

# Reporting the energy efficiency of residential tenancies in the ACT

## Options analysis

Prepared for: ACT Environment and Sustainable Development Directorate (ESDD)

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**Appendix 1**      *Experience with energy performance disclosure programs*

**Appendix 2**      *ACT Renter Survey on Energy Efficiency*

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## Executive summary

This report looks at options for improving the information on the energy efficiency of properties available for rent, with the aim of generating greater comfort, lower annual costs and fewer greenhouse gas emissions within the ACT rental housing market. It follows the ACT government's commitment to examine and address the need for action to support better energy efficiency information and choice for residential tenants, as described in Action 3 of Action Plan Two (AP2), and is a precursor to a full assessment and Regulation Impact Statement.

It builds on consultations held with stakeholders in the ACT in the months of September and October 2013, and a Consultation Paper to support and focus public discussion of policy options that was released on 19 September.

### Need for policy

ACT households are among the biggest users of energy on a per capita basis in Australia. We use around 25 GJ per person annually, compared to an average of about 13 GJ per annum in NSW. This is influenced by the cold climate, with around 58% of energy use associated with space conditioning (heating and cooling), 21% consumed by general appliances (eg. fridges, TVs, lights, etc), 18% being used for water heating and 3% for cooking<sup>1</sup>.

At the time of the 2011 Census, there were 129,000 households in the ACT and almost a third of these (30.9%) were rental properties. A typical household energy bill is likely to be well over \$3,000 per year, and there is reason to believe that rental properties will typically underperform owner-occupied housing in terms of energy efficiency – meaning higher than necessary costs for tenants.

Providing information to prospective tenants on the energy efficiency of rental properties can help correct a lack of transparency over energy performance in the rental market, and boost incentives for landlords to invest in energy efficiency improvements in their properties. Revealing a property's energy efficiency allows the market to put a more accurate value on the potential future stream of energy costs or savings associated with that property, and allows properties to compete more effectively on the basis of their energy performance. All else being equal, more efficient premises should be able to command higher rents than those that are less efficient—and have a higher resale value as well. However, stakeholders emphasise the extreme sensitivity of the poorest tenants to even very modest rental increases.

### Stakeholder consultations

A range of issues and options were put to stakeholders with the aim of testing the potential design and pay offs of a program focused on filling the energy efficiency information gap in the ACT rental market. The menu of options highlighted in the Consultation Paper is shown in Box ES.1. Six written submissions were received, and a community workshop attracted 19 participants from 11 organisations. One on one interviews were also conducted, in parallel with an ACT government Renter Survey in this area.

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<sup>1</sup> Commonwealth of Australia 2008, *Energy use in the Australian residential sector 1986–2020*

**Box ES.1 Policy options developed for stakeholder consideration**

1. more rigorous enforcement of requirements to reveal existing EERs when a residential property is put on the rental market, supplemented by development of a comprehensive database of all available dwellings with an EER.
2. provision of comparative energy consumption information for a rental property, provided by ACT energy retailers and accessible by landlords. This information, supplemented by information on occupancy levels, could be provided to prospective tenants. Issues of practicality and privacy would need to be explored.
3. greater promotion of energy-efficient housing by real estate agents and landlords, with scope for specialisation in this area.
4. greater information 'pooling' by tenants (via, for example, the Tenant's Union), agents or landlords to help develop a register of property energy performance or a 'positive list' of property choices.
5. coordination between progressive landlords and tenants to promote greater transparency of the energy performance of inspected properties.
6. developing a user-friendly tool or checklist that prospective tenants could use to make their own assessment of likely energy efficiency of properties they are considering.
7. (in conjunction with Option 1 above) requiring non-rated dwellings to be explicitly advertised as such.
8. requiring the provision of a simplified assessment tool (such as an energy efficiency checklist) to tenants at the time of inspecting a property.
9. requiring all properties without a formal energy rating to obtain one prior to being placed on the rental market, with ALL rental properties being required to share the EER with prospective tenants.

Perspectives and issues raised in the submissions and workshop are summarised within. However, key concerns and input were reasonably consistent. They highlighted:

- the desire that any new measures should not add significantly to landlord or renter costs
- that housing energy efficiency is important to renters (though has lower priority than other factors such as size, location and affordability)
- that current energy efficiency ratings were poorly understood and inadequate. The ideal would be comparative information on prospective household running costs – supplemented by advice on key energy saving behaviours
- better energy efficiency information would be welcomed by tenants – but likely to be greeted more cautiously by landlords
- occupancy decisions were less likely to be influenced by energy efficiency ratings in a tight rental market
- mixed views on the need for, and likely pay-offs from, extending rating and disclosure obligations – and the need for stronger measures such as minimum energy efficiency standards for residential rental properties, tax breaks and other financial incentives.

**Recommended action**

Analysis and stakeholder discussion highlights the need for more reliable and comprehensive information on the energy performance of residential rental properties in the ACT. Tenants reviewing options in the rental market put value on energy efficiency information. But their interest is critically dependent on the notion that energy efficiency information is telling them

something about the likely annual energy costs associated with living in that particular home. Energy efficiency ratings are most useful when they effectively support this objective, and allow tenants to confidently trade off higher ratings against higher weekly rental costs. This capability also translates into a market framework in which landlords with better performing properties (that can deliver lower energy costs) can command higher rental prices and properties with poor energy performance will be faced with reduced demand.

Based on the economics, the case for further action in this area looks strong.

Assuming that a mandatory energy efficiency disclosure requirement would (typically) require around 14,250 rental properties to obtain an energy efficiency rating, this translates into an additional (and one-off) cost of around **\$8.55 million** on these property owners.

This would then ensure all of the ACT properties advertised for rent could be compared on the basis of their energy efficiency. Although, effort would still be required to ensure that tenants fully comprehended and properly utilised energy rating information, the availability of a consistent metric for comparing the potential energy performance of tenancies would be a major step toward boosting incentives for more efficient housing (and putting downward pressure on the price of less efficient housing).

Assuming that this extra information drove an increase in the average energy efficiency of newly leased rental properties from 2 to 2.5 Stars (or alternatively, generated equivalent downward pressure on rents to compensate for poor energy performance) this would result in an NPV energy saving of over **\$43.13 million** (calculated at 7% pa over 30 years). This represents a pay-off ratio of over 5 to 1. The averaged result from economic modelling does not mean that every individual would benefit in every case.

Importantly, with growth in the ACT rental stock and the increasing population of post-1996 housing, the population of unrated housing can be expected to shrink progressively over time, while the benefits of transparency and comparability of energy efficiency would be ongoing.

Social and environmental benefits would be additional to these calculated householder savings, though there is also a risk that despite downward pressure on the price of less efficient houses, incentive for higher quality houses might see a gradual reduction in the size of the housing stock at the very lowest end of the market. The implications of these countervailing forces for the availability of low cost housing and improving the welfare of those on low incomes will need to be considered more closely.

However, there is a need to fine tune the policy approach and move forward incrementally. The use of the EER rating tools – and the need for these to be improved and extended in some important areas – is a critical issue of national importance, and one that is best advanced within a national form. The ACT is well positioned to contribute to this discussion.

The following actions are recommended for further consideration by policymakers as part of a package of measures designed to improve the ability of tenants to discern and demand greater energy efficiency in residential rental properties in the ACT, and reward landlords that effectively respond to those demands.

In the near term:

- 1. Develop, or make available existing, checklists and tools that can be used by tenants to make their own assessment of the energy efficiency (and consumption characteristics) of rental properties**

2. Engage with ACT real estate agents and peak bodies to promote the use of the self assessment tool among property seekers and lessors, noting a mandatory requirement for training and client guidance as a fall back option
3. Support certification of energy assessors to ensure reliability and comparability of ratings
4. Review real estate agent support for the tenant energy efficiency checklist initiative, and mandate training and support as appropriate

Over the medium term:

5. Following consolidation of an effective self assessment tools package (as described above), mandate the disclosure of EE ratings for ALL properties entering the rental market, and enforce existing regulatory requirements. Ratings would be authoritative and comprehensive, integrating robust findings from the EER and self assessment tools.
6. Move to phase out FirstRate 4 in favour of second generation NatHERS tools, in conjunction with national action to extend the suitability of these tools for assessment of established structures.

## 1. Objectives and issues

The ACT government is pursuing greenhouse gas reduction targets of 40% below 1990 levels by 2020, 80% below 1990 levels by 2050 and zero net greenhouse gas emissions by 2060. A comprehensive plan to achieve those targets is contained in the Government's Climate Change *Action Plan Two* (AP2)<sup>2</sup>. The plan includes 18 actions, several of which focus on energy efficiency improvements to reduce emissions at low cost.

For reasons of both economic efficiency and equity, residential rental properties are an important area for policy concern, and have been highlighted in Action 3 of AP2.

**AP2 Action 3** – Subject to a regulatory impact assessment, the ACT Government will introduce legislation to require landlords to provide information to tenants on the energy efficiency of homes and fixed appliances and major energy uses. Regulatory impact assessment and stakeholder consultation will be completed in 2013.

This report looks at options for improving the information on the energy efficiency of properties available for rent, with the aim of generating greater comfort, lower annual costs and fewer greenhouse gas emissions within the ACT rental housing market. It builds on consultations held with stakeholders in the ACT in the months of September and October 2013, and a Consultation Paper to support and focus public discussion of policy options that was released on 19 September. The window for submissions on the Issues Paper closed on 11 November 2013.

### 1.1 Rental properties in the ACT

ACT households are among the biggest users of energy on a per capita basis in Australia. We use around 25 GJ per person annually, compared to an average of about 13 GJ per annum in NSW. This is influenced by the cold climate, with around 58% of energy use associated with space conditioning (heating and cooling), 21% consumed by general appliances (eg. fridges, TVs, lights, etc), 18% being used for water heating and 3% for cooking<sup>3</sup>.

The energy bill of a typical three-person household in the ACT consuming average quantities of gas and electricity is estimated at around \$3,427 per year, based on the fees and usage shown below in Table 1.1. On Census night 2011, there were around 129,000 households located within the borders of the Australian Capital Territory. Importantly, there will be considerable variation around this, depending on household size, usage patterns and energy mix. The ACT's Independent Competition and Regulatory Commission reported average electricity consumption across Canberra households of around 7.67 MWh in 2011-12, and an average of 47 GJ for gas.

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<sup>2</sup> Environment and Sustainable Development Directorate 2012, *AP2: A new climate change strategy and action plan for the Australian Capital Territory*, ACT Government, Canberra

<sup>3</sup> Commonwealth of Australia 2008, *Energy use in the Australian residential sector 1986–2020*

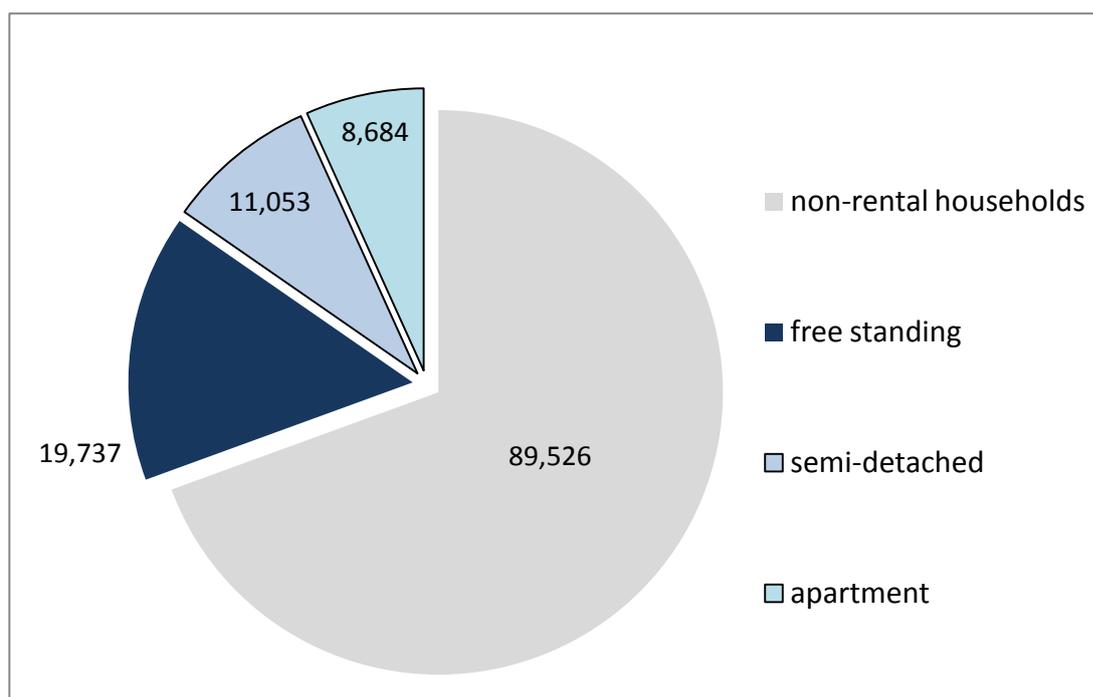
**Table 1.1** Indicative annual energy bill in the ACT

Estimated energy bill for a 'typical' 3 person household				
	Annual supply fees	Annual use	Energy cost (\$)	Total
Electricity	\$ 242.91	kWh 8,706	\$ 1,714.21	\$ 1,957.12
Gas	\$ 227.61	MJ 49,226	\$ 1,242.17	\$ 1,469.78
Total		(1 kWh = 3.6 MJ)		\$ 3,426.90

Source: Based on data from <http://www.energymadeeasy.gov.au/bill-benchmark/results/2601/4>, Energy use in the Australian residential sector 1986–2020, Commonwealth of Australia, 2008, ACT Natural gas: Schedule of charges from 1 July 2012 and ACT Standard retail electricity supply: Schedule of charges from 1 July 2012 from ActewAGL.

Further, as indicated in Figure 1.1, almost one-third of occupied dwellings in the ACT (about 39,474 residences) are rental properties (30.6%), with about half of renters occupying a free-standing house and the balance living in semi-detached (28%) or apartment style (22%) dwellings. In 2011 the median rent was \$380 per week<sup>4</sup>. For about 8% of households rent accounts for 30% or more of income<sup>5</sup>.

**Figure 1.1** Ownership and type of households in the ACT, 2011 ABS Census



Due to factors such as the split between ownership and occupancy, and the 'embodied' nature of energy efficiency, there is reason to believe that rental properties are likely to be less energy efficient than similarly aged homes occupied by their owners. Energy bills for these properties are likely to be higher as consequence. The lack of transparency around the energy

<sup>4</sup>ABS 2011, Census QuickStats

<sup>5</sup> ABS 2011, Census QuickStats

consumption characteristics of rental properties can lead to poor housing choices and higher living costs for families that are ill equipped to deal with these extra burdens.

## 1.2 Systemic problems in the rental market

Three factors are commonly cited as leading to poor energy efficiency outcomes in the rental market. These lead to a situation where tenants are spending too much on energy, landlords are spending too little on energy saving features and, without policy intervention, there is little hope of this situation being rectified.

The first factor relates to the existence of split incentives, and is pointedly referred to as the 'landlord-tenant' problem. This recognises that investment (in insulation, high efficiency hot water, window coverings, etc.) to improve energy performance in the property would generally be made by the landlord, who owns the dwelling and its fixtures. The landlord wants to keep expenditure low and rents and occupancy high. But the tenant pays for the energy associated with living in the property, and would strongly favour extra investment in energy efficiency, but wants low rent and often does not have a long term commitment to the property or its upkeep. As a consequence of these differences in motivation and outlook, incentives for investment in energy efficiency in rental accommodation tend to be lower than in owner-occupied property where the same person 'owns' the capital investment and the long term stream of benefits it generates.

The second factor is a lack of reliable information on energy performance. Renters tend to have limited information about a property's energy efficiency characteristics. A short visual inspection is a common method of assessing the overall quality of a property. However, in a quick walk through a typical prospective tenant seldom inspects or makes an informed judgement on the quality of wall or ceiling insulation, the significance of construction materials or window orientation or how fixtures will affect comfort or energy performance through the summer heat and the winter cold.

A competent energy assessor, builder or engineer could advise on the energy efficiency of the dwelling, based on observable features, but few prospective tenants would be prepared to bear this expense on their own, even though important information could be revealed.

Thirdly, even if such a report was undertaken, negative findings have no established way of being communicated to other prospective tenants. There is no relationship or linkage between those inspecting a rental property, and landlords with inefficient properties have no incentive to reveal this to prospective renters.

Welfare concerns are also important in the rental market. Low-income households spend nearly twice as much of their budget (as a share of household income) on energy as wealthier households<sup>6</sup>. And the opportunity for these households to invest in energy efficiency measures on their own and/or choose from a wide menu of alternative properties is reduced relative to high income households. Importantly, dwellings with poor energy efficiency performance also tend to deliver poor comfort, health and social outcomes, especially for vulnerable groups such as infants and the elderly.<sup>7</sup>

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<sup>6</sup> ACOSS 2009, Energy and equity, [http://acoss.org.au/images/uploads/4204\\_\\_EnergyEquity\\_low\\_res.pdf](http://acoss.org.au/images/uploads/4204__EnergyEquity_low_res.pdf)

<sup>7</sup> See the NZ study by Philippa Howden-Chapman et al. (2007), 'Effect of insulating existing houses on health inequality: cluster randomised study in the community', *British Medical Journal* 334:460, <http://dx.doi.org/10.1136/bmj.39070.573032.80>

The bottom line is that the absence of easily accessible and reliable information on energy efficiency means that many prospective tenants will not be able to compare housing options on the basis of their likely relative energy performance, or make informed trade-offs regarding rent versus running costs. The extra rental value of improving the energy efficiency of property is also eroded.

### 1.3 Addressing these problems

Providing information to prospective tenants on the energy efficiency of rental properties can help correct information gaps in the rental market. The problem of split incentives will not be directly solved by the provision of information, but the impact can be reduced. Revealing a property's energy efficiency allows the market to put a more accurate value on the potential future stream of energy costs or savings associated with that property, and allows properties to compete more effectively on the basis of their energy performance. All else being equal, more efficient premises should be able to command higher rents than those that are less efficient—and have a higher resale value as well.

However, providing timely, reliable and relevant information on energy efficiency is a challenging task. And a fundamental feature of efficient policy is that benefits outweigh costs.

A range of issues and options were put to stakeholders with the aim of testing the potential design and pay offs of a program focused on filling the energy efficiency information gap in the ACT rental market. Important analysis and perspectives to emerge from that process follow.

#### The policy options developed for deeper consideration spanned:

1. more rigorous enforcement of requirements to reveal existing EERs when a residential property is put on the rental market, supplemented by development of a comprehensive database of all available dwellings with an EER.
2. provision of comparative energy consumption information for a rental property, provided by ACT energy retailers and accessible by landlords. This information, supplemented by information on occupancy levels, could be provided to prospective tenants. Issues of practicality and privacy would need to be explored.
3. greater promotion of energy-efficient housing by real estate agents and landlords, with scope for specialisation in this area.
4. greater information 'pooling' by tenants (via, for example, the Tenant's Union), agents or landlords to help develop a register of property energy performance or a 'positive list' of property choices.
5. coordination between progressive landlords and tenants to promote greater transparency of the energy performance of inspected properties.
6. developing a user-friendly tool or checklist that prospective tenants could use to make their own assessment of likely energy efficiency of properties they are considering.
7. (in conjunction with Option 1 above) requiring non-rated dwellings to be explicitly advertised as such.
8. requiring the provision of a simplified assessment tool (such as an energy efficiency checklist) to tenants at the time of inspecting a property, and
9. requiring all properties without a formal energy rating to obtain one prior to being placed on the rental market, with ALL rental properties being required to share the EER with prospective tenants.

## 2. Energy efficiency requirements in the ACT

The ACT has significant experience with disclosure of residential energy efficiency ratings (EERs) and energy efficiency standards. Current laws cover minimum energy efficiency requirements for construction of new homes and alterations and additions, publication of energy efficiency rating information for all residential property sales and the need to advertise the energy rating of rental properties when they go on the market, where that rating is available.

However, these requirements only go part way toward providing full coverage and comparability of the likely energy performance of residences available in the rental market.

### 2.1 Energy efficiency performance and rating requirements

Since 1996, ACT legislation has required all newly built or substantially altered dwellings to achieve equivalency with rated energy efficiency standards (although requirements for efficiency enhancing inclusions in some types of construction, such as insulation, go back to 1992). The majority of people choose to comply with the standards by obtaining an energy star rating. A minimum rating of 4-Stars was required when energy efficiency standards linked to rating tools were first introduced. This was increased to 5-Stars in 2004 and 6-Stars in 2010 in line with nationally agreed changes to the National Construction Code. Energy star ratings are determined by a licensed building assessor using approved rating software.

Further, the government legislated that from 1999 all homes being sold in the ACT were required to carry an energy rating, thereby allowing their passive energy performance characteristics to be compared with other ACT homes being offered for sale in the market. The *Energy Efficiency Ratings (Sale of Premises) Act* came into effect in the ACT in December 1997. This Act was superseded by the *Civil Law (Sale of Residential Property) Act 2003*. It effectively extends the requirement for Star-ratings to premises being sold on the property market to include those built prior to 1996.

#### Rental properties

The ACT *Residential Tenancies Act 1997* was amended in 1997 in an effort to address energy efficiency issues for rental properties. The Act requires that any existing rating be disclosed in any advertisement to rent a dwelling, and that the rating must not be false or misleading. A residential tenancies agreement must also include the following:

- (i) a copy of an EER statement (if any) for the habitable part of the premises; or
- (ii) a copy of a fresh EER statement for the habitable part of the premises if:
  - (A) building work under *the Building Act 2004, section 6* has been carried out on the premises that affects the EER of the habitable part of the premises; and
  - (B) before the building work was carried out, an EER statement had been prepared for the habitable part of the premises.

While there are differences in definitions of premises between the two Acts and a number of properties cannot be assessed using the software mandated for EERs, the intent of the provisions was that over time the vast majority of the housing stock would be subject to a disclosure requirement to help home buyers and renters to compare the energy characteristics of properties in the market. However, there are no designated resources for enforcement of the

obligations and it is likely that the number of rental properties advertised with an EER in the ACT falls short of that required under the *Residential Tenancies Act*.

As indicated in Appendix 1 the ACT is not alone in pursuing greater transparency of energy performance for residential properties, although it is the only Australian jurisdiction to require revelation of energy ratings on a mandatory basis. And it is necessary to look overseas for precedents that extend this requirement to the rental market. Although experience has been mixed, coverage appears to be a key element of success. Patchy information tends to reduce comparability and value to users.

## 2.2 Rating tools, and what they cover

In the ACT, FirstRate 4 is used as the EER tool for established residential premises being sold. It is a first generation tool developed under the Nationwide House Energy Ratings Scheme (NatHERS), which is collectively run by Australian governments. While based on the original NatHERS energy modelling software, FirstRate provides a simpler approach by assigning points to design features, with the points total then linked to a star (EER) value approximating the star rating that would have been achieved had the design been directly modelled by NatHERS. The tool provides an assessment of thermal performance and also has a module that provides upgrade options for the dwelling. These options are generally configured for houses at the design stage, but can be modified for an existing dwelling and form part of the disclosure requirement in the ACT. However, FirstRate 4 is unable to provide ratings above the 6-star level, which is the current minimum equivalency standard for new residential housing specified in the National Construction Code. An increasing range of apartment style residences are coming onto the market with energy efficiency performance levels in excess of the 6-Star minimum.

Alongside FirstRate 4, there are a number of second generation accredited NatHERS tools recognised under the National Construction Code for the purposes of rating new dwellings. These are:

- AccuRate
- BERS Pro, and
- FirstRate 5.

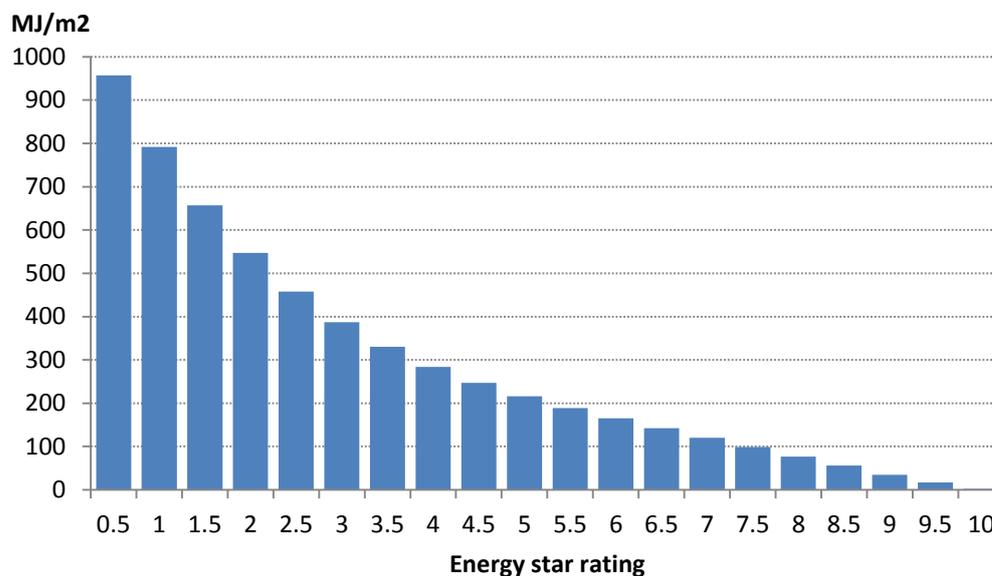
Second generation tools do not provide built-in upgrade information, but allow alternative design solutions and materials to be simply and quickly modelled once the original plan and material details are entered into the software. These tools provide rankings expressed as star ratings based on the total annual energy input (measured as MJ/m<sup>2</sup>) to maintain 'comfort' levels. Rankings span a range of 0-star (very poor) to 10-star (minimal additional heating or cooling energy required). Higher star ratings indicate an inherently lower energy requirement (per square metre of floor space) to maintain comfort levels, once they are attained.

An extra star represents an approximate 30 per cent reduction in thermal energy requirements relative to the last star. This is illustrated in Figure 2.1. This translates to a saving on the energy bill. However, boosting the insulating properties of a home to achieve higher and higher star ratings (and greater thermal efficiency) can involve increasing cost and effort (e.g. more and better insulation and window treatments). Generally, bigger and cheaper energy savings are achievable when starting from a low base – that is, in houses with low star ratings.

In second generation tools, comfort is based on temperature, humidity and air speed rather than on temperature alone (as in first generation NatHERS and FirstRate 4). They require more data (full plans) and more assessor effort than FirstRate 4 to produce an assessment. Second

generation tools were designed to give very similar results at the 4 and 5-star levels to the first generation tools. However, there are differences in approach and, coupled with user errors, it is possible to achieve differing results across dwellings, though variations tend to be small and infrequent. In general, homes of different ages and energy performance levels can be effectively compared on the basis their energy efficiency rating regardless of the rating tool used (up to and including 5 - Star – but not beyond).

*Figure 2.1 Star ratings and thermal energy performance in AccuRate*



However, there are other forms of assessment and information that may be of use to tenants that do not need an EER or can be used in conjunction with an energy efficiency rating (EER) if it is available. And where EERs are used, people need to be aware of what is being disclosed and what the rating or assessment outcome implies.

Typically, the rating tools used to produce EERs take account of:

- layout of the home
- construction of its roof, walls, windows and floor
- orientation of windows and shading to the sun's path and local breezes
- how well these suit the local climate.

They are essentially focused in the thermal properties of a house. That is its ability to absorb and trap heat (or by implication, its ability to stay cool). They reflect the energy transfer properties of the building 'envelope', but not the:

- efficiency of energy using devices within the building
- impact of building size and atypical occupant behaviour on energy consumption, or
- indicative cost of energy in running the house, which is a function of usage and price.

Fixtures in a house such as heaters, coolers, hot water systems and cooking appliances can also have a major impact on energy use depending on their own efficiencies and occupant use. Analysis for a typical Canberra home suggests that about 58 per cent of annual energy consumption is due to space heating and cooling, 21 per cent is associated with operating

electrical appliances (eg. fridges, TVs, lighting, etc.), 18 per cent is due to hot water consumption and 3 per cent is used in cooking.<sup>8</sup>

Under current regulatory ratings the implications of these ‘fixtures’ for energy consumption are not captured in the overall assessment of energy efficiency. Energy use for water heating and cooking may relate to appliance efficiency, but also to the climate and household size and lifestyle (eg. the number of people that enjoy long or frequent showers). And importantly, a highly efficient building full of inefficient heating and cooling technologies that are used frequently can still be costly to run – with the actual cost depending in the mix and price of energy used (ie. electricity, gas, oil, wood, wind or solar).

Typically, there is no readily observable set of factors that can reliably predict the total energy performance of a household. However, a short list of ‘negative’ factors can be developed. These include a lack of insulation, draughty and unsealed windows, doors and chimneys, and holes and breaks in the floor and walls. Inefficient fixtures (typically provided with rental properties) such as hot water systems, cookers and dishwashers can also be key culprits in excessive household energy use, along with incandescent or banks of quartz halogen lighting. Finally, poor energy use practices (such as running heaters or coolers with the windows open, badly leaking hot water taps, or leaving lights on in empty rooms for long hours) will drive up energy use despite the inherent energy efficiency properties of a home and its appliances.

### 2.3 Potential pay-offs from energy efficiency

Occupant usage levels and lifestyle are critical to energy consumption outcomes. A big family in a large efficient home can still use more energy each year than a couple in a small inefficient home. However, improving energy efficiency gives both families the ability to cut their energy consumption and costs without materially harming their lifestyle. In fact, the ability of enhanced energy efficiency to make energy services such as heating, cooling and washing cheaper generally helps improve comfort and lifestyle - and this has been shown to translate into significantly improved health and wellbeing for many low income families.<sup>9</sup>

As noted, every home and family is different - and energy efficiency ratings as currently designed only provide a window on the thermal properties of a dwelling. Bigger houses maintained at the same comfort level will use more energy, even if their star rating is the same. However, these tools - properly applied - can provide some guidance to the level of saving achievable for a ‘representative’ family as it faces the choice of different star rated dwelling - with all other things being equal. In reality, issues such as heater, cooler and water heater type and rating and the type of lighting, as discussed above, would also need to be factored into the mix in order to develop a first-pass estimate of likely future energy bills. Small non-fixed appliances would also be relevant to energy consumption, but are not inherent features of vacant dwelling being offered for sale or rent.

The AccuRate energy consumption relationship provides a starting point for putting some ballpark numbers on the ‘realistic’ value of potential energy savings. Table 2.1 below presents the value of annual energy savings achievable from space heating (and cooling) under

<sup>8</sup> Commonwealth of Australia 2008, *Energy use in the Australian residential sector 1986–2020*

<sup>9</sup> See the NZ study by Philippa Howden-Chapman et al. (2007), ‘Effect of insulating existing houses on health inequality: cluster randomised study in the community’, *British Medical Journal* 334:460, <http://dx.doi.org/10.1136/bmj.39070.573032.80>

progressively higher star ratings for the housing shell. Under this example, the following assumptions apply:

- space conditioning relies on retailer supplied electricity only (and reverse cycle/ heat pump technology is not used)
- the average price paid for electricity by this ACT household is 20 cents per kWh (ie. around current residential retail prices), and
- the house has useable floor area of around 170 square metres, and heats and cools about half of this, as needed (this conforms with usage patterns normally observed).

For the household described, the following annual energy cost savings would apply to incremental improvements in thermal energy efficiency. These estimates indicate that, for the household described above, substantial savings can be achieved as thermal energy efficiency is improved (eg. through measures such as better insulation, curtaining, door and window seals, etc). With normal use, an improvement from 1-Star to 2-Star, yields a potential saving estimated at around \$1,099 a year, while an improvement to 4-Star yields around \$2,279 a year. This amount would be available to fund further consumption by the householder - including (potentially) the purchase of additional energy services (eg. heating an additional room or turning up the thermostat).

*Table 2.1 Indicative value of annual energy savings from improving thermal efficiency (based on technology assumptions above)*

Current Star rating	Improved household thermal Star rating						
	0.5	1	2	3	4	5	6
0.5	\$0	\$740	\$1,839	\$2,557	\$3,019	\$3,324	\$3,553
1		\$0	\$1,099	\$1,817	\$2,279	\$2,584	\$2,813
2			\$0	\$718	\$1,180	\$1,485	\$1,714
3				\$0	\$462	\$767	\$996
4					\$0	\$305	\$534
5						\$0	\$229

Importantly, these savings (whether taken as lower household expenditures or the purchase of more energy services to boost comfort levels) can justify significant efficiency upgrades. Using the example of the 1 Star house above, and assuming an outlook of only 10 years, an owner seeking an investment return of 10 per cent per annum could spend as much as \$2,851 on an upgrade to 2 Stars and \$5,911 on an upgrade to 4 Stars and still achieve that hurdle rate. Should some of energy savings be taken as increased comfort the spend would be reduced. And in many cases – depending on the house or apartment, these improvements could be achieved more cheaply than that, indicating an even higher rate of return. On the other hand, greater existing use of reticulated gas or other variations to the assumptions listed above (such as use of heat pump technology for heating – which accesses ‘free’ energy from the atmosphere) could swing the estimated savings the other way.

The thermal energy efficiency investments that could be justified in pursuit of higher Star ratings - and lower annual energy costs - by the owners of these 'case study' households are presented in Table 2.2. The numbers are based on the annual savings shown in Table 2.1, and a conservative investor requirement of a real rate of return of 10 per cent per annum and a focus on only the first 10 years of savings.

As a parallel observation, it is important to note that if the value of these energy savings was being estimated for policy purposes on a longer term basis, the value of 'benefits' from action to boost energy efficiency would increase substantially. At a 7 per cent real discount rate applied over 30 years, the value of moving from 1-Star to 2-Star jumps to \$8,367, and in a move from 1-Star to 4-Star value increases to \$17,348. In general, the longer term focus coupled with lower discount rates (consistent with policy evaluation guidelines) generates energy efficiency pay-off valuations that are consistently 2.93 times those indicated in each cell in Table 2.2.

*Table 2.2 Indicative investment justified by annual energy savings from thermal efficiency improvements (over 10 years, at a 10% pa earning requirement)*

Current Star rating	Improved household thermal Star rating						
	0.5	1	2	3	4	5	6
0.5	\$0	\$1,920	\$4,771	\$6,632	\$7,831	\$8,622	\$9,216
1		\$0	\$2,851	\$4,713	\$5,911	\$6,702	\$7,296
2			\$0	\$1,862	\$3,060	\$3,851	\$4,445
3				\$0	\$1,198	\$1,990	\$2,583
4					\$0	\$791	\$1,385
5						\$0	\$593

What's more, use of energy efficient fixtures can generate additional savings beyond those indicated in the table above, which purely reflects thermal performance, and is the sole focus of the Star ratings attached to ACT housing. More efficient or cost-effective heating and cooling technologies, cookers and water heaters can all yield extra annual energy savings. But actual savings will vary from household to household, and depend on occupant usage and the energy mix because the price of energy per megajoule differs between electricity and gas, and can be sensitive to the amount consumed and time of use.

Further, as noted, some households may decide to consume more energy as energy efficiency makes it cheaper to heat or cool their home. This may particularly be the case with households who struggle to maintain a 'reasonable' level of comfort in their homes during the extremes of winter and summer.

Nevertheless, a couple considering renting similar properties might find it useful to know which property is likely to cost them an extra \$10 per week or so in energy costs. Conversely, a landlord offering a property with superior energy characteristics might be interested to secure a higher rent for that property or at least have it considered more favourably by renters in the market. Even if all the direct financial benefits from an energy efficiency upgrade were absorbed

by the landlord, the tenants would still get to enjoy the 'spillover' benefits commonly associated with higher comfort levels.

The challenge lies in effectively assessing and communicating these potential pay-offs to tenants, and supporting their ability to 'shop around' and distinguish one rental property from another on the basis of energy efficiency.

The likely pay-off from providing this information and the cost of doing so are critical considerations for policymakers in developing and comparing options to address the impediments to efficiency that exist in this area.

Current experience in the ACT suggests that residential ratings using FirstRate 4 (for older unrated homes being sold) cost in the vicinity of \$150 to \$200 for a 'walk through' assessment and software analysis; while an AccuRate rating (applied to rate the design of new homes built in the ACT) is reported to cost around \$400 per assessment, which involves an energy modelling 'desktop' assessment of plan dimensions and material specifications.

### 3. Policy options and stakeholder views

Extensive consultations have been conducted in order to examine the significance of these issues for stakeholders in the ACT community, and explore possible policy responses that could help support more efficient outcomes for tenants and landlords and progress welfare objectives in the ACT, noting the vulnerability of low income families in rental accommodation. A Consultation Paper canvassing policy issues and options was released in August 2013, and a stakeholder workshop was held at the end of October. Six formal submissions were made in the period to 7 November, along with contributions from the workshop and one-on-one meetings. The key options considered and stakeholder views on policy needs and priorities are discussed below.

#### 3.1 Policy options

Detailing the nature and possible scale of costs and benefits of an energy efficiency information scheme for ACT tenancies is a logical precursor to any further design work. However, even if the potential savings are thought to be significant, policymakers must confront the challenge of developing a scheme that works well. Good public policy is about delivering community benefits cost effectively, and avoiding significant levels of intrusiveness, inconvenience, uncertainty and risk. These factors must all be weighed in the mix as part of a practical consideration of the options for delivering a workable and efficient tenancy energy efficiency information scheme for residential tenancies.

##### Extending existing approaches and information sources

Under current ACT legislation, advertisements for rental properties are required to display any *existing* EER. This means that dwellings built after 1996 that acquired an energy rating via building standard requirements, or have been altered, or acquired an EER as a result of being sold in the period since 1999 (ie. when EER requirements for dwellings for sale came into force) should be advertised with an EER if they enter the rental market. These requirements provide for disclosure of EERs for rental properties built or sold within the last 17 years or so.

But older dwellings that have not changed hands in that period are unlikely to have a rating. Prospective tenants for these properties would be likely to derive little benefit from the current regulations even if they were rigorously adhered to.

However, this requirement could be used as a base for further action. An extension option that could be considered might involve more rigorous enforcement of requirements to reveal existing EERs when a residential property is put on the rental market, supplemented by development of a comprehensive database of all available dwellings with an EER.

Energy retailers also offer a parallel stream of information on energy use and relative performance. Following the implementation of the National Energy Customer Framework in the ACT from 1 July 2012, electricity bills must carry information on the electrical energy use of each household relative to other households in the local area, categorised by the number of people in the household<sup>10</sup>. The usefulness of this information for comparative purposes is obviously reduced where other sources of energy (e.g. gas, solar or wood) are a significant part of total

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<sup>10</sup> Part 11 of the *National energy retail rules* <http://www.aemc.gov.au/retail/national-energy-retail-rules/current-rules.html>

household consumption. In this case, the bill is no longer conveying reliable information on how the total energy use (or efficiency) of one household compares with another.

However, if this gap could be plugged, benchmarked household energy bill information could represent a useful indicator of the actual realised energy performance of a property—in terms of both energy use and also differences in annual running costs. With additional information on household size and occupancy levels, it would be possible to ‘benchmark’ a household’s quarterly or annual energy consumption within the spectrum of comparable households in the local area.

Energy retailers in the ACT have also recently become subject to explicit greenhouse reduction targets under the Energy Efficiency Improvement Scheme (EEIS). Retailers’ targets under the EEIS are achieved by undertaking a range of specific energy efficiency improvement measures<sup>11</sup>. Eligible measures under the scheme cover a wide range of possible activities, and the measures pursued are at the retailer’s discretion. While activities being undertaken by retailers in the first year of the EEIS currently focus on lighting, draft sealing and standby power control, it is expected that retailers will move into bigger ticket items as the EEIS progresses and targets increase.

It is feasible that more directed action around comparing household energy performance—and identifying poor performers in particular—could yield benefits in terms of targeting EEIS activities and expanding the scope of energy services to customers.

ActewAGL have reported to ESDD that approximately 20% of installations in 2013 under the EEIS were in rental and community housing properties.

## **New approaches**

Options built around new obligations and approaches were also considered. These may be used in combination and could draw on or complement existing processes and resources.

Voluntary approaches are attractive because they allow individuals to choose timeframes and actions that suit them best, and tailor solutions to their own particular circumstances. However, voluntary approaches can fail to adequately address costs and benefits that have a strong social or environmental dimension, or arise when there are major power or information imbalances in markets. That is, problems linked to a lack of coordination, ownership or enforcement can perpetuate under a voluntary approach.

Voluntary measures put forward for consideration included:

- greater promotion of energy-efficient housing by real estate agents and landlords
- encouraging greater information ‘pooling’ by tenants, agents or landlords to help develop a register of property energy performance or a ‘positive list’ of property choices
- encouraging coordination between progressive landlords and tenants to promote greater transparency of the energy performance of inspected properties, and/or
- developing a user-friendly tool or checklist that prospective tenants could use to make their own assessment of likely energy efficiency of properties they are considering.

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<sup>11</sup> [http://www.environment.act.gov.au/energy/energy\\_efficiency\\_improvement\\_scheme\\_eeis/eligible\\_activities\\_under\\_the\\_eeis](http://www.environment.act.gov.au/energy/energy_efficiency_improvement_scheme_eeis/eligible_activities_under_the_eeis)

The 'Liveability' initiative developed by LJ Hooker provides a leading example of efforts in this area by real estate agents to inform and encourage energy efficiency behaviour among tenants and property owners. By training and engaging agents it helps to empower consumer interest in residential energy efficiency and promote energy and sustainability issues among new customers.<sup>12</sup>

However, given that the worst performing properties are those with the most to lose from greater comparability and transparency, regulatory options that can achieve more consistent and comprehensive action across rental properties are likely to offer benefits that voluntary and information based approaches would struggle to deliver. Duplicated and overlapping effort can also be a costly feature of voluntary approaches.

## 3.2 Input from stakeholders

Submissions, face to face meetings and a stakeholder workshop were used to draw out stakeholder views - and suggestions – around the best way to inject better energy efficiency information into property comparisons and tenancy choices. The discussions also coincided with an ACT government renter survey which captured 88 responses.

Key stakeholder observations follow.

### Written submissions

Submissions on the Consultation Paper were received from:

- Sustainability Programs, Environmental and Sustainability Directorate, ACT
- Real Estate Institute of the ACT (REIACT)
- Property Council of Australia (PCA)
- Care Inc. Financial Counselling Service, Consumer Law Centre, ACT (Care)
- the Tenants' Union, and
- Canberra Loves 40%.

Their observations and suggestions are summarised in Table 3.1 below.

There was generally strong support for more and better information on residential energy efficiency, and recognition that tenants would find value in this information when comparing and selecting rental accommodation. A more comprehensive approach to mandatory disclosure of energy efficiency was widely supported in the submissions, with the Sustainability Programs area of ESDD highlighting that the current situation of partial coverage has made regulation, compliance and enforcement difficult. Partial information also tends to lower value to consumers. The ESDD submission highlighted the relevance of stronger investment support initiatives such as the UK's Landlords Energy Savings Allowance', the ACT's own Energy Efficiency Improvement Scheme (EEIS) and potential changes to existing Australian taxation arrangements that would allow within-year 'expensing' of energy efficiency improvements as a maintenance cost rather than a capital investment subject to depreciation. Canberra Loves 40% also supported a change to the write-off provisions for energy efficiency investment under the tax laws.

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<sup>12</sup>See <http://www.ljhooker.com.au/liveability>

However, there was strong recognition that affordability, size and location tend to dominate rental decisions, and energy efficiency is often a subsidiary factor. Care Inc. highlighted that individuals and families in the lowest income group tended to have the narrowest range of rental options and were also less likely to apply, and extract full value from, information based tools.

The Tenants Union and Canberra Loves 40% both supported the introduction of minimum energy efficiency standards for rental housing in conjunction with mandatory disclosure of efficiency information. However, Care Inc. cautioned that initiatives that significantly raised across the board costs in the rental market could impact adversely on tenants with low incomes, by narrowing their rental opportunities even further. They noted that vulnerable groups at the bottom end of the market were often left behind by initiatives aimed at benefiting the 'average' consumer. Low income groups have a much smaller ability to absorb or tolerate what might generally be thought of as a 'modest' increase in costs.

Problems with the scope and comparability of the energy efficiency rating tools currently used in the ACT were also a key source of concern. Both the Real Estate Institute and the Property Council highlighted the mix of first (eg. FirstRate 4) and second (eg. AccuRate, BERS Pro) generation rating tool applied to existing and new housing, and the inconsistency of ratings from these sources beyond the 5 and 6 star range. Further, these submissions – and others – emphasised the desirability of better and broader insights into household energy performance – and its likely cost to the tenant. The current focus on the thermal energy performance of the building shell was seen as too narrow and falling short of providing useful and relevant advice that could help inform tenant choices and trade-offs.

**Table 3.1** *Summary of written responses to the Consultation Paper*

Organisation	Need for measures	Costs and value	Meaningful information	Assessing benefits	Policy options
<b>Sustainability Programs, Environmental and Sustainability Directorate, ACT</b>	Strongly supportive - recognising that partial coverage makes compliance difficult and supporting disclosure for all sales and rentals; mandatory EER insufficient on its own and supplementary information on achieving operational energy efficiency needed; EEIS and tax incentives (immediate write-off) could support landlord action; and impacts on low income households need to be understood for chosen option.	Partial coverage of dwelling stock for disclosure of EER makes it difficult for regulators to enforce the rules. A mandatory approach for all rental properties would be better, though support such as a comprehensive data base would be needed.	Evidence suggests EER is often poorly understood. Clearer information on EER with supplementary information on fixed appliances and occupant behaviour is needed to complement mandatory disclosure.	Market conditions will determine impact of mandatory disclosure on rent levels and likelihood of landlord investment to improve EER.	The Energy Efficiency Improvement Scheme (EEIS) could provide a means to focus on incentives for landlords to improve the performance of rental properties. A change to tax treatment of energy efficiency improvements (e.g. UK approach) could provide appropriate incentives to landlords.
<b>Real Estate Institute of the ACT (REIACT)</b>	Supportive - tenants need improved information on EE; agree EE is second order issue; support encouraging owners to improve EE through disclosure; but need more informative approach than EER rating, and prefer to avoid EER altogether.		EER requirement for new homes recognised as important, but no recognition that EER improves capital value. Support for encouraging landlords to improve energy efficiency and agree that disclosure would help tenants. A preference for mandatory disclosure of a wider range of information was expressed, with the elimination of EER.		

**Property Council of Australia (PCA)** Supportive - improved information on all aspects of EE needed; resolve confusion between 1st and 2nd generation rating tools by using 2nd generation tools to allow good EE to be promoted; original EER to be used for disclosure with multi-unit buildings

Required disclosure of performance should be backed up by government provision of information on EER (related to conditioning costs) and other factors including occupant behaviour. For multi-unit properties scope for owner to improve performance is limited, and so there is little incentive to improve performance. Required disclosure of EER should allow use of the original EER for multi-unit developments. This would require a regulatory change. This issue is linked to the confusion between 1st and 2nd generation rating tools (including lack of training and accreditation for 1st generation) and the commercial disadvantage of a 1st generation rating for a 6+- star rated dwelling.

**Care Inc. Financial Counselling Service, Consumer Law Centre, ACT (Care)**

Supportive - access to information and tools designed to help make choices on the basis of relative energy efficiency welcomed, but generally Care clients have very limited choice and could not be regarded as well informed consumers.

Clients often enter rental market at times of crisis and/or financial constraint so limited options in tight market, and concern that rents could increase - any such change must not outweigh the benefits from lower energy costs. Tax incentives for energy efficiency improvements would assist.

Information needs to be appropriately presented in forms useful to all groups of renters, including less informed consumers. Clear explanations are needed of building shell rating (EER) together with the performances of fixed and other appliances and the impact of the number of occupants, preferably with annual cost estimates provided to show fortnightly costs. Simple graphics would help explain issues, and renters need a check list of factors that influence energy costs.

Information will help those in a position to use it, but be less of a factor for low income renters. Ideal solution would be for all rental properties to meet a minimum standard so that energy was less important as dwellings would provide a basic level of comfort.

Minimising costs should be a goal for all parties, so that disclosure should build upon existing market information with EER plus information on fixed appliances and general energy efficiency advice. Lower (or non-) rated older properties provide the greatest challenges for low income groups should improvements be mandated, as relatively higher costs would be involved. Vulnerable groups can be left behind by schemes designed to benefit consumers.

<p><b>Tenants' Union</b></p>	<p>Strongly supportive - preference for mandatory standards supported by incentives for landlords; mandatory disclosure in concert with suite of information tools could benefit tenants and landlords over time; recognition that tight rental market limits tenant options to exercise choice, particularly for low income groups.</p>	<p>In current market the majority of tenants may not value or appreciate the value of information on energy efficiency as most decisions based on price, size and location. Price is particularly relevant for low income families as rent can be 40+% of household income. ACOSS report identifies impacts of energy costs for low income renters in relation to less efficient appliances, fewer appliances so energy determined by number of occupants, energy rationing and hardship, and health impacts from damp/mould and excessive indoor temperature extremes.</p>	<p>Critical to provide information in a way that allows renters to understand cost trade-offs between rent and energy costs. Such a tool would clarify the respective roles of EER (conditioning energy), fixed appliance efficiency and use, and occupant behaviour. The information messages need to be presented clearly (graphically) for all groups of renters. Support from property advertisements will impact on more informed choices by tenants. EER system needs to be explained and adapted with additional information to allow understanding energy use of key appliances. A mandatory disclosure approach requires a package of information resources.</p>	<p>Key concerns for tenants are rent, size and location. Rent is the primary cost issue, with energy factored in later, including options to restrict energy consumption. Voluntary and self-assessment approaches will be more amenable to landlords (no or low cost) but are accompanied by concerns over accuracy, completeness, consistency and trust, and thus unlikely to be of value. Information alone is unlikely to be of value for improving choice or reducing the cost of the least efficient properties. Any change in approach needs to address "split incentives" for energy efficiency. Incentives for landlords to improve energy efficiency (e.g. change tax treatment of improvements from capital to maintenance) could help.</p>	<p>Existing regulation, even if enforced and in a more flexible market, is unlikely to deliver energy efficiency benefits to tenants. If enforced, the current program would need much stronger information support at key points in the rental process. There is concern over other aspects of enforcement of regulations (e.g. lodgement of rental bonds). Information sharing from utility bills has privacy issues and is complicated by needing to know whether electricity or electricity and gas has been used, and unknown occupancy issues. Costs of a mandatory approach are unknown but expect a high proportion of rental properties would have a rating. There would be costs associated with developing a suitable information package with details of fixed appliances to support mandatory disclosure. The ideal package would involve minimum standards (i.e. beyond disclosure), mandatory disclosure for all rental properties, information package that allowed rent and energy costs to be compared, appropriate information in advertisements, and information on potential economic benefits for landlords.</p>
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**Canberra Loves  
40%**

Strongly supportive - but specific focus on minimum performance requirement for rental properties complemented by EE information needed to achieve 40% target.

Practicalities of tight rental market mean that EE information is not enough - EE minimum performance needed. UK approach commended with minimum performance, EE information and incentives for landlords. Specifically R3.5 in every attic space and declaration of EER for every house built since 1999.

Information that allows simple comparisons of running costs between properties (in both summer and winter). More information needed to support current EER, including on fixed appliances, but such information is not part of ratings. Propose that 1st generation tools remain in use for disclosure for pre-2003 dwellings, with 2nd generation tools for dwellings from 2003.

Information valued, but tight market limits choice, so that minimum standard would deliver benefits to all tenants. Present voluntary approach is not working, and self-assessment (like Queensland ) lacks credibility to the receiver of information. Minimum performance complemented by better information and incentives for landlords would address EE issues.

Low proportion of rentals with disclosed EER, though high EER likely to be promoted. Current scheme is essentially voluntary, and the risks associated with self-assessment a very high and can undermine such a scheme. Information sharing is unlikely to provide benefits due to lack of comparable information because of differences in occupant behaviour. Best would be a package of targeted approaches built around mandatory minimum performance (with incentives for landlords, e.g. tax breaks as maintenance in current year rather than treatment as capital improvement).

## Perspectives from the workshop

Views expressed at the stakeholder workshop covered similar ground. There were 19 participants and observers from 11 organisations. The organisations represented were:

- Environment and Sustainable Development Directorate (ESDD, ACT government)
- Tenants Union
- ActewAGL
- YWCA, Canberra
- Real Estate Institute of the ACT
- First National Real Estate
- Care Financial
- Baptist Community Services (BCS)
- ACT Council of Social Service (ACTCOSS)
- Canberra Loves 40%
- Sustainability Advice Team Pty Ltd.

Key points and proposals are outlined below.

### **Low cost housing in Canberra is in short supply, and policymakers must be careful not to add significantly to landlord or renter costs**

Rents in Canberra are relatively high, and there are very few ‘low cost’ options available. Some participants were concerned that if landlords were required to upgrade their housing Canberra could lose many inner city properties due to increased cost. As a consequence, low-income families would be forced to move to outer suburbs away from familiar and jobs, and face potentially higher transport costs. One participant highlighted that it is currently very difficult to get a 3 bedroom house in Canberra for less than \$350 per week. And important as energy efficiency is, it is likely to be less critical to a family’s wellbeing than having shelter and proximity to important services.

### **In principle, housing energy efficiency is important to renters – but current EE rating advice is not well understood, and has a lower priority than other factors**

The Real Estate Institute highlighted a survey of 1,200 tenants which indicated that, for the vast majority, energy efficiency was not a critical factor in housing choices. However, many agreed that lack of concern about energy efficiency in the ‘search’ phase for a property could quickly be reversed soon after the first electricity or gas bill arrived, as the link between ‘energy efficiency’ and cost or comfort may not be apparent to all householders. Evidence from the consultation indicates that few renters have a clear idea of the energy costs implied by the choice of one house over another, but this is information that they would clearly value if it could be provided. Its value would also be greater in times of reduced stress in the housing market (giving a broader ‘menu’ of properties), and less stressed personal circumstances.

### **Action in this area would be welcomed by tenants – but likely to be greeted more cautiously by landlords**

The group recognised that tenants have little opportunity to improve structural aspects of the property affecting energy efficiency and, even if they were allowed, their investment return horizon is very much shorter than the building owner’s (eg. 2-3 years versus 20-30). However, it was also noted that many landlords care very little about the value of the building itself, and are

motivated almost entirely by land value. They buy (and rent) ‘knock downs’ with a 1 to 5 year outlook. These are often in poor condition, but also the lowest cost properties in an area. Additional costs and obligations on landlords could seriously squeeze this end of the market.

**Stakeholders agreed that current energy efficiency ratings were poorly understood and inadequate. The ideal would be comparative information on prospective household running costs – supplemented by advice on key energy saving behaviours**

There was strong support for tools and energy efficiency information that gave a better idea of the likely energy costs associated with living in a home, and the behaviours that would be most effective in ensuring that it ran close to its efficiency potential. The current EER tools are not well understood or trusted due to a lack of information and education for the tenant, landlord and agent. They do not cover major energy using fixtures such as space heaters, coolers or hot water, they fail to give information on likely household energy costs, and they provide no advice on how energy performance could be improved - including through user behaviour. To make energy costs more comparable with rental costs, it was also suggested that a fortnightly estimate of average energy costs might be useful. The notion of a benchmarking approach or ability for information on the household size and energy consumption of previous tenants being made available was seen as of potential interest but subject to some significant practical problems – not least of which were confidentiality provisions.

**There were mixed views on the need for, and pay-offs from, extending rating and disclosure obligations. Occupancy decisions were less likely to be influenced by energy efficiency ratings in a tight rental market**

Many felt that energy efficiency information would be more powerful in affecting choice and investment when rental properties were more plentiful and the range of choice was greater. Despite an increase in rental vacancies in the Canberra market in 2014, low income earners are still struggling to find housing.<sup>13</sup> There was concern around imposing additional costs on landlords that would likely result in only modest changes in consumer choices, and be passed on in large measure to tenants. Nevertheless, there was a broadly supported view that if more relevant comparative tools could be developed, their value would be maximised if they were applied comprehensively. That is, to all properties made available for rent in the ACT residential property market.

**Views were also mixed on the most appropriate policy measures for encouraging the uptake of more energy efficient housing. Better and more consistent information was clearly important, but some saw merit in applying minimum efficiency standards for rental properties. Other obligation arrangements were also discussed.**

Some stakeholders saw merit in moving beyond information based measures to support energy efficient choice by tenants. Further options included minimum residential energy efficiency standards, tax breaks for energy efficient investment and encouraging a greater focus on major equipment upgrades (eg. hot water, air conditioning, etc) via targets and the introduction of co-payment arrangements under the Energy Efficiency Improvement Scheme (EEIS) - which imposes demand side energy saving obligations on major energy retailers in ACT. While the EEIS does not have an explicit rental focus, it was recognised that its requirement for 25 per cent of savings to be generated among low income households would be likely to see renters as key beneficiaries.

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<sup>13</sup> <http://www.canberratimes.com.au/act-news/lowincome-earners-priced-out-of-rental-market-20140429-37g87.html>

There was also recognition that enforcement of current energy efficiency disclosure requirements would not prove particularly onerous for many landlords – whose properties had been rated previously as a consequence of construction (since 1996) or re-sale (since 1999). Others would need to obtain a rating. Advertising properties as ‘unrated’ was seen as an inferior alternative to an approach that required transparency and comparability for all residential renter properties entering the market.

### Individual meetings

Prior to and in conjunction with the workshops, the **pitt&sherry** team also undertook a range of meetings with stakeholders on an individual basis. Fifteen stakeholders representing community, landlord and tenant groups, energy raters, energy retailers and real estate agents were contacted. Of these, 10 were interviewed. Discussants, additional to those that attended the workshop, included:

- ACT Property Council
- Laurie Paul and Associates
- ACT Institute of Architects
- ACT Property Owners Association
- Homebuyers Inspections, and
- ACT Civil and Administrative Tribunal.

While confidentiality dictates that comments cannot be attributed to individual organisations, in general the concerns and issues discussed echoed those raised in the workshop quite closely. They emphasised:

- tenant interest (and confusion) around energy efficiency
- the poor living conditions and high energy bills faced by low income tenants, and the lack of suitable alternatives
- the need to generate meaningful information around the likely annual energy costs associated with occupying one place versus another
- inconsistency in the rating tools, and their application
- the potential for estate agents to play an expanded support role
- the desirability of proportional, well designed and targeted action in this area.

### ACT government renter survey

The Renter Survey conducted by the ACT government over the September-October 2013 period is also relevant to these themes. It covers responses from 88 tenants and focuses on their experience with energy efficiency in ACT rental properties. Key outcomes of the survey are reproduced in Appendix 2, but headline results include:

- almost 47% of respondents rated the energy efficiency of their rental property as ‘Awful’, while only 16% rated it as being ‘Good’ or better
- 83% stated that they had no idea of the energy efficiency of their rental property prior to moving in
- 86% responded that they would have liked more information on the properties energy efficiency prior to renting it, and

- 70% suggested they would have liked more information on its insulation levels, 67% said they would find information on summer and winter comfort helpful, and 62% said they would appreciate knowledge on its energy efficiency rating (EER).

These outcomes reinforce the desire for better and more reliable information on energy efficiency to assist tenant choice.

### 3.3 Implications for policy development

Stakeholder comments help provide some perspective on the pros and cons of the different policy options. Importantly, there is broad support for action in this area and agreement that more and better information on the inherent energy performance of residential rental properties - and the costs implied by that – would be valuable to tenants. The challenge is to identify the characteristics of a program that could achieve this best.

In assessing program and policy options it is common to review alternatives against a set of criteria that reflect key aspects of ‘performance’. Criteria applied in recent regulation impact (RIS) analyses for the ACT include:

- practicality of implementing and administering the proposed measure
- coverage of the measure (ie. ability to ‘reach’ the target group, and impact others)
- financial costs and benefits to key target groups
- financial costs and benefits to others
- delivery risk and variability (ie. how volatile or uncertain are the pay-offs?)
- stakeholder impacts (eg. landlords, tenants, low income families ,etc).
- affect on competition
- greenhouse gas emission implications
- wider impacts (eg. environmental, health, socio-economic, etc)
- administrative costs for government.

While these are best suited to investigation as part of a full RIS exercise - and the directed quantitative analysis and stakeholder input that that involves, they nevertheless point to a broad set of criteria that can be useful as part of an initial shortlisting process. The elements reflected in the list above can be reconstituted into broad categories of:

- feasibility
- costs, and
- benefits

where the nature, level and particulars of factors falling under each of these criteria is relevant. This coarser set of criteria is consistent with a ‘first pass’ assessment of the pros and cons of potential measures and their suitability for deeper consideration in the context of a potential future Regulatory Impact Statement.

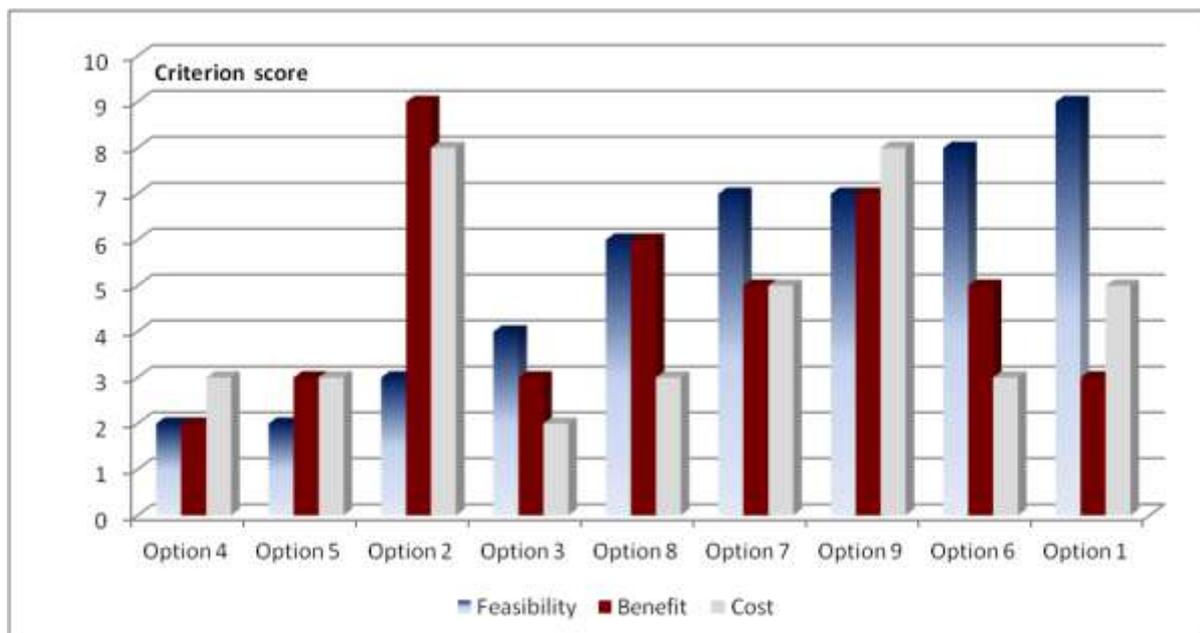
A qualitative assessment of the policy options identified earlier in this report, and presented to workshop participants for feedback, follows. It includes a ‘within category’ rating for each option. This means that, for instance, a ‘moderate’ cost option is thought likely to involve costs around the middle of the spectrum considered. Benefits are rated similarly – and independently. Equating likely costs and likely benefits numerically would require a formal cost-benefit analysis. The ratings are provided to help scale and rank the options.

Table 3.2 High level assessment of policy options (and indicative scores /10)

Policy option	Feasibility	Costs	Benefits	Remarks
<b>1. Enforce current requirement to reveal existing EER, and create database of rated properties</b>	HIGH – no additional regulation required (score = 9/10)	MODERATE – unbudgeted enforcement and admin costs (=5) 3 in figure	LOW – results in partial coverage of properties, described by increasingly out of date EE rating (=3)	Promotes consistency (and tenant & landlord incentives to pursue EE), but has coverage gaps and is hostage to rating tool adequacy
<b>2. Provide ‘benchmarked’ actual energy consumption data for rental properties</b>	LOW – requires legislation and need to address privacy issues (=3)	HIGH – additional impost on energy retailer, landlord & tenants (=8)	HIGH – provides actual cost information on whole of property energy costs & usage (=9)	Privacy issues and new requirements on large energy retailers loom as significant barriers to implementation
<b>3. Greater real estate agent engagement and promotion of energy efficient housing options</b>	MODERATE – take up not guaranteed, assumes cooperation (=4)	LOW – voluntary measure, some additional govt admin reqd (=2)	LOW – expect partial coverage of properties and uncertain delivery outcomes (=3)	Greater engagement could be difficult to achieve, low probability of full & consistent coverage
<b>4. Greater information pooling by tenants on home EE ratings or performance</b>	LOW – requires cooperation across a broad and diverse group (=2)	LOW – voluntary measure, data collection, assembly & hosting required (=3)	LOW – expect partial coverage & mixed data quality (=2)	Requires extensive and altruistic cooperation, and must overcome data consistency and coverage problems . Needs buy-in
<b>5. Coordination between progressive landlords and tenants to promote greater transparency of energy performance</b>	LOW – requires cooperation across a broad and diverse group (=2)	LOW – voluntary measure, data collection, assembly & hosting required (=3)	LOW – expect partial coverage & mixed data quality (3)	Landlord and tenant engagement is a positive (supply vs demand stakeholders), but requires sustained altruistic organisation & input
<b>6. Develop a user-friendly EE tool or checklist for self assessment by tenants</b>	HIGH – can build on existing tools and capabilities (=8)	LOW – voluntary & information based, some costs to govt (=3)	MODERATE – potential for more useful & targeted info than EER. Does not directly support consistency & comparability objectives (=5)	Addresses EER information gaps and tenant needs, does not leave a paper trail that reduces duplication of effort or supports comparability
<b>7. In conjunction with Option 1, require unrated properties to be explicitly advertised as such</b>	MODERATE – requires additional regulation (7)	MODERATE – no extra costs beyond requirements of Option 1 (5)	MODERATE – helps addresses coverage concerns, but uncertainty remains over actual comparability & performance (5)	Helps plug dwelling EE comparability gap, but actual performance still unknown. And information and relevancy problems of EERs not addressed.
<b>8. Require self assessment tools to be provided to tenants for use at the time of inspection</b>	MODERATE – may require additional regulation, or extended estate agent co-operation (=6)	LOW – quasi-voluntary approach that extends the reach of Option 6 (=3)	MODERATE – potential for more useful & targeted info than EER. Does not support consistency & comparability objectives. Potentially greater penetration than Option 6 (=6)	Ensures greater penetration of usable EE info. However info transfer, pooling & comparability (to drive supplier incentives) is weak
<b>9. Require ALL rental properties to have an EER, and reveal this to prospective tenants</b>	MODERATE – required additional regulation (=7)	HIGH – requires additional rating activity, and potential need to re-fresh periodically (=8)	MODERATE – established comparability, but concerns over adequacy of EER tools remain (=7)	Helps ensure consistency & comparability, but does not address info gaps, reliability & relevancy issues in the EER tools themselves

The relative performance of the options, summarised on the basis of their scores, is shown in Figure 3.1. This depicts the options in ascending order of feasibility, and allows some tentative sorting on the basis of relative cost and benefit.

Figure 3.1 Comparison of options against performance criteria



The first issue to note is that Options 4, 5, 2 and 3 score relatively poorly in terms of feasibility. While theoretically worthy of consideration, particularly Option 2 (which envisages a performance benchmarking approach that is refined at a cohort level), these options are likely to suffer from some serious implementation problems - a characteristics that would ultimately affect their costs and benefits.

Discounting on the basis of feasibility would leave Options 8,7,9,6 and 1 in the initial cut. Further short listing then becomes more challenging, recalling that benefits and costs have been estimated qualitatively rather than numerically. A moderate 'cost' (in the range of options considered) *may* turn out to be \$10 million (in net present value terms), whereas a moderate benefit *might* be \$50 million. Nevertheless, while strict benefit –cost ratios cannot be applied, it is still feasible to compare alternatives on the basis their ability (or likelihood) to deliver similar pay-offs for a lower level of cost.

Option 8 is likely to represent a similar level of cost to Option 6, but a superior level of benefit. And Options 1 and 7, deliver similar or lower levels of benefit to Option 6, but at a considerably higher cost. This suggests a ranking (for further exploration) of 1,7,6 and 8 in ascending order of likely net benefit. But what of Option 9? This option implies both higher costs and higher benefits than other feasible options. The pay-offs from this option also deserve closer scrutiny in a cost-benefit context.

It is also important to look at the deficiencies of the stand alone options. Various options are not mutually exclusive and can be combined to enhance the effectiveness and pay-offs of policy action. The possibility of combining options is discussed in the following section, along with consideration of a staged exploratory approach to policy implementation in this area.

## 4. Moving forward

The foregoing discussion highlights the demand for more reliable and comprehensive information on the energy performance of residential rental properties in the ACT. Tenants reviewing options in rental market put value on energy efficiency information. But their interest is critically dependent on the notion that energy efficiency information is telling them something about the likely annual energy costs associated with living in that particular home. Energy efficiency ratings are most useful when they effectively support this objective, and allow tenants to confidently trade off higher ratings against higher weekly rental costs. This capability also translates into a market framework in which landlords with better performing properties (that can deliver lower energy costs) can command higher rental prices and properties with poor energy performance will be faced with reduced demand.

### 4.1 Indicative costs and benefits

Analysis of relevant costs and benefits associated with detailed design options is a core aspect of a formal RIS process. As a prelude to that, it is possible to outline some calculations that provide a broad indication of the magnitude of the costs and benefits likely to be involved if policies are developed that make substantial inroads into the lack of transparency and comparability that is reducing tenants' ability to reliably identify energy efficiency housing, and landlords' incentive to provide it. Some simple calculations help to identify the 'size of the prize' in this area.

As indicated earlier, we know that in 2011 there were around 39,474 residential rental properties in the ACT.

Assuming that around 40% of these are turned over in a single year, a mandatory energy efficiency disclosure requirement would apply to around 15,790 of them. (Published analysis of bond refunds from the Victorian Residential Tenancies Bond Authority, indicates a quarterly turnover rate of around 9.5% in Melbourne and 10.5% in regional areas – June quarter 2011, Rental Report).

Further, if we assume (very conservatively) that 95% of them were constructed prior to 1996 AND 95% of these had never changed ownership since 1999, then 14,250 of these properties would be required to obtain a thermal energy rating.

Based on a cost of \$600 to obtain an energy rating (using a second generation NatHERS rating tool, (ie. a 50% increase on costs associated with a plan based assessment), the disclosure requirement would impose on additional (and one-off) cost of around \$8.55 million on these property owners.

On the upside, all of the properties advertised for rent would now be comparable on the basis of energy efficiency.

Assuming that the extra information drove an increase in the average energy efficiency of newly leased rental properties in the ACT in 2011 from 2 to 2.5 Stars (or alternatively, generated equivalent downward pressure on rents to compensate for poor energy performance) this would result in an NPV of over \$43.13 million (calculated at 7% pa over 30 years). This represents a pay-off ratio of over 5 to 1, and a net benefit from the initiative (in NPV) terms of around \$34.59 million overall.

This calculation is based on the energy mix assumptions underpinning the results in Table 2.1 (in Chapter 2), and will vary according to energy sources and space conditioning technology. However, these assumptions are not unrealistic for rental properties, and the pay-offs do not account for other energy savings that might be stimulated by the disclosure and assessment tools envisaged which would highlight efficiency opportunities in areas such as water heating and lighting, as well as behavioural measures. However, as highlighted previously, the value of energy savings will not always be realised as substantially lower energy consumption of lower energy expenditures. Some households – particularly those in very poor housing conditions – can be expected to respond to cheaper heating or cooling by buying more of it, thereby ‘spending’ some of their saving on a more comfortable home environment. Nevertheless, the welfare enhancing pay-offs of energy efficiency – and hence economic credentials of the proposal – stand.

Importantly, with growth in the ACT rental stock and the increasing population of post-1996 housing, the population of unrated housing can be expected to shrink progressively over time, while the benefits of transparency and comparability of energy efficiency would be ongoing. But even if a drastically truncated pay-off horizon is adopted (as might be the case for an individual tenancy subject to a new lease in the first year of operation of the scheme), the economics of the proposed measure are still reasonable. With an outlook of only 3 years, the NPV of energy savings would be around \$6.94 million, and at 5 years it is \$7.95 million. The policy ‘breaks even’ after around 6 years of savings accumulate to offset the additional rating costs. Social and environmental benefits would be additional to these calculated savings.

This represents a strong prima facie case for policy options that are consistent, structural and have a wide reach. A case can be made for a regulatory option in this mix.

However, optimal policy design would involve a process of ‘fine tuning’ aimed at maximising the net benefit to the community from government regulation and other measures and would also take account of the administrative costs associated with any new measures. Priority issues that must be addressed are the:

1. cost and coverage of energy rating tools, which can represent an outlay of several hundred dollars for professional advice and currently omit the efficiency of energy using fixtures and information for tenants on likely annual energy costs;
2. prospect that second generation NatHERS tools are less suited to a ‘walk through’ energy inspection and rating calculation. Significant investment is likely to be required to bring the suitability of these tools for use on pre-existing structures into alignment with generation tools being used to assess residential housing offered for sale in the ACT (and where EE ratings are considered to have a shelf life of 5 years);
3. need to account for the timeliness of action and the costs to government and other stakeholders in developing new tools and regulations – and in ensuring compliance with any new rules that are agreed;
4. need to address the immediate and ongoing requirement of tenants for better information to support better decisions, and also create greater transparency and comparability around the energy performance of housing in the rental market as an incentive for landlords to increase investment in this area;
5. need to consider the social impact (particularly on low income families) of the combined incentives for more energy efficient housing, downward price pressure on less efficient housing (with higher running costs) and the potential for reduced housing numbers at the bottom end of

the market (if landlords of the worst performing residences decide to upgrade their tenancies, or bring forward demolition in response to the increased transparency and potential costs)

## 4.2 Recommended actions

The following actions are recommended for further consideration by policymakers as part of a package of measures designed to improve the ability of tenants to discern and demand greater energy efficiency in residential rental properties in the ACT (or seek lower rents for accommodation offering higher energy costs), and reward landlords that effectively respond to these demands.

### **NEAR TERM PRIORITIES (within the next 12-18 months)**

#### **1. Develop checklists and tools that can be used by tenants to make their own assessment of the energy efficiency (and consumption characteristics) of rental properties**

The tool should cover energy using appliances such as water heaters, space heating/ cooling etc - that can be readily inspected by the tenant in a walk through and which are subject to MEPS labelling. Using these ratings to indicate likely impacts and contributions to the monthly or annual electricity bill (based on family size and floor space) will be important – perhaps using a web-based tool. The LJ Hooker ‘Liveability’ initiative would be complementary to this, and helps distinguish properties on the basis of their energy performance characteristics. This is a low cost step toward promoting energy efficiency transparency and preferences for more efficient accommodation in the rental market.

#### **2. Engage with ACT real estate agents and peak bodies to promote the use of the self assessment tool among property seekers, noting a mandatory requirement for training and client guidance as a fall back option**

The LJ Hooker ‘Liveability’ initiative provides an example of good practice and innovation in this area, that can be built on. Vendors and landlords of efficient housing should be encouraged to promote these attributes and rewarded in the marketplace. The proposed self-assessment tool is relevant to both buyers and renters, and a much needed supplement to the energy efficiency ratings (EERs) which are mandated for all home sales in the ACT. As noted, these focus solely on the thermal energy efficiency attributes of the building shell and hence provide a seriously incomplete indication of whole-of-building performance. This deficiency extends to their lack of focus on the energy consumption or expenditure likely to be associated with normal occupancy of a building over the course of a year.

#### **3. Support certification of energy assessors to ensure reliability and comparability of ratings**

The performance of energy assessors can play a critical design role in delivering improved building energy performance. While the ACT already requires all energy assessors to be licenced, the planned introduction of a Certificate 4 level training requirement for energy assessors in 2015 provides a context for improved assessor performance and certification in future and an appropriate basis for moving toward greater use of 2<sup>nd</sup> generation NatHERS tools in the assessment of existing buildings. The ACT should maintain its requirement all energy assessors be appropriately qualified and expert in the use of the approved rating tools. Reliable, consistent, meaningful and comparable energy ratings are essential for ‘labelling’ initiatives such as this to work effectively. Failure to ensure this risks the spread of poor practice and ‘misinformation’ which can quickly erode the fundamental aims of the program.

**4. Review real estate agent support for the tenant energy efficiency checklist initiative, and mandate training and support as appropriate**

Voluntary participation programs can be difficult to sustain at effective levels, particularly where individual contributors cannot capture major individual benefit. If voluntary engagement and support falters, mandated requirements applying to all relevant parties can be necessary.

**MEDIUM TERM PRIORITIES (within the next 2-4 years)**

**5. Following consolidation of an effective self assessment tools package (as described above), mandate the disclosure of EE ratings for ALL properties entering the rental market, and enforce existing regulatory requirements. Ratings would be authoritative and comprehensive, integrating robust findings from the EER and self assessment tools.**

This recommendation requires enforcement of current legislation requiring pre-existing energy ratings to be disclosed when residential rental properties are advertised, and extension to include unrated properties to acquire a rating. This would imply a modest once-off cost to currently unrated properties entering the ACT rental market (largely focused on properties built before 1996 that have not been re-sold in the period since 1999). This step is important to establishing the dynamics for an effective market for residential energy efficiency. It promotes the availability and transparency of objective and comprehensive information on energy efficiency (including on ceiling and wall insulation and other design features) between buyers and sellers.

**6. Move to phase out FirstRate 4 in favour of second generation NatHERS tools, in conjunction with national action to extend the suitability of these tools for assessment of established structures.**

A comprehensive approach to mandatory disclosure in the ACT requires convergence of consumer appreciation of the information conveyed by energy ratings for new and existing dwellings. This can only be achieved with AccuRate or other second generation rating tools which have the capability to reliably rate newly constructed homes and those designed to achieve even higher efficiency levels. This is the only way the market can fully value energy performance beyond 6-stars. On a more practical basis, FirstRate 4 is no longer technically supported nor available on the market, and training and accreditation in its use is not available under NatHERS, though the ACT does provide an alternative pathway. With a 6-star energy rating as the current construction minimum standard – and the ready capability to supply new units and apartments that easily exceed that, FirstRate 4 has essentially reached its use-by date. However, the technical needs of the second generation tools are an issue. Currently, they do not lend themselves to a ‘walk through’ assessment, and this increases costs. The future extension and improvement of the second generation NatHERS tools, aimed at making them more useful and relevant to renter and purchaser needs, is an issue that the ACT is well placed to lead on in discussions between Australian governments.

## Appendix 1

### Experience with energy performance disclosure programs



## Experience with energy performance disclosure programs

Under policies supported by the Council of Australian Governments, a national energy performance disclosure scheme for commercial buildings was introduced in 2011. The ACT remains the only Australian jurisdiction that requires energy performance disclosure for residential dwellings, and was a world leader in introducing this policy. Examples of programs requiring energy efficiency disclosure for residential rental properties are rare in Australia but are more common overseas. A number of self-rating tools that can be used by buyers, renters or occupiers are also available.

A study of the impact of the EER system on prices in the **ACT property market** was undertaken by the Australian Bureau of Statistics (ABS) in 2008. The ABS analysis focused on detached houses constructed prior to 1996 (when whole-of-home energy efficiency standards were introduced) and sold in the ACT in 2005 and 2006.<sup>14</sup> The sample comprised over 5000 houses with EERs in the range of 0–6 stars, and an average EER of 1.7.

The study found that when other key characteristics were controlled for (e.g. location, number of bedrooms, etc.) the EER star rating for a house was found to be a (statistically) significant factor in ‘explaining’ observed differences in house prices. It concluded that:

...holding all other house characteristics constant, for a detached house in ACT in 2005 with a price value of \$365,000 (i.e. median price), increasing the EER star rating by 0.5 would be associated with an additional \$4489 in its price...

...consumers who know little about EER may add a value of between 0.5 and 1 percent of the house price if the EER is disclosed to them when buying a house. In contrast, for a consumer with a comprehensive knowledge of strategies to improve the thermal performance of a home (e.g. a builder), EER disclosure may not be significantly associated with increased house price, as any value associated with EER may have already been added to the house price. (p. 25)<sup>9</sup>

However, the value that renters might attribute to energy efficiency information is a different question. They are not making a long-term commitment to the property, and can generally reverse their property choice more quickly and cheaply than a home buyer. On the other hand, information that can help them estimate or rate the likely day-to-day running costs of a property could be more important to them - given that they do not have a strong interest in potential future maintenance costs or capital expenditures.

In **Queensland** between January 2010 and June 2012 a sustainability declaration was required when selling a residential property—termination of the program was an election commitment in 2012. The declaration covered 19 energy and water issues, with examples of potential savings in electricity costs and water. The declaration needed to be signed and provided if requested. Most of the questions were very simple and involved ticking a box if an obvious feature were present. Though opposed by the real estate industry, an independent survey in December 2010

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<sup>14</sup> ABS 2008, *Energy efficiency rating and house price in the ACT*, ABS Analytical Services Branch for the Department of the Environment, Water, Heritage and the Arts, Canberra.

commissioned by the government indicated degrees of community support from both buyers and sellers for the usefulness of the declaration.

**New Zealand** currently has an online sustainability rating scheme (Homestar™), that can be undertaken on a self-assessment basis, with support (Homecoach assessment), or independently by a fully accredited professional (certified assessment).<sup>15</sup> Energy is one of six items reported against, and contributes 25% of the total rating score.

The **European Union** (EU) implemented the Energy Performance of Buildings Directive (EPBD) in 2003, which required all member countries to develop national energy performance certificates (EPC) for all residential dwelling (and other buildings) by 2009. The EPC must be made available, when buildings are constructed, sold or rented, to the owner, buyer or tenant, respectively. While the direct goal of EPC is to reduce CO<sub>2</sub> emissions, intermediate objectives include increasing the rate and level of energy performance improvements through improved understanding of options, and increasing the market capitalisation of energy efficiency investments by providing reliable and trusted information to market participants.

The **Netherlands** introduced EPC in 2008 (ahead of the EU requirement), and a study was undertaken of some 177,000 housing transactions between January 2008 and August 2009.<sup>16</sup> The EPC is not fully mandatory in the Netherlands as buyers are able to sign a declaration that obviates the seller's obligation to certify the dwelling. In the first three months, some 25% of transactions had an energy label, but this had declined to less than 10% by the end of the study period. The decline was attributed to negative sentiment created by the main real estate industry bodies. The study concluded that the opt-out provisions eroded the intent of the disclosure legislation as all dwellings needed to have an energy performance label to support meaningful comparison within the residential stock.

The problems with the early design of the program (methodological issues, complaints procedure, issues around accreditation of inspectors and absence of enforcement) have been flagged in a qualitative assessment of the building energy efficiency policy instruments in the Netherlands.<sup>17</sup> A new EPC was introduced in 2010, and there are further plans for an enforcement scheme for disclosure in line with revised EU requirements.

In 2011, a survey of **German** home owners was undertaken to examine the impact of EPCs with the aim of identifying how they had helped buyers to reflect energy efficiency in purchasing decisions.<sup>18</sup> The study was directed at one of the EPC intermediary goals—to increase the market capitalisation of energy efficiency investments by providing reliable information on the energy performance of buildings to potential buyers and tenants.

In Germany, the EPC can be based on an operational rating (past energy consumption of inhabitants) or an asset rating based on building characteristics (i.e. energy modelling). A further regulatory distinction arises between new buildings and existing buildings. The display of EPC is mandatory for new buildings, but for existing buildings it is only required *if* requested by the prospective purchaser or tenant.

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<sup>15</sup> <http://www.homestar.org.nz>

<sup>16</sup> Dirk Brounen and Nils Kok 2011, 'On the economics of energy labels in the housing market', *Journal of Environmental Economics and Management*, 62 (2011), 166–79.

<sup>17</sup> Lorraine Murphy, Frits Meijer and Henk Visscher 2012, 'A qualitative evaluation of policy instruments used to improve energy performance of existing private dwellings in the Netherlands', *Energy Policy*, 45 (2012), 459–68.

<sup>18</sup> Hermann Amecke, 'The impact of energy performance certificates: A survey of German home owners', *Energy Policy*, 46 (2012), 4–14.

For this jurisdiction:

- The conditional requirement was identified as a barrier—some prospective buyers were hesitant to ask for an EPC and risk alienating the seller.
- Despite high awareness of EPCs, effectiveness was reduced in purchase decisions because:
  - EPCs were not helpful in understanding the financial implications of energy efficiency;
  - the legal status of EPCs meant that they were not sought for most buildings; and
  - energy efficiency tends to be a secondary criterion for dwelling decisions—location, price and overall condition are more important.

In the **United Kingdom**, EPCs became mandatory in October 2008 as part of explicit government policies to reduce GHG emissions from the built environment with a focus on the existing stock. A survey of 350 homeowners who purchased properties in the first year of the scheme indicated awareness but highlighted that EPCs and their recommendations were not seen as a priority.<sup>19</sup> As with other EU experience the results indicated that the scheme requires modification to improve understanding of energy efficiency opportunities.

In June 2013, the UK Government published the results of an investigation of the effect of EPC ratings on house prices based on 325,950 dwellings sold between 1995 and 2011.<sup>20</sup> Like the ACT study, the results indicate a positive relationship between energy rating and selling price, with higher ratings tending to boost market valuations.

A new law is to be introduced requiring a minimum energy efficiency standard for rental houses from 2018, with measures from 2016 to allow councils and tenants to demand efficiency measures from landlords.<sup>21</sup> The UK government has also introduced a range of programs to fund energy efficiency (e.g. *Green Deal*, a ‘pay-as-you-save’ funding mechanism), including programs specific to landlords (Landlord Energy Savings Allowance, reduced VAT for energy efficiency improvements).

In the **USA** there is no equivalent to the EU approach, but all states to a greater or lesser extent have minimum energy performance standards for new dwellings. A recent study of the **Californian** housing market explored the value that can be ascribed to the voluntary disclosure of ‘green’ labels.<sup>22</sup>

Californian dwellings with green labels were compared with a sample of 1.6 million non-certified dwellings, controlling for geographic location and time of the sale. The analysis showed a 9% price premium (~US\$35,000) for green homes. The voluntary nature of green labels could also be expected to result in ‘self-selection’ of a premium housing stock. Nevertheless, the study demonstrates the common alignment of construction quality, capital value and energy efficiency—and the preparedness of the market to recognise these qualities in its valuations.

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<sup>19</sup> Watts, C, Jentsch, MF and James, PAB 2011, *Implications of energy performance certificates for the UK domestic building stock – Feedback from Southampton homeowner survey*, CIBSE Technical Symposium, DeMonfort University, Leicester, UK, September 2011.

<sup>20</sup> Franz Fuerst, Pat McAllister, Anupam Nanda and Peter Wyatt 2013, *Final project report – An investigation of the effect of EPC ratings on house prices*, Department of Energy and Climate Change, June 2013.

<sup>21</sup> British Property Federation 2013, *Energy efficiency and the private rented sector*, British Property Federation, April 2013.

<sup>22</sup> Nils Kok and Matthew Kahn 2012, *The value of green labels in the California housing market*, UCLA Institute of the Environment and Sustainability Los Angeles, California, 2012.

### ***Key observations***

Experience with energy performance disclosure programs suggests that:

- residential energy ratings and assessments can make the value of energy efficiency more transparent;
- improved energy performance is recognised in the market valuation of dwellings— although the value of ratings and disclosure (as distinct from the value of the energy efficiency investments and capital improvements themselves) is harder to discern;
- energy ratings and assessments are most influential when they are understood, trusted and supported by all stakeholders;
- the benefits of disclosure are maximised when all dwellings in sales and rental markets are assessed and their relative performance can be compared.
- 



## Appendix 2

### ACT Renter Survey on Energy Efficiency September – October 2013



A survey regarding rental experiences in the ACT was circulated to the general community, using stakeholder networks, Time to Talk and social media. The survey question and summary of the 88 responses is provided below.

## Survey Questions

The ACT Government wants to hear about your experiences as a renter in the ACT to inform future action on energy efficiency in rental properties.

### Questions

Thinking about a home you have rented in the ACT, please answer the following questions:

1. What suburb was it in?
2. How old were you when you rented it?
3. What type of rental was it?
  - i. Bedsit/granny flat
  - ii. Unit
  - iii. Townhouse
  - iv. House
  - v. Other (please specify)
4. Rate it in terms of its energy efficiency:
  - i. Amazing
  - ii. Good
  - iii. Passable
  - iv. Awful
5. Did you know how energy efficient (or inefficient) it was before you rented it?
6. Would you have liked more information about the efficiency of that property before you rented it?
  - a. If YES: What information would have been helpful?
    - i. Air leaks
    - ii. Water heater
    - iii. Insulation levels
    - iv. Solar access
    - v. Heating and cooling
    - vi. Fixed appliance efficiency
    - vii. The Energy Efficiency Rating (EER)
    - viii. Lighting

- ix. Comfort in summer and winter
- x. How to improve the energy efficiency/reduce bills
- xi. Other (Please specify)

7. Are there any other comments you would like to make about energy efficiency in ACT rental properties?

## Survey Results

There were 88 respondents to the survey.

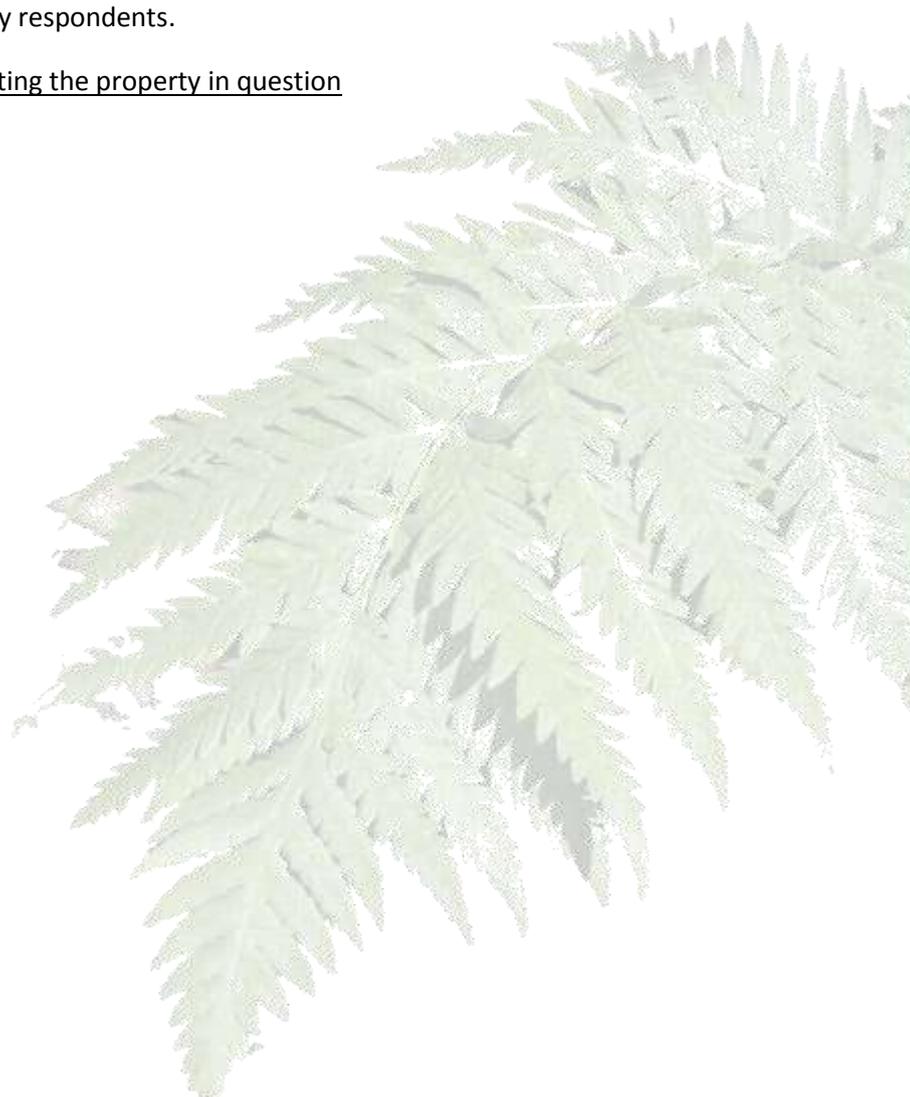
45 Suburbs across the ACT were covered by respondents.

### Proportion of age of respondent when renting the property in question

0 - 17	0%
18 - 24	29%
25 - 29	26%
30 - 34	16%
35 - 39	10%
40 - 44	6%
45 - 49	6%
50 - 54	3%
55 - 59	1%
60 - 64	0%
65 - 67	2%
67+	0%

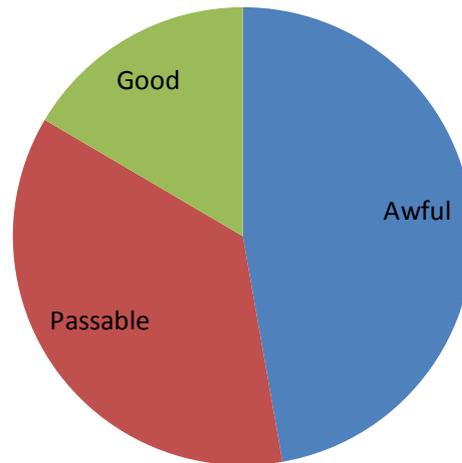
### Type of rental

House	41%
Townhouse	30%
Unit/Apartment	24%
Other	3%
Bedsit/granny flat	2%



Respondent's rating of the property's energy efficiency

Awful	47%
Passable	36%
Good	16%
Amazing	0%



Respondent's awareness of the property's energy efficiency before renting the property

Aware	17%
Not Aware	83%

Would you have liked more information about the efficiency of that property before you rented it?

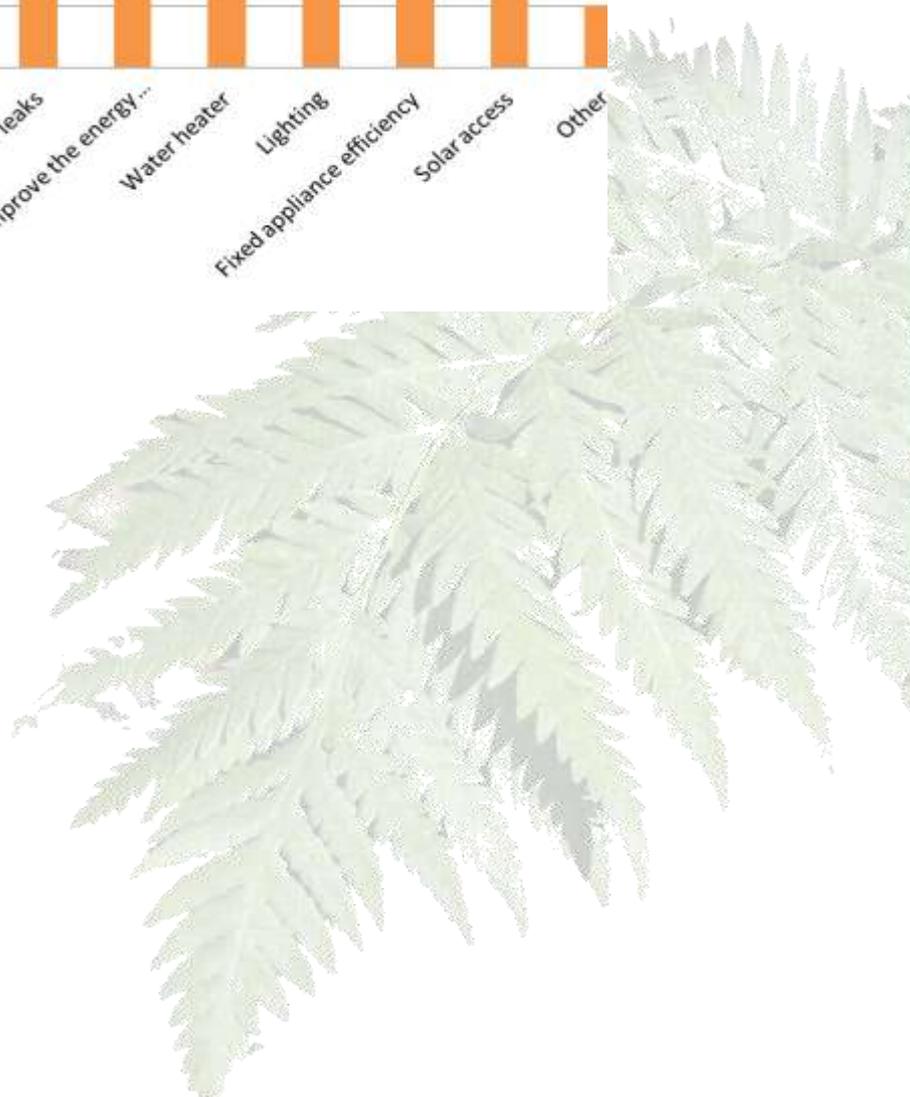
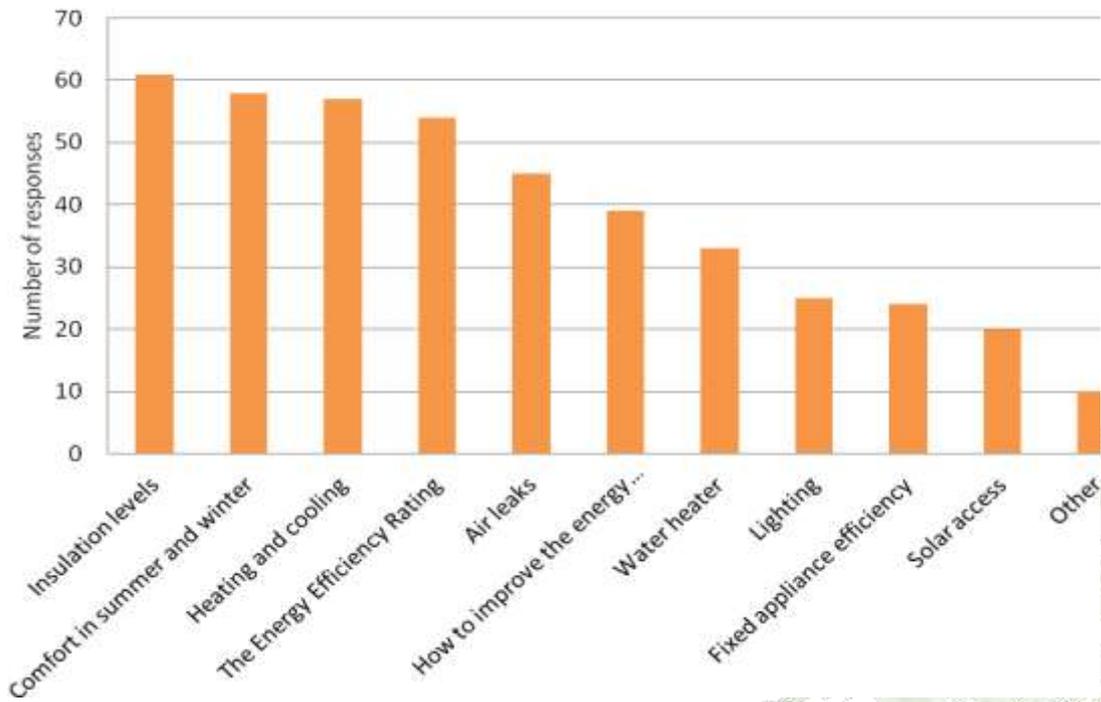
Yes	86%
No	14%

- Respondents who weren't aware of the efficiency of the property and would have liked more information: 86%
- Respondents who were aware of the efficiency of the property, but also would have liked more information: 93%

Proportion of respondents would have found more information on the following helpful:

Insulation levels	70%
Comfort in summer and winter	67%
Heating and cooling	66%
The Energy Efficiency Rating	62%
Air leaks	52%
How to improve energy efficiency/reduce bills	45%
Water heater	38%
Lighting	29%
Fixed appliance efficiency	28%
Solar access	23%
Other	11%

### What further information would have been helpful?



transport | community | industrial | carbon & energy



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