



LEGISLATIVE ASSEMBLY

FOR THE AUSTRALIAN CAPITAL TERRITORY

QON No. 6

STANDING COMMITTEE ON ENVIRONMENT AND TRANSPORT AND CITY SERVICES
TARA CHEYNÉ MLA (CHAIR), CANDICE BURCH MLA (DEPUTY CHAIR), JAMES MILLIGAN MLA

Inquiry into referred 2018–19 Annual and Financial Reports ANSWER TO QUESTION ON NOTICE

Asked by **MS ELIZABETH KIKKERT:**

In relation to: The ACT Government's climate change action plan

1. The current ACT Government's Climate Change Strategy includes 'phasing out new and existing gas connections' and 'replacing gas household appliances with electric alternatives'. I have spoken with a constituent who relies on natural gas appliances for heating, cooking and hot water. He has obtained quotes on replacing all current household appliances with energy-efficient electric alternatives, and the total was close to \$25,000. According to the models that you are using, what is the predicted cost overall and per household associated with making this switch?
2. What specific schemes are you considering to alleviate the financial burden of replacing natural gas household appliances?
3. What will be the cost to the territory of these schemes?
4. Is it the intention that these schemes be means tested or limited to certain households in any way? If so, how will this operate?
5. The strategy specifically mentions the use of heat pump water heating systems as replacements for gas systems. Sustainability Victoria states that 'Heat-pump water heaters ... are not well suited to cool climates – especially where frosts occur regularly. In cooler climates, the compressor will run for longer periods, which can result in greater energy consumption and a shorter life expectancy for the pump'. Elgas likewise notes that 'Heat pump water heaters in cold climates pose special problems. Heat pumps are usually a poor choice because they extract heat from the ambient air, making their effectiveness marginal in a cold climate'. What data or expert opinions do you have that support the use of heat pump water heating in Canberra's climate?

MINISTER RATTENBURY: The answer to the Member's question is as follows:—

1. The *ACT Climate Change Strategy 2019-2025* (the Strategy) includes an action to develop a plan for achieving zero emissions from natural gas use in the ACT by 2045. Importantly, the Strategy does not seek to ban natural gas use, but to instead encourage consumers to look for efficient options when existing appliances reach the end of their life. Importantly, a longer time frame has been set to ensure consumers who are unable to transition away from natural gas in the short-term are not disadvantaged.

ACT consumers are not being asked to transition to all-electric households immediately if that is not practical for them. The best time for a household to make the switch may be when they are ready to replace existing appliances or are doing renovations. Given this, it should mean little or no additional financial burden on households. Households shifting to all-electric will also benefit from cost savings through reduced utility connection charges.

2. In support of the Strategy, the ACT Government's Energy Efficiency Improvement Scheme (EEIS) has been expanded to include activities that reduce natural gas use, to reduce emissions and cut energy bills. The EEIS incentivises a transition from natural gas to efficient electric heating and hot water systems. As a result of the energy saving obligations created by the EEIS, new rebates of up to \$5,000 are now being offered by ActewAGL to encourage households to replace their central ducted gas heating with more efficient central electric reverse cycle air conditioner.
3. The EEIS has been in operation since 2012. It requires electricity retailers to achieve energy savings in households and small-to-medium enterprises. The Scheme is costing ACT households an average of 57c per week through their electricity bills. However, over the lifetime of products installed, households and businesses will save around \$400 million, with average weekly savings of \$6 for households and \$96 for businesses.
4. As part of the EEIS, electricity retailers must ensure that at least 1 in 5 Canberra households taking part are low-income households. The Scheme has so far supported some 19,000 low income priority households and 16,000 rental properties to achieve greater energy efficiency. The obligation to deliver energy savings in low income households will be increased to almost 1 in 3 households (30%) in 2020, ensuring that around 400 additional low-income households will benefit from energy efficiency measures.
5. Performance of electric heat pumps decreases at sub-zero temperatures, however, improvements to this technology over the last decade mean that they are suitable for Canberra's climate. The Australian Government's Heat Pump Water Heater Guide for Households¹ states that "heat pump water heaters generally perform most efficiently in warmer climates" but that "some heat pump water heaters are designed to perform efficiently in cold climates" and the document provides guidance on choosing an appropriate model. Harvest Hot Water², in discussing the specific situation in Canberra, notes that "the Clean Energy Regulator's 2017 register of heat pump water heaters listed 171 models which had passed the testing and modelling requirements for cold climate operation." EPSDD contacted Sustainability Victoria about their comments on the suitability of heat pumps in cold climates. Sustainability Victoria noted that some information on their website is several years old, and there are many heat pump models suitable for climates that receive frosts. Manufacturers' performance specifications will help in selecting an appropriate unit.

Heating units can be set to operate during daylight hours when they are at their most efficient. Confidence in the operation of these systems in the ACT is strong. For example, they are currently being offered by ActewAGL to its customers under the EEIS.

¹ http://www.energyrating.gov.au/sites/new.energyrating/files/documents/HeatPumpWaterHeaterGuide_toWeb_0.pdf

² <https://harvesthotwater.com.au/do-heat-pumps-work-in-canberra/>

Electric heating and hot water technology is becoming increasingly efficient, so electric appliances have lower running costs than their gas-powered counterparts. An all-electric approach can therefore reduce the cost of building homes in new suburbs, as it avoids the construction of new natural gas infrastructure.

Approved for circulation to the Standing Committee on Environment and Transport and City Services

Signature:



Date:

10/12/19

By the Minister for Climate Change and Sustainability, Shane Rattenbury MLA

