



STANDING COMMITTEE ON ENVIRONMENT, CLIMATE CHANGE AND BIODIVERSITY
MARISA PATERSON MLA (CHAIR), ANDREW BRADDOCK MLA (DEPUTY CHAIR), LEANNE CASTLEY MLA

Inquiry into referred 2019–20 Annual and Financial Reports and Budget Estimates 2020-21
ANSWER TO QUESTION ON NOTICE

Asked by **ELIZABETH LEE**

In relation to: The Parliamentary Agreement under “Next steps on climate action”

Phase out of fossil-fuel gas:

1. What are the ACT’s biggest gas emitting assets? Please list each of them by emissions.
2. What consultations have been held with owners of gas emitting assets?
Were all asset owners consulted? If not, who was not consulted and why were they not consulted?
3. The Parliamentary Agreement suggests the Government will “*progress a project with relevant asset owners and key stakeholders to reduce the emissions intensity of the existing ACT gas network as much as possible by injecting zero emissions gas alternatives*”.

Who are the “key stakeholders” as referenced in the Parliamentary Agreement?
 - a. Are all households with gas appliances and commercial users included in discussions and/or projects?
 - b. If not, why not?
4. What projects have been started or are under consideration?
 - a. If not yet started, when will they be?
5. What will the \$855,000 initial funding to support phasing out fossil fuel be spent on? Please list each item.
 - a. What calculations were made to determine this amount? Please provide a copy.
 - a. If no calculations made, why not?
6. What zero emissions gas alternatives are being considered? Please list.
 - a. If none yet considered, when will they be?
7. Have any of these alternatives been costed?
 - a. If not, when will they be?
- 8.. Can you give examples of where in Australia or elsewhere these alternatives have been affordable and reliable?
9. How many gas users, domestic and commercial, are there in the ACT?



STANDING COMMITTEE ON ENVIRONMENT, CLIMATE CHANGE AND BIODIVERSITY
MARISA PATERSON MLA (CHAIR), ANDREW BRADDOCK MLA (DEPUTY CHAIR), LEANNE CASTLEY MLA

10. Has an indicative date been set to outlaw the sale of gas appliances in the ACT?
 - a. If not yet, when will one be set?
 - b. What lead time will households and retailers have for this transition?
 - c. What assistance or incentives will be provided to encourage this transition?
 - d. If no incentives, why not?

11. Has any assessment or modelling been done of the increased electricity demand as a result of new all electric housing developments, increased electric transport and the phasing out of gas appliances?
 - a. If so, by whom?
 - b. What was the outcome?
 - c. Will there be sufficient additional capacity to meet the demand?
 - d. If not, how will energy shortfalls be managed?
 - e. What alternative energy sources might be accessed to ensure continuity of energy?

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

1. **What are the ACT's biggest gas emitting assets? Please list each of them by emissions.**

Facility level emissions are commercial in confidence under National Greenhouse and Energy Reporting scheme, established by the *National Greenhouse and Energy Reporting Act 2007 (C'wth)*.

2. **What consultations have been held with owners of gas emitting assets? Were all asset owners consulted? If not, who was not consulted and why were they not consulted?**

See question 1. The ACT Government regularly consults with a range of energy users, and is working with ACT Government organisations that are significant gas users. Consultation will be an important part of future policy work on the gas transition.

3. **The Parliamentary Agreement suggests the Government will “progress a project with relevant asset owners and key stakeholders to reduce the emissions intensity of the existing ACT gas network as much as possible by injecting zero emissions gas alternatives”.**

Who are the “key stakeholders” as referenced in the Parliamentary Agreement?

- a. Are all households with gas appliances and commercial users included in discussions and/or projects?
- b. If not, why not?

In response to the commitment in the Parliamentary and Governing Agreement, the ACT Government is in the early phases of developing a gas transition plan that considers, amongst other things, energy grid stability. The considerations required for this project will be included in the development of the plan.



STANDING COMMITTEE ON ENVIRONMENT, CLIMATE CHANGE AND BIODIVERSITY
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4. What projects have been started or are under consideration?
a. If not yet started, when will they be?

See response to 3 above. Projects and appropriate timing will be identified in the work being conducted to inform and develop a gas transition plan.

5. What will the \$855,000 initial funding to support phasing out fossil fuel be spent on? Please list each item.
a. What calculations were made to determine this amount? Please provide a copy.
a. If no calculations made, why not?

The \$855,000 is for a four-year period, to undertake the work required to develop a gas transition plan and includes:

- One policy officer (ASO6 level) until 2024.
- \$150,000 has been allocated for technical consultancies in 2020/21
- \$250,000 has been allocated for technical consultancies in 2021/22

6. What zero emissions gas alternatives are being considered? Please list.
a. If none yet considered, when will they be?

The development of the gas transition plan will include consideration of the viability, cost, network and consumer impacts of green gas alternatives (hydrogen and biomethane) as well as all-electric options.

7. Have any of these alternatives been costed?
a. If not, when will they be?

As identified in part 5, the government has provided funding to develop more detailed technical and economic modelling and gas transition pathway scenario analysis.

8. Can you give examples of where in Australia or elsewhere these alternatives have been affordable and reliable?

In terms of electrification, there are already numerous examples of cost-effective switching from gas to electric for heating and cooling, hot water and cooking. The Government has recently opened its first all-electric office building in Dickson, its first all-electric school in Gungahlin, and announced that the new Canberra Hospital extension will be all-electric. The government is also supporting an ARENA-funded trial of vehicle-to-grid applications for Electric Vehicles (EVs); this will trial an innovative new source of grid support as well as a potential new source of income for EV owners.

In terms of alternative green gases this is a new and emerging technology space. There are studies and trials currently being conducted within Australia and across the world that are seeking to answer the question of whether green gas is a viable replacement in gas networks, including the availability of necessary feedstocks. Some examples include:



STANDING COMMITTEE ON ENVIRONMENT, CLIMATE CHANGE AND BIODIVERSITY
MARISA PATERSON MLA (CHAIR), ANDREW BRADDOCK MLA (DEPUTY CHAIR), LEANNE CASTLEY MLA

- The Australian Hydrogen Centre is exploring the feasibility and potential for hydrogen in South Australian and Victorian gas networks. This trial is the recipient of ARENA funding.
- Jemena is conducting a trial of injecting biomethane into the natural gas network in New South Wales. This trial is the recipient of ARENA funding.
- Evoenergy has partnered with the Canberra Institute of Technology to test how 100% hydrogen interacts with network materials, work practices and equipment.
- SGN has received approval to build a world-first 100% green hydrogen-to-homes demonstration network in Fife, Scotland. This trial consists of 300 homes with homes connected to a new, purpose built, hydrogen network from 2022.
- The creation, capture and use of Biomethane in gas networks is well established in Europe. In 2020 there were 729 biomethane plants in Europe and approximately 10% of gas in the European grid is supplied by biomethane.

9. How many gas users, domestic and commercial, are there in the ACT?

There are 130,037 gas customers in the ACT.

This information was sourced from the Australian Energy Regulator, December 2020

10. Has an indicative date been set to outlaw the sale of gas appliances in the ACT?

- a. If not yet, when will one be set?
- b. What lead time will households and retailers have for this transition?
- c. What assistance or incentives will be provided to encourage this transition?
- d. If no incentives, why not?

No.

11. Has any assessment or modelling been done of the increased electricity demand as a result of new all electric housing developments, increased electric transport and the phasing out of gas appliances?

- a. If so, by whom?
- b. What was the outcome?
- c. Will there be sufficient additional capacity to meet the demand?
- d. If not, how will energy shortfalls be managed?
- e. What alternative energy sources might be accessed to ensure continuity of energy?

Some preliminary analysis has been conducted by ACIL Allen on household energy choices and the impact for consumers when replacing gas appliances with electric appliances. An analysis of the current state of Evoenergy's Electricity and Gas Networks was also conducted by AECOM. Additional analysis is required to fully understand the network impacts.

The ACIL Allen report found that the majority of Canberra households modelled would be financially better off if they replaced gas appliances with electric. The Grattan Institute's



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STANDING COMMITTEE ON ENVIRONMENT, CLIMATE CHANGE AND BIODIVERSITY
MARISA PATERSON MLA (CHAIR), ANDREW BRADDOCK MLA (DEPUTY CHAIR), LEANNE CASTLEY MLA

'Flame out' report also found that all-new electric Canberra homes would save approximately \$9,000 over 10 years, compared to a new dual-fuel home.

The AECOM report found that even though currently peak gas use is roughly equivalent to peak electricity use, a full electrification of gas use in the ACT would require only a 40-60% increase in electric capacity. This results from the much higher efficiencies of electric appliances relative to gas. This report also found that the uptake of electric vehicles could enable vehicle to home battery solutions that would reduce peak demand on the electricity network.

The 'Flame Out' report found that the increased demand required to electrify small-user (residential) gas loads in the ACT would be easily met across the NSW generation fleet noting the need for reinforcing the ACT's distribution network.

See response to 7 above.

Approved for circulation to the Standing Committee on Environment, Climate Change and Biodiversity

Signature: *Andrew Barr*

Date: **23.3.21**

By the Minister for Climate Action, Andrew Barr

