup>59</sup>.

**Table 6: NPV consequences of space heating energy use assumptions in Rental Standards RIS (single household over 15 years)**

	Ducted air-conditioning	Ducted Gas
Supply and Install Cost	\$9,120	\$4,943
Removal of Gas Heater	\$799	\$0
Cap Gas Heater	\$300	\$0
Year Energy Cost	\$3,834	\$6,346
Emissions Cost	\$986	\$1,966
Health Cost	\$74	\$35
Total	\$15,112	\$13,290
Loss from switching to Ducted AC	\$1,822	

The result for an individual household who chooses a gas option rather than electricity is a net present value of that choice of \$1,822 over the 15-year appliance life. If we adopt the same approach as for hot water systems above of including all those assumed to switch over the seven years until the proposed regulations sunset, then the result is \$393 million in net present benefits for a gas consumer over an equivalent electric option. Note that this is likely an under-estimate as the analysis uses the gas options in the Rental Standards RIS, rather than an efficient gas space heating option, which remains unexplored by the RIS. This strongly suggests that including efficient gas options in the Rental Standards RIS would have shown significantly higher net benefits than any of the electric options.

#### *Emissions savings*

In respect of emissions stemming from use of grid electricity rather than gas, there is almost no detail on the basis of savings save for a single number of a Greenhouse Gas Co-efficient (gas minus electricity) of 0.74 in 2025 going down to 0.02 in 2050,<sup>60</sup> which appears to be based on work which is not available from Endgame Economics based upon the AEMO ISP. However, not only is the pathway not shown but it is by no means clear how this translates to actual use of appliances. An average annual figure is meaningless, given the changing generation mix season-by-season and hour by hour and given that the times at which an appliance is used will determine how big the saving between electricity and gas in terms of emissions will actually be. However,

<sup>59</sup> Rossi, S, 2021, Split system refrigerant targeted for end-of-life recovery, available [here](#). (average end of life charge loss of 30%) Kim, W, 2012, Impacts of Refrigerant Charge on Air Conditioner and Heat Pump Performance, available [here](#). (25% charge loss lead to a 15% efficiency loss and a 20% capacity reduction)

<sup>60</sup> See Rental Standards RIS p82.

with no further detail, we can say nothing about the accuracy of the modelling of emissions reductions from grid power.

We can, however, make 3 comments on the net present value figures for emissions, based on:

- the use of a value of carbon in the Rental Standards RIS which seems excessive;
- an overstatement of the emissions inherent in the use of gas; and
- a failure to include the emissions consequences of an increase in refrigerant use.

We comment on how these issues influence results below, noting that the total from all three gives rise to the \$416 million of excess benefits reported in Table 3.

In respect of carbon values, we note that DEECA has used, at least until 2030 (the Rental Standards RIS makes no comment about what was used post 2030), the carbon prices from the IPCC's sixth assessment report.<sup>61</sup> We note that there are many carbon price valuations available, from many different sources. However, in part to deal with this, the Ministerial Council on Energy developed a methodology for greenhouse gas emission valuation which has subsequently been adopted by the AEMC and the AER and turned into annual carbon prices for use on social cost benefit analysis.<sup>62</sup> Given that the Victorian Minister of Energy and Resources was presumably a signatory to this statement, it is unclear why her department follows a methodology which differs to the methodology agreed at a ministerial level. The practical consequence of doing this is that the carbon values DEECA uses are much higher than those which its Minister has signed up to, particularly in earlier years.

We have taken the net present value of one tonne of carbon emissions each year from 2024 to 2050 valued via DEECA's approach and via the MCE approach out to 2050,<sup>63</sup> and the MCE approach gives a net present value roughly 80 percent of the net present value formed using DEECA's numbers. The preferred option for hot water systems in the Rental Standards RIS has emissions benefits of \$211.76 million and for space heating the figure is \$1366.68 million.<sup>64</sup> Using the MCE methodology, the values should have been \$171 and \$1,104 million respective; giving a total overstatement of \$303 million.

Secondly, the assumption (provided by DEECA) that each GJ of gas combusted results in 0.06 tonnes (60 kg) of CO<sub>2</sub>-equivalent of GHG emissions leads to the net benefits being overstated. The Australian National Greenhouse Accounts Factors, used to report Victoria's GHG emissions and to report Australia's emissions to the United Nations, use a factor of 0.055 tonnes (55 kg) per GJ (combining scope 1, 51.53 kg and scope 3, 4 kg per GJ). It is not clear whether the figure in the Appendix was rounded, or represents the actual figure used (the source just to DEECA is insufficient, and the actual source should have been provided) but if 0.06 was used, the Rental Standards RIS overstates GHG reductions and value of these benefits by more than 8 per cent, and it is not clear why the Rental Standard RIS was required to use this figure. The total amount of the overstatement for the preferred options is \$61.75 million

Thirdly, electric heat pumps, whether for water or space heating, are not zero emissions, even when powered by renewable power. This is because they use, and leak, refrigerants; a central reverse-cycle air conditioner which services the whole home, requires about 4 kg of refrigerant

<sup>61</sup> See Rental Standards RIS p83.

<sup>62</sup> See AER, 2024, Valuing Emissions Reduction: AER guidance and policy statement, May 2024, p4, available [here](#), along with several AEMC papers, including the MCS statement, available [here](#).

<sup>63</sup> We note that DEECA do not provide numbers post 2030. However, the MCE methodology involves using a "linear interpolation" between an Australian Carbon Credit Unit whose spot price is \$33/t in 2023 and which grows at 10 percent per annum and the IPCC figures which DEECA appear to have used, and these numbers are enough to reverse-engineer what the IPCC values used are for each year. We get very similar numbers to DEECA pre-2030 and thus reverse-engineer in the same manner post 2030. Note that, had we done the analysis out to 2045 when Victoria is assumed to reach net zero, the overstatement would have been a little higher, as the IPCC and MCS numbers are closer together in the last five years to 2050.

<sup>64</sup> See Rental Standards RIS p48 and 57 respectively.

and will lose about a third of it over its operational life.<sup>65</sup> R32, a refrigerant used in modern air-conditioners has about 675 times the global warming potential as CO<sub>2</sub>.<sup>66</sup> If we take the numbers of air-conditioners (we have not made the same calculation for hot water, as the relevant parameters are a little more challenging) installed per annum noted in the cases above (roughly 35,000 per annum), assume each of them loses refrigerant evenly over their life, use the MCE methodology for carbon costs rather than the higher numbers used in the Rental Standards RIS and take the NPV of 7 years of appliance replacement, this gives roughly \$24 million in over-estimated environmental benefits.

## 4.5. Summarise preferred option

In this section we address our details with the summary of the preferred option in the Rental Standards RIS (Chapter 10). As is clear from the discussion above on the costs and benefits in the preceding section, we believe that the choice in the Rental Standards RIS for an all-electric option for both water and space-heating is incorrect. Our preferred options, which are based on our assessment of errors in the benefit cost analysis, are summarised in Section 5.

Here we focus on three issues summarised in Chapters 10 and 11 of the Rental Standards RIS which all pertain to the impacts of the preferred option:

- Distributional impacts.
- Impacts on rental markets.
- Impacts on competition and small business.

We note that the latter two might ordinarily be combined together, but the Rental Standards RIS has separated them, and we do so here as well.

### 4.5.1. Distributional Impacts

The distributional impacts of the Rental Standards RIS are summarised in pages 67 to 69. It consists solely of an assessment of the per-household costs and benefits, coupled with some commentary about the VEU programme. There are issues in respect of the analysis including:

- The “marginal cost analysis” is untethered to any options a stakeholder can actually take. A stakeholder believing, for example, that they would pay only \$361 more for an electric heat pump system than they would to replace their current gas appliance would find themselves mistaken as there are no gas or inefficient electrical options in Appendix A that are \$361 different from the figure given for a heat pump.<sup>67</sup> The analysis is misleading.
- The section discussing the VEU, particularly Table 10.2 could be construed by stakeholders as implying that the “marginal costs” could be offset by VEU payments. This is untrue. Not only are the marginal costs not representative of actual costs faced by stakeholders choosing appliances, but the VEU does not apply in the case of mandated appliances. The text in the Rental Standards RIS does refer to this, but including a discussion of the VEU at all has a tendency to mislead stakeholders.

However, the far bigger issue with the distributional assessment is what it misses. Some distributional issues which we have identified during the short time available for responses to the Rental Standards RIS but which should be explored further include:

<sup>65</sup> See Rossi, S, 2021, Split system refrigerant targeted for end-of-life recovery, available [here](#).

<sup>66</sup> Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 – HFCs – R32: Global warming potential values of hydrofluorocarbon refrigerants - DCCEEW Table 1, available [here](#).

<sup>67</sup> See Rental Standards RIS p88 for the different appliance choices and their costs.

- Australia’s rental supply is understood to be primarily provided by households<sup>68</sup>. ABS data indicates that approximately 68% of rental providers hold one single investment property<sup>69</sup>. Further, the Australian Landlords Association analysis indicates that most rental providers report a taxable income of less than \$100,000 per annum<sup>70</sup>. The RIS omits any analysis in these areas. We note that notwithstanding the likely underestimation of upgrading costs, this is likely to have distributional impacts on lower to middle income households owning an investment property. It may also impact compliance, which appears less likely where it may put rental providers in financial distress.
- Though the Rental Standards RIS focuses on different types of tenants, and poorer tenants in particular in the statement of the problem, it does not examine how the minimum standard could impact different types of tenants. In particular:
  - In the context of space heating (see Section 4.4.1), the amount of energy used is an average, and well in excess of the amount which might be used by a low-income renter seeking to save on energy costs. This suggests that the benefits are likely to be very different for such renters compared to the averages shown in the Rental Standards RIS.
  - In the context of hot water, a heat pump, even though it is efficient at heating water, it needs to keep the water which has been heated hot throughout the day, whereas an instantaneous gas hot water system heats water as it is needed. The less water is used, the greater is the likelihood that the cost of keeping water hot will outweigh any costs savings from heating water at a lower cost. Advice from our expert consultant energyFit suggest that, for a two-person household seeking to save both water and energy by taking 4-minute showers and washing clothes in cold water would spend only \$81 per year heating the water required using an instantaneous gas hot water system but would spend \$183 per annum using a heat pump; \$120 of which would go towards keeping the water in the heat pump storage tank hot and ready for use. Such customers would in fact be worse off under the favoured option in the Rental Standards RIS, even if the higher appliance cost has no impact on rental prices.
- We understand that a proportion of rental providers, rather than having a property which is permanently rented out and is never their place of residence, rent out a property which they one day intend to live in and/or have already lived in. This could be, for example, because they intend to downsize when they retire, or because work takes them away, for a period from their regular home location or from where they would like to live in future. Such rental providers, if they prefer to keep gas for their own purposes, must incur a cost to install electric appliances whilst the property is rented, only to replace it with gas when they use it themselves. Providing an exemption or broader options for rental properties that are also “principal places of residence” is not examined. Indeed, we are unable to see that this category has been explored at all.
- The Rental Standards RIS makes no assessment of whether the minimum standards will affect different types of renters differently. For example, a low-income tenant in a property which currently has no cooling or heating may be better off if they receive a reverse-cycle air-conditioner (provided changes in rent do not capture all the benefits), but a tenant in a property with gas currently who loses it and the warmth it provides in winter may be worse off if they now have to compensate themselves for the loss in thermal comfort in rooms outside the main living area where the rental provider chooses the cheaper of the options in the minimum standard. Worse than this, if the regulations just

<sup>68</sup> [https://www.ahuri.edu.au/sites/default/files/migration/documents/AHURI-Final\\_Report-296-Private-rental-in-transition-institutional-change-technology-and-innovation-in-Australia.pdf](https://www.ahuri.edu.au/sites/default/files/migration/documents/AHURI-Final_Report-296-Private-rental-in-transition-institutional-change-technology-and-innovation-in-Australia.pdf)

<sup>69</sup> [Housing Occupancy and Costs, 2019-20 financial year | Australian Bureau of Statistics \(abs.gov.au\)](https://www.abs.gov.au/Housing-Occupancy-and-Costs-2019-20-financial-year)

<sup>70</sup> <https://www.smh.com.au/national/fiona-martin-is-a-typical-landlord-but-she-s-not-what-you-expect-20230517-p5d931.html>



required efficient cooling, rather than on removing gas appliances, a tenant with gas at present could gain most of the running cost savings (the health and environmental benefits would also accrue as the tenant does this) the Rental Standards RIS focusses on by choosing to use the reverse cycle air conditioner in winter wherever possible and keeping their existing gas heater for the coldest days. That is, it would have been very simple to avoid the negative impacts on subsets of the market, and keep most of the benefits, but the Rental Standards RIS has failed to do this by focusing so dogmatically on removing gas appliances.

- The Rental Standards RIS also makes no assessment of the impacts on different types of rental properties. The Rental Standards RIS notes that *"The introduction of minimum standards is more likely to disproportionately affect older rental properties. Should these properties exit from the rental market, this may reduce choice and supply for renters, particularly at the more affordable end of the market"*,<sup>71</sup> but no effort is made to understand what the consequences of this observation will be, nor even to understand whether the costs to providers of such properties will differ compared with the averages used in the Rental Standards RIS.<sup>72</sup>
- By largely ignoring the above distributional impacts, as well as the regional impacts identified below, the RIS thus also fails to consider the impacts on cohorts such as women, particularly low-income single mothers in areas with limited, affordable rental options suitable for children and especially where those options are further reduced through their facing domestic violence situations that constrain locational choices (an acute issue in regional locations). Similarly, the RIS does not consider other cohorts such as indigenous renters, whether urban or regional, and provides only passing mention of the challenges facing the elderly.

### *Regional Impacts*

A particular subset of distributional impacts which are unexplored are regional impacts. We operate distributed gas networks across Victoria, including Wodonga, Echuca and Yarrawonga, Shepparton, Traralgon, Moe, Morewell, Bairnsdale and Sale among many other communities. We observe no analysis in the Rental Standards RIS of the issues of regional customers who are currently connected to gas networks.

Whilst regional customers share many of the same characteristics as those in Melbourne, there are some key differences. One is rental market availability and cost. In many regional markets, there may be only a small number of rental properties, so the loss of even a few can have significant impacts. As discussed in Section 4.5.2 we believe the rental market impacts have been mis-estimated in the Rental Standards RIS, but, even if they were not, the risks for regional areas are greater because they have less depth to absorb market shocks. In this context, the data in

Figure 4 is important, as it shows that affordability is already an issue in many regional towns.

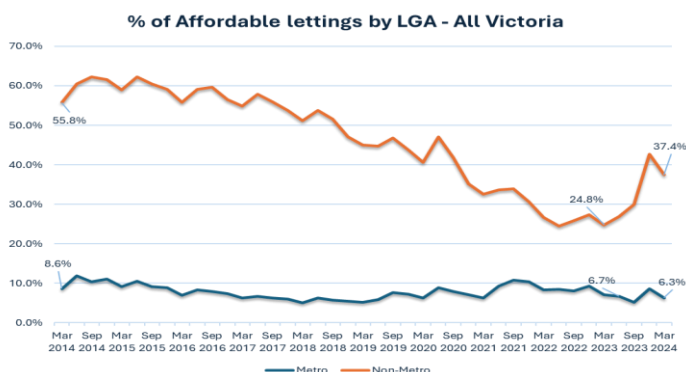
However, it is clear from Victorian Government rental data on affordable rentals that there is a substantial decrease, over the last 10 years, in affordable rentals regionally, and that regional markets exhibit significantly more volatile trends compared to metropolitan Victoria.

<sup>71</sup> See Rental Standards RIS p12.

<sup>72</sup> See also <https://www.abc.net.au/news/2024-06-20/victorian-minimum-rental-standards-raise-concerns/103987620>



**Figure 4: Rental market affordability in regional and metro Victoria**



Source: Rental Report, March 2024 - Affordable lettings by local government area - March quarter 2024, Department of Families, Fairness and Housing Victoria

**There is likely to be a disproportionate impact on regional and lower income renters, which is ignored**

Over the last 10 years, the percent of affordable housing has fallen from 55.8% to 37.4%, while in metropolitan Melbourne it has fallen from 8.6% to 6.3%.

The volatility indicates that regional communities are much more affected by changes to rental stock – the removal of 3 to 5 properties from a regional area has a greater impact than removing the same number of properties in metropolitan Melbourne.

In Section 2.2, p12, of the RIS, it is noted that *“The introduction of minimum standards is more likely to disproportionately affect older rental properties. Should these properties exit from the rental market, this may reduce choice and supply for renters, particularly at the more affordable end of the market.”*

There are also further regional impacts that need to be considered:

- Regional towns often have very different climates compared to Melbourne. Some are colder, and less suitable to reverse cycle air-conditioners, which perform much more poorly in colder temperatures.
- Other regional towns are much warmer. We note that many of our customers in the north of Victoria have gas-boosted solar power, taking advantage of the greater sunshine than is found in Melbourne. The Rental Standards RIS is silent on these (other than their being prohibited in the preferred option). However, what happens when the gas booster breaks down? In most cases, it will not be possible to simply swap-out the booster for an electric model, which will mean that the whole system will need to be replaced. The preferred option appears to require that an otherwise perfectly good solar hot water service be removed and replaced with a fully electric unit, simply on the premise that its gas booster unit requires replacement. It will no doubt come as a surprise to owners and renters alike across northern Victoria that their direct use of solar energy by way of solar hot water collectors is to be banned, and that they are to be instead forced to purchase all of their energy for hot water - either off the network or by purchase of solar PV systems. It may also come as a surprise to policymakers who have recognised both the cost and emissions

saving potential of these systems, even in comparison to the options favoured in the Rental Standards RIS, for example in [this work](#) by Sustainability Victoria.

- Several of the regional towns we serve are on the NSW border and, like Albury-Wodonga, have urban conurbations on both sides of the border. In these towns, rental properties on the Victorian side will not be able to have gas appliances (save for cooktops) and those on the NSW side will. This appears likely to skew rental availability in suburbs in these towns. To add to this oddity, Albury Wodonga is where green hydrogen, a renewable gas, from Hyp Murray Valley, developed by AGIG and which is being supported in part by the Victorian Government, will be more readily accessible to residents in the NSW town of Albury than it will be to Victoria’s own residents in Wodonga.<sup>73</sup>

Overall, our key concern is that the Rental Standards RIS appears to contain no investigation of regional impacts, and we question whether this should have been considered adequate by the Commissioner for Better Regulation.

#### 4.5.2. Rental Market Impacts

Broadly speaking, Deloitte Access Economics conclude that the proposed changes to the *Residential Tenancy Regulations* will have no meaningful impact on rental prices.<sup>74</sup> Whilst they do admit that there may be some rent increases, these, they suggest, are likely to be limited, and offset by energy savings. The evidence for this, however, is remarkably thin.

Of more concern, it appears that Deloitte Access Economics has either misunderstood, or misrepresented much of the evidence it supports backs its claims. In fact, one piece of evidence relied upon suggests that it has missed a significant impact on rental and real-estate markets.

**The RIS claims from studies that there is little to no impact on rents should the RIS be implemented, however, of the five studies quoted in the RIS:**

1. AHURI finds that tenancy laws have a reasonably strong effect on market entries, impacting net rental stock.
2. The Herald Sun and REA Group data indicating rents increased captures the COVID pandemic. During the same period, Victorian Government data indicates rental vacancies were significantly above average, meaning rents should have fallen. The article also highlights several anecdotes about how rents have been affected by prior policy changes.
3. Consumer Policy Research Centre indicates lower compliance with heating standards.
4. Deloitte Access Economics study in Queensland, when extrapolated to Victoria, indicates a \$110M and \$6.25B impact on rental and dwelling prices respectively.
5. Deloitte Access Economics’ study in Queensland and Regulatory Impact Solutions’ work in 2019 is quoted as having a \$5 per annum impact; the Regulatory Impact Solutions’ report quotes a \$5 *per week* impact; 50 times the stated impact.

<sup>73</sup> We are reminded of the views of Mark Twain, visiting Australia in the 19<sup>th</sup> Century when NSW and Victoria were linked by a railway with a different gauge at the border. He suggested that this was the "most baffling and unaccountable marvel that Australia can show" and wondered at "the paralysis of intellect that gave that idea birth" (see Twain, M *The Wayward Tourist*, reprinted in 2007 and available [here](#)). We hope that Twain’s sense of schadenfreude would be tickled by the fact that the inability of Australian governments to "[Ask the Border Question](#)" has survived Federation.

<sup>74</sup> See Rental Standards RIS p xii, pp11-12 and pp69-70.

There are five pieces of evidence which Deloitte Access Economics cites. The first of these is a study by AHURI from 2022, about which Deloitte Access Economics says:<sup>75</sup>

*The Australian Housing and Urban Research Institute (AHURI) undertook difference-in-difference modelling to analyse the impact on rental market exits of two tenancy law reforms. These two reforms were the enactment of the NSW Residential Tenancies Act 2010 and the 2015 Victorian Fairer Safer Housing review, which gave rise to a number of reforms, including a ban on rental bidding and eviction without a reason, allowable modifications and urgent repairs, and the introduction of minimum rental standards. It is important to note some of these reforms came into effect towards the end of AHURI's analysis period and that AHURI's research did not analyse the impact of the introduction of the reforms themselves. The analysis found no statistical evidence that tenancy law reforms led to higher exits from the rental property market. The same AHURI study also undertook a survey of rental providers which found that tenancy law does not factor in strongly as a reason to dispose of their rental property.*

It is important to note that the changes in both of the states analysed by AHURI are different to those proposed by DEECA in this instance; one change to a set of regulations governing rental properties should not be expected to give the same impact as another unless the actual changes are the same. From this perspective, it is difficult to draw conclusions from the AHURI study that are relevant in the current context.

More concerning than this, however, is the assertion about the impact on market exit, which misrepresents the analysis. The actual conclusions from the AHURI report are shown in Figure 5.

**Figure 5: Regulatory Change Impacts on Investors**

Table 8: Summary of DID results, NSW and Victorian interventions

	RTA NSW 2010	Victorian Fairer Safer Housing review 2015
Entries (investment)	No effect	Negative effect: fewer entries
Exits (disinvestment)	Negative effect: fewer exits	No effect

Source: Martin, C et al 2022, Regulation of residential tenancies and impacts on investment, AHURI Final Report No. 391, Australian Housing and Urban Research Institute Limited, Melbourne, available [here](#) p42

Whilst it is technically true that the report found no statistically significant impact on market exit in Victoria, it did find an impact on market entry. The number of available properties depends on both entry and exit, and less entry will lead just as surely to fewer properties as more exit. It is unclear why these results are selectively presented.

In respect of the comment in the quotation above about the AHURI survey, it is true that the survey results found that tenancy law does not feature strongly in reasons for disposing of a property, the full quotation from the source is:<sup>76</sup>

*When investors decide to invest, prospective rental income and capital gains are the most important reasons, but tenancy laws are an important consideration too. On the other hand, tenancy laws do not figure strongly in reasons for disposing of investment properties*

Further on, in Figure 21 of the publication (ibid p47), Tenancy laws rate as very important for 44 percent of respondents in the decision to acquire a property (third highest amongst the 7 factors shown), and as fairly important for 45 percent of respondents (again, third highest). In Figure 22 (ibid p48), tenancy laws were rated as a very important reason for disposing of a property by only 14 percent (last among 14 reasons), but as "fairly important" by 39 percent of respondents (5<sup>th</sup> highest response). Again, it seems that tenancy laws do have a reasonably strong effect, but that

<sup>75</sup> See Rental Standards RIS p11.

<sup>76</sup> See Martin et al 2022 Regulation of residential tenancies and impacts on investment, AHURI Final Report No. 391, Australian Housing and Urban Research Institute Limited, Melbourne, p43, available [here](#).

this is more important in the decision to enter, rather than exit the rental market. Again, the results of the cited literature appear to have been selectively presented.

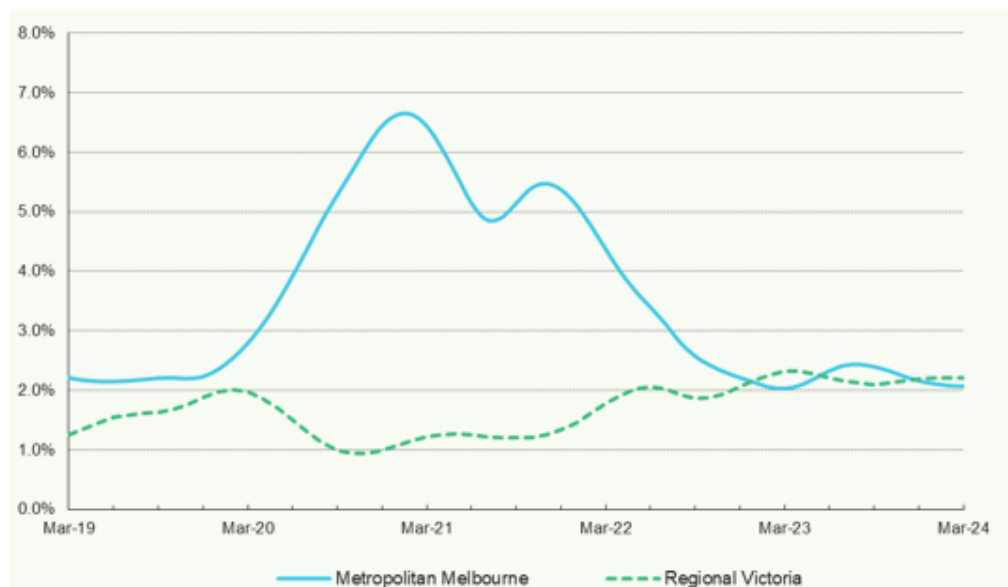
The second piece of evidence is data from the REA group, about which Deloitte Access Economics says:<sup>77</sup>

*Data by the REA Group, which operates one of Australia’s largest residential and commercial property websites, is consistent with AHURI’s research, indicating that minimum standards did not drive an increase in rents and sales by rental providers a year from the introduction of the Residential Tenancies Regulations 2021, which introduced minimum rental standards.*

The URL provided points to an article written for the Herald Sun, published on realestate.com. We would note that it is considered somewhat unusual to use data from a newspaper article as evidence in a formal policy assessment, and question why a more robust source, such as a refereed academic article, was not used. However, the full story is clouded somewhat by the quotation. Firstly, the time period is not mentioned. What the newspaper article actually says is that rents in the 12 months to September 2019 were \$400 a week and in the 12 months to September 2021 were \$410.

The small increase in rents noted in the newspaper article cited in the Rental Standards RIS coincides with the peak in vacancy rates shown in Figure 6. All else being equal, one might have expected an increase in vacancy rates to have lowered rents, and it may be the fact that the previous round of regulations played a role in this. Rather than assuming that a lack of impact meant that regulation has no effect on rents, the Rental Standards RIS should have investigated what else was happening. In particular because the same time period also coincided with Covid (which possibly drove vacancy rates), which most Victorians understand had some impacts on the state.

**Figure 6: Rental vacancy rates trend**



SOURCE: Figure 7, Rental Report statistics - March quarter 2024 – Department of Families, Fairness and Housing Victoria

Further, although it is little more than anecdote, much of the rest of the article is devoted to statements from interviewees that the changes had forced investors to sell and leave the sector. Again, it is not clear why the Rental Standards RIS does not include these aspects of the article in its evidence, given how they featured as a focus in the article.

<sup>77</sup> See Rental Standards RIS p12.

Third, Deloitte Access Economics cites research from the Consumer Policy Research Centre associated with the last major change to the Residential Tenancies Act in 2021, suggesting:<sup>78</sup>

*A recent Consumer Policy Research Centre (CPRC) report investigated the compliance of existing minimum rental standards introduced over the period beginning in March 2021 and ending in March 2023, across a sample of 100 properties in Victoria. The study suggests that most properties appear to meet minimum standards, indicating "that the standards set by the Victorian Government for rental properties are achievable and that the market has responded to the new requirements for quality rental homes". The research also suggested that while it is possible to offer affordable rental properties that comply with the existing rental standards, there was greater compliance risk among more affordable properties when compared to less affordable ones. While this evidence suggests current standards do not seem to be a barrier to the rental market delivering affordable rental properties, there is a risk that additional standards may lead to greater non-compliance in affordable rental properties.*

However, this assessment does not really capture what is relevant from the study for the Rental Standards RIS. Firstly, although the study does conclude that 'large parts of the rental provider market are responding to the new requirements',<sup>79</sup> the heating requirements are the worst performers (ibid) with 15 of the 100 properties failing to meet this benchmark. Moreover, the CPRC concludes (ibid):

*Across our sample, rent amount was the best predictor of whether a property met minimum standards. While some lower cost properties met all minimum standards, these properties were more likely to fail to meet minimum standards, as well as have issues with other obligations such as poor maintenance and cleanliness*

Further, relevant for the information asymmetry issue which underpins the current assessment in 28 of the 100 cases, the agent could not tell the mystery shopper whether the heating met minimum standards or would be updated by March 2023 (ibid, p34).

We note that 100 properties is not necessarily representative of the overall rental market, but, whilst 85 out of 100 and 78 out of 100 still meets any reasonable definition of "most properties", the current proposal requires much higher standards in terms of space and water heating than the 2021 amendments, which seem much more likely to face compliance problems. What the paper arguably shows is that compliance may be an issue, which casts some doubt on the assumption in the analysis that compliance with the proposed regulations will be 100 percent.<sup>80</sup>

The fourth piece of evidence comes from another study on rental reforms in Queensland (and also by Deloitte Access Economics), noting:<sup>81</sup>

*Furthermore, research from Deloitte Access Economics found that overall, the impacts of recent rental reform in Queensland, which included minimum standards, on the rental market were negligible. It is important to note the average compliance cost from the analysed reforms was approximately \$2,000 per rental property*

This is an accurate description of what the study found. However, just because a price change is not significant, does not mean it is zero. The study in fact finds a -0.11 percent impact on dwelling prices (that is, all dwellings, not just rental properties) and a 0.02 percent per annum

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<sup>78</sup> See Rental Standards RIS p12.

<sup>79</sup> See CPRC, 2023, *Is it Liveable: A mystery shop of private rental properties*, p14, available [here](#).

<sup>80</sup> See Rental Standards RIS p24. See also the discussion on the impacts of the consequences of the assumption about split incentives in Section 4.1.1. The same issue exists when compliance rates are assumed to be too high.

<sup>81</sup> See Rental Standards RIS p69.

long run impact from the higher cost intervention (which it values at \$2468 per property).<sup>82</sup> This information should have informed the Rental Standards RIS.

From the Rental Standards RIS, the average rent in Melbourne is \$515 per week and in regional Victoria it is \$430 per week and there are a total of some 704,575 rental properties.<sup>83</sup> ABS data suggests that just over ¾ of the Victorian population lives in Melbourne,<sup>84</sup> giving a weighted average rental price of \$494.60 or an annual rent of \$25,719. ABS data suggests that the median Victorian house was worth \$895,000 in December 2023, and that there were 2,839,329 of them.<sup>85</sup> Pro-rating each of the marginal impacts of the Rental Standards RIS (to the \$2,468 per rental property from the Queensland study and using a discount rate of 4 percent for the rental impact, this gives rise to the results shown in Table 7.<sup>86</sup> These results suggest that the impacts on rental market may be significant, and are almost certainly not zero.

**Table 7: Impact on rents and home values of proposed changes (\$mil)**

	Rental impact (NPV)	Home value impact	Benefits in Rental Standards RIS*
Ceiling insulation	\$49.49	\$2,808.91	\$350.26
Draught sealing	\$12.11	\$687.50	\$458.14
Hot water systems	\$7.20	\$408.88	\$727.40
Shower heads	\$4.71	\$267.30	\$406.14
Heating and cooling	\$35.72	\$2,027.40	\$2114.75
Blind cord safety anchors	\$0.90	\$50.97	n/a
Total	\$110.14	\$6,250.96	\$4056.69

\* See Table 10.1 RIS p66. Note that we have not included the heating of rooming houses for want of sufficient data.

We note our caveats above about different changes to regulations meaning that the impacts from one study may not carry over, necessarily to another context. We note also that we have assumed a linear relationship between the size of the compliance costs and the impact on rents and house values (the Rental Standards RIS has a compliance cost roughly twice that of the higher impact in Queensland) which may not hold. This means that the costs shown in Table 7 may not be correct. However, if Deloitte Access Economics believes that its own work in Queensland is robust, it should have attempted to translate these costs into the Victorian context and included them in the benefit cost analysis, or sought to replicate the Queensland work in the Victorian context, taking into account differences in the relevant regulations. It should not simply have assumed zero impact.

The fifth piece of evidence comes from both the above Queensland study by Deloitte Access Economics and from a study by Regulatory Impact Solutions. In referring to these two pieces of evidence, the Rental Standards RIS notes:<sup>87</sup>

*Various analyses have found that similar policy changes, such as changes to minimum housing standards, have not led to significant long-term changes in rental prices. Generally, these analyses found that the cost that was expected to be passed on was a very small portion of the overall change in the user cost as a result of the policy.*

We have addressed the Queensland study above. The Rental Standards RIS provides no page numbers for most of its quotes, which makes it much more difficult for stakeholders to assess the

<sup>82</sup> See Deloitte Access Economics, 2021, *Updated Economic Analysis of Queensland Residential Renting Reforms, July 2021*, p45, available [here](#).

<sup>83</sup> See Rental Standards RIS p10 and 82 respectively.

<sup>84</sup> Melbourne population accessed from [here](#), and Victorian population from ABS Cat no 3101.0 Table 4

<sup>85</sup> House values available [here](#), and dwelling numbers available [here](#). We note that the value is from December 2023 and the number from 2022, which suggests we have under-estimated the total impact slightly.

<sup>86</sup> See Rental Standards RIS p67 for the marginal impacts, and 82 for the discount rate used. As we discuss elsewhere, we have issues with both of these aspects of the Rental Standards RIS

<sup>87</sup> See Rental Standards RIS p70.



veracity of claims made, but in the Regulatory Impact Solutions document we find the following quote:<sup>88</sup>

*This gives a total cost to rental providers across private rental properties of \$235 million over the ten-year life of the proposed Regulations (NPV, using a real discount rate of 4 per cent). While the proposed Regulations make the rental provider responsible for these activities, it is expected that most of these costs would be (at least to some extent) passed through to private renters in the form of higher rents. The above costs, if fully passed through to higher rents to the private renter as they become subject to the safety checks, would increase rents by an average of \$300 per annum (or less than \$6 per week) over the life of the proposed Regulations. It is unlikely that the full amount would be passed through, as these costs would already be reflected in market rents for premises that already undertake these safety-related checks. That said, there may be some rental properties that operate at near-cost (particularly likely to be properties at the lower end of rents) where pass through of costs to renters is inevitable.*

The summary in the Rental Standards RIS is broadly accurate, but, as with the Queensland study, the amounts should have led to some consideration of cost in the Rental Standards RIS. The Queensland finding of a long run impact of 0.02 percent is equivalent to just over \$5 in annual rents, based on the calculations that inform Table 7. Here, Regulatory Impact Solutions suggest an impact on rents of about the same amount *per week*, or about 50 times as high. Moreover, this is for a set of changes with an NPV of costs about \$235 million over 10 years, or roughly a quarter of the NPV of costs in the Rental Standards RIS.<sup>89</sup> Again, the caveat about comparing studies holds, but on the basis of the previous work of Regulatory Impact Solutions, the impacts in Table 7 could have been up to 200 times those which are shown. We doubt the impacts would be that high and note that the detailed empirical work in the Queensland study from 2021 should be given more weight than the estimates of Regulatory Impact Solutions, but in either case, the value of zero for the impacts on rents and house values in the Rental Standards RIS is clearly wrong.

In conclusion, much of the source material quoted in the Rental Standards RIS actually suggests that we ought to expect at least some impact on rental and real-estate markets from the proposed changes in standards; indeed rental markets would be very strange if costs increased for all parties but prices did not. Some of the evidence suggests substantial impacts. Costs impacting rental and property markets should have been included in the benefit cost assessment, and not simply waved away with an assertion that they are likely to be offset by energy savings; particularly when the energy savings results are gross savings, and not net of any rental or property market impacts.

### 4.5.3. Competition Impacts

A RIS is required to summarise the preferred option so as 'to understand what it will mean in practice'.<sup>90</sup> The summary of the preferred option in Chapter 11 of the Rental Standards RIS has a number of flaws which we address elsewhere in this response. Here, we focus on the assessment of competition and small business impacts, as this aspect of the Rental Standards RIS.

Any regulatory proposal needs to be scrutinised carefully to assess whether it is having an adverse impact on the ability of firms or individuals to enter and participate in the market. Victoria is party

<sup>88</sup> See *Regulatory Impact Solutions, 2019, Regulatory Impact Statement: Residential Tenancies Regulations 2020, pp40-41, available [here](#).*

<sup>89</sup> See Rental Standards RIS p66 for these costs. We note that the Regulatory Impact Solutions NPV (which does use 4 percent as its discount rate) is over 10 years, whilst the Rental Standards RIS is over 20 years. If the costs were the same value every year, then an NPV over 10 years of \$235 million would have a value of \$393 million over 20 years, or roughly a quarter of the costs of the Rental Standards RIS. This would differ, or course, if costs were not constant, but we do not have that information, for either study. This does not affect our overall conclusions above.

<sup>90</sup> *Better Regulation Victoria (2016) Victorian Guide to Regulation, p.39*

to the Competition Principles Agreement, which requires that any new primary or subordinate legislation should not restrict competition unless it can be demonstrated that:

- the benefits of the restriction, as a whole, outweigh the costs; and
- the objectives of the legislation can only be achieved by restricting competition.

This is the 'competition test' to be applied to making Regulations. It is noted that the competition assessment does not preclude any option being preferred but requires that any decrease in competition should ensure that the benefits outweigh the costs and that the desired outcomes can only be achieved by affecting competition.

In some cases, regulation can affect competition by preventing or limiting the ability of businesses and individuals to enter and compete within particular markets. The primary cost of a restriction on competition is that it reduces the ability or incentives for businesses to act in ways that benefit consumers, that can result in lower innovation and productivity, reduced choice of products and/or higher prices.

The competition assessment is assessed by Better Regulation Victoria as part of its assessment of the 'adequacy' of a RIS.<sup>91</sup> The responsible Minister must also certify that the requirements relating to regulatory impact statements in the Subordinate Legislation Act 1994 (SLA) and the SLA Guidelines have been complied with, and that in their opinion the regulatory impact statement adequately assesses the likely impact of the proposed statutory rule.<sup>92</sup> This requirement is given expression through the SLA Guidelines, which requires that to meet the requirements of the Competition Principles Agreement the responsible Minister must issue a competition policy certificate for proposed statutory rules for which a RIS has been prepared.<sup>93</sup>

In its assessment of competition impacts, the Rental Standards RIS states that:

*Restrictions on competition can be identified where there will be changes to the way a market functions due to the implementation of the proposed regulation. Specifically, restriction can occur where:*

- *the number or range of suppliers is limited*
- *the ability of suppliers to compete is limited*
- *the incentive of suppliers to compete vigorously is reduced.*<sup>94</sup>

The Rental Standards RIS concludes that "the proposed minimum standards are not anticipated to have any adverse impacts on small business or competition ... supply of products and trades will not be restricted, as rental providers and rooming house operators will be free to choose relevant suppliers and products to install measures or appliances to meet the minimum standards".<sup>95</sup> However, it acknowledges that "there is likely to be reduced demand for gas appliances and subsequently some impacts on gas appliance manufacturers".

AGIG submits that the analysis in the Rental Standards RIS of competition impacts is wrong.

The proposed Regulations will limit the number and range of suppliers, will limit the ability of suppliers, and will reduce competition for heating and hot water appliances in the rental market.

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<sup>91</sup> Section 10(3) of the Subordinate Legislation Act 1994 provides that the responsible Minister must ensure that independent advice as to the adequacy of the regulatory impact statement and of the assessment included in the regulatory impact statement is obtained and considered in accordance with the guidelines.

<sup>92</sup> Section 10(4), SLA

<sup>93</sup> SLA Guidelines, paragraph 228

<sup>94</sup> See Rental Standards RIS p. 75. Table 11.1 also includes an explanation of Deloitte's assessment.

<sup>95</sup> See Rental Standards RIS, p. xiii

The Rental Standards RIS competition assessment is contained in table 11.1.<sup>96</sup> This table is reproduced below and AGIG has included a column to address where we believe this analysis is inadequate.

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<sup>96</sup> See Rental Standards RIS p75

**Table 8: Competition assessment questions**

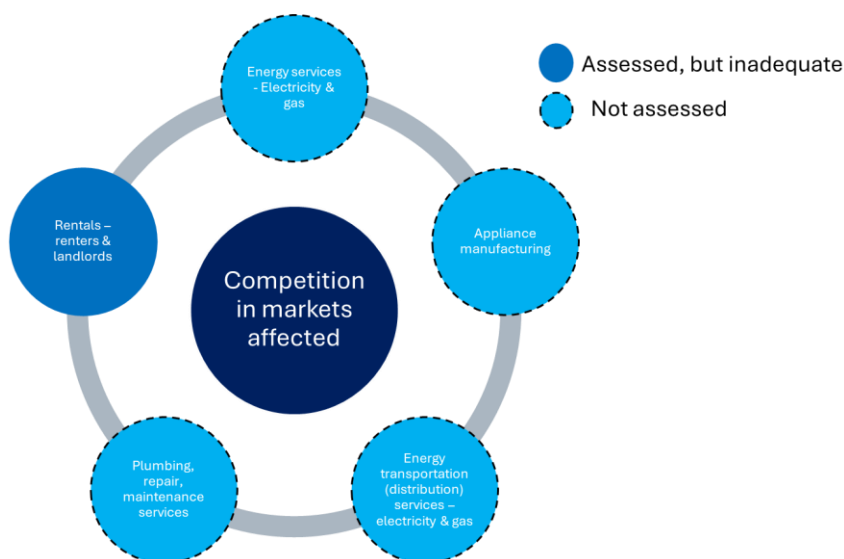
Test Question	Answer <sup>97</sup>	Explanation
<p>Are the proposed measures likely to limit the number of producers or suppliers to:</p> <ul style="list-style-type: none"> <li>• Only one producer?</li> <li>• Only one buyer?</li> <li>• Less than 4 producers?</li> </ul>	Yes	<p>The proposal will remove, over time, all gas service and product suppliers in the hot water and heater segment of the rental market. The proposal will result in structural changes to the industry.</p> <p>Deloitte’s explanation of its assessment considers this test questions against other measures in the RIS but does not assess gas at all.</p> <p>The criteria in these test questions have also been framed too narrowly. According to these criteria, a proposal would need to create a monopolistic market structure to result in a market restriction.</p> <p>Previous RISs assessed by Better Regulation Victoria have considered the follow test question: “Are the proposed Regulations likely to affect the market structure of the affected sector(s) – i.e., will it reduce the number of participants in the market, or increase the size of incumbent firms?” A broader question allows more meaningful consideration of any restrictions on competition. (The test questions, except for this one, adopt the fairly standard wording used in other RISs.).</p>
<p>Would the proposed measure restrict the ability of businesses to choose their output, price or service quality?</p>	Yes	<p>The gas heating and hot water appliance segment will be gradually removed from the rental market sector. As such, gas sector businesses will not be able supply their products when existing appliances need replacement.</p> <p>The RIS claims that “the regulations do not restrict or prescribe how the appliances/measures will be supplied”. This is incorrect. The competition assessment of this criterion does not consider the gas sector at all; gas distribution networks would be significantly impacted by the proposed regulations, as a large volume of their residential customers would be required to significantly reduce gas consumption.</p>
<p>Would the proposed measures discourage entry into the industry by new firms/individuals or encourage exit by existing providers?</p>	Yes	<p>The gas heating appliance and supply sector will no longer be able to provide products to the rental market and <i>will</i> encourage existing suppliers to exit the market.</p> <p>The RIS does acknowledge that “There is likely to be reduced demand for gas appliances and subsequently some impacts on gas appliance manufacturers. Many gas appliances manufacturers already also offer electric appliances.” This reasoning assumes that gas appliance manufacturers are diversified businesses, which is often not the case.</p>
<p>Would the proposed measure impose higher costs on a particular class of business or type of service?</p>	Yes	<p>The way regulation operates is that the largely fixed costs of a particular infrastructure provider, such as a gas network, are spread across all of the demand which is forecast to eventuate during a given regulatory five-year period. When demand falls, prices for those who remain rise. Here, rental properties are roughly one-third of properties in Victoria according to the Rental Standards RIS, and residential revenues comprise roughly 90 percent of our revenues, with space and water heating comprising almost all of this load. This means that, if all space and water heating in rental properties were electrified, tariffs for all other customers would rise between 20 and 25 percent.</p>
<p>Are the proposed measures likely to make it more difficult for consumers to move between or leave service providers?</p>	No	
<p>Would the proposed measures affect the ability of businesses to innovate, adopt new technology or respond to the changing demands of consumers?</p>	Yes	<p>The mandated phasing out these gas appliances will reduce consumer choice and will not permit the re-entry of gas into the rental market when future products are developed (e.g., more efficient appliances or renewable gas).</p> <p>In this context, the statement in the RIS that “there is nothing in the proposed Regulations that prevent rental providers/rooming house operators from adopting and responding to changing consumer demands” is false.</p>

<sup>97</sup> These represent AGIG’s views. We note that Deloitte Access Economics believes that the answer is “no” in each instance.

Based on the inadequate analysis of competition impacts summarised in Table 8, AGIG cannot see how the Rental Standards RIS could have been assessed as adequate by the Commissioner for Better Regulation for its competition effects in accordance with the SLA, SLA Guidelines and Victorian Guide to Regulation.

If the Minister certifies the proposed Regulations do not restrict competition, this will be based on a flawed competition assessment in the Rental Standards RIS. It is noted, however, that a regulatory proposal may restrict competition but may still be preferred if the benefits outweigh the costs and that the desired outcomes can only be achieved by affecting competition. In this case, a different certificate is required.

**Figure 7: Competition Impacts not Assessed in the Rental Standards RIS**



In any case, AGIG submits that the RIS has not adequately demonstrated that the benefits of phasing out gas hot water and heating appliances have outweighed the costs for this proposal.

#### 4.6. Implementation and evaluation plan

Our concerns in this respect of the Rental Standards RIS stem from our concerns that the problem that the RIS poses does not exist in reality. That is, there are no widespread market failures for the RIS to address. As we note in Section 4.1.1, this does not mean, necessarily, no market failures exist at all; there may be sub-sectors of the rental market, potentially where lower income renters dominate, where the market is failing to deliver adequate heating and cooling. This is something that the Rental Standards RIS should have focused on and delivered policy to address.

However, because the Rental Standards RIS deals with problems which do not exist, it considers solutions which do not match the potential problems and misses key impacts on those it seeks to help.

For example, we have already noted that a tenant in a home with gas could see this replaced with a single reverse-cycle air-conditioner in one room and be significantly worse off in winter. Evaluation of the Rental Standards RIS will not pick this issue up, because it is not even contemplated in the RIS that it could exist.

Given the multiple flaws in the Rental Standards RIS, there are likely to be many unintended consequences which flow from its implementation, such as the issue noted above. Our strong

preference would be for the Rental Standards RIS to be re-done, fixing its various flaws, which would also limit some of its unintended consequences.

However, if the proposed regulations are implemented, despite the information provided in our and other submissions the Victorian Government could take advantage of the fact that it is a large-scale provider of rental properties in the state (we assume, as a matter of course, that the proposed regulations would apply to all rental providers, and not exempt government) to track in detail the actual costs of implementation of the proposed regulations, the actual energy savings which result and the incidence of any unintended consequences amongst its tenants.

Given that the tenants of housing provided by the Victorian Government tend to be from lower socio-economic backgrounds and likely in greatest need of support, this information would be very useful, particularly in planning future changes, and assessing the proposed regulations when they sunset after 7 years.



## 5. Suggested Path Forwards

We consider that the proposed regulations are inadequate as a basis for appropriate policy aimed at improving the residential rental market in Victoria. In respect of space and water heating appliances, the Rental Standards RIS:

- addresses a problem which does not exist;
- seeks to impose a solution which would not solve that problem if it did exist;
- is, motivated by a flawed impact assessment that, if corrected, would point to a different solution; and
- is proposed to be implemented via a regulatory change which appears to be beyond the power of the governing legislation.

Given this, the most appropriate path forwards should start with a re-examination of the problems that need to be solved in the Victorian rental market (or parts of that market) which is driven by data rather than theoretical assumptions.

Our view is that, should the analysis be repeated in a robust fashion, and provided efficient gas options are included for space-heating, it would show that:

- Efficient instantaneous gas hot water systems have greater net benefits than heat pumps which, although they have lower running costs, are still too expensive to warrant the higher capital costs. This finding emerges even if the only change that is made is to fix errors which lead to gas appliance energy consumption to be significantly over-estimated.
- Efficient gas space-heating systems have greater net benefits than electric heat pumps. This finding is likely to emerge once overall energy use is based on more sensible assumptions, and sensitivity analysis should cover many different use profiles.

Although we believe that gas appliances would deliver higher net benefits, we do not believe that these should be mandated, any more than we believe that electric appliances should be mandated as per the Rental Standards RIS. Rather, we believe that the focus should be on efficiency standards, on standards that a variety of different appliance types can meet, and that government departments in charge of the operation of rental markets should take a technology neutral position on how energy efficiency initiatives are met.

We also believe that customer choice should be central to the analysis., This is not simply a matter of including a value for customer choice in a cost benefit analysis, but is, far more substantially, about making customer choice and agency central to the analysis.

To give a concrete example, if the Rental Standards RIS had focussed on adequate cooling (which we understand many stakeholders have raised concerns about in recent years), and found benefits with options favouring reverse-cycle air-conditioners, reflecting this in regulation would allow tenants to capture all of the benefits found in the Rental Standards RIS when they use those appliances. However, the choice to use the reverse cycle air-conditioner, or to use an existing gas heater (or both; dependent upon temperature) would remain with the tenant. This is quite different from the Rental Standards RIS, which takes away the choice of gas, and delivers no extra benefits from the removal of choice.

**AGIG recommends that the most appropriate way forward is to revisit the RIS process.**

The proposed regulations should be reconsidered to ensure they are within the power conferred by the Residential Tenancies Act.

The analysis re-done to address the flaws identified in this submission, which would naturally enact efficiency standards that allow consumers to choose options with greater net-benefits, such as:

- An efficient gas hot water system option; and
- An efficient gas space-heating option.