



17 April 2023

## **Submission: City of Melbourne Planning Amendment C376**

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure, connecting natural and renewable gas production to demand centres in cities and other locations across Australia. Offering a wide range of services to gas users, retailers and producers, APGA members ensure the safe and reliable delivery of 28 per cent of the end-use energy consumed in Australia and are at the forefront of Australia's renewable gas industry, helping achieve net-zero as quickly and affordably as possible.

APGA welcomes the opportunity to provide comments on the City of Melbourne Planning Amendment C376: Sustainable Building Design. We acknowledge planning schemes can be powerful tools to encourage or enforce 'environmentally sustainable design' to support the transition to net zero greenhouse gas emissions.

APGA supports a net zero emission future for Australia by 2050<sup>1</sup>. Renewable gases represent a real, technically viable approach to lowest-cost energy decarbonisation in Australia. As set out in Gas Vision 2050<sup>2</sup>, APGA sees renewable gases such as hydrogen and biomethane playing a critical role in decarbonising gas use for both wholesale and retail customers. APGA is the largest industry contributor to the Future Fuels CRC<sup>3</sup>, which has over 80 research projects dedicated to leveraging the value of Australia's gas infrastructure to deliver decarbonised energy to homes, businesses, and industry throughout Australia.

### **Supporting decarbonisation through sustainable design**

Of particular interest to APGA within Amendment C376 is Schedule 73 to Clause 43.02 – Design and Development Overlay. Within this, Table 3 notes that a requirement for all development applications is that they *should not incorporate connections to gas services or other non-renewable energy and should incorporate on-side renewable energy generation*. No basis for the inclusion of this requirement has been provided.

APGA understands that while it is not the intention of the LGA to directly ban new gas connections, amending the planning scheme as proposed implies discouragement. This risks energy consumers being worse off in the City of Melbourne where developers choose more costly zero emission energy solutions.

While direct gas use and electricity generated from gas are not zero emissions, both are considerably lower emissions than using the existing coal-fired electricity grid or liquid fuel

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<sup>1</sup> APGA, *Climate Statement*, available at: <https://www.apga.org.au/apga-climate-statement>

<sup>2</sup> APGA, 2020, *Gas Vision 2050*, [https://www.apga.org.au/sites/default/files/uploaded-content/website-content/gasinnovation\\_04.pdf](https://www.apga.org.au/sites/default/files/uploaded-content/website-content/gasinnovation_04.pdf)

<sup>3</sup> Future Fuels CRC: <https://www.futurefuelscrc.com/>

alternatives. Notwithstanding actions by state governments to increase the proportion of renewably generated electricity, gas will be lower emission than electricity for years to come.

Dissuading choices that have lower cost and lower emission outcomes may have unintended cost and emissions consequences for the City of Melbourne. This is especially true as the option of providing access to renewable gas supply is explored through the Victorian Gas Substitution Roadmap. Gas use should therefore be considered *alongside* renewable electricity, especially where the design and scale of commercial and high-density residential buildings makes it infeasible to satisfy all of their energy needs from on-site variable renewable generation.

The majority of the buildings in the City of Melbourne are commercial and could readily take advantage of the considerable efficiencies involved with onsite gas heating systems. This is especially true as gas supply is decarbonised through renewable gas uptake. Restricting or disincentivising the choice of new gas connections today may directly increase the cost of residential and commercial energy use in the LGA, with associated consequences.

### **Understanding customer cost**

It is regularly asserted that for households and some commercial users, renewable energy is 'cheaper' than reliance on fossil fuel energy, especially in terms of heating systems. Generally this relies on the cost effectiveness or efficiency of individual components of energy supply chains, and fails to take into account the total cost of those supply chains to the customer.

In 2022, APGA undertook a study<sup>4</sup> to examine the costs of these supply chains to providing heat to household consumers. This study considered all aspects upstream of the purpose for which a customer is using energy – including the cost of the appliance, the cost of the energy used, and the efficiency of the appliance using this energy.

While this study currently only considers data for freestanding homes which use gas today in Victoria, there are applicable lessons across other sectors, including commercial and high-density residential.

Despite electric appliances having vastly greater energy efficiency within this example, the renewable gas pathway displayed comparable economic efficiency to the renewable electricity pathways for gas use decarbonisation in the home. This means that gas use decarbonisation for these customers is cost competitive whether achieved via renewable gas or renewable electricity uptake. We would like to see this analysis undertaken for commercial energy customers in the City of Melbourne region.

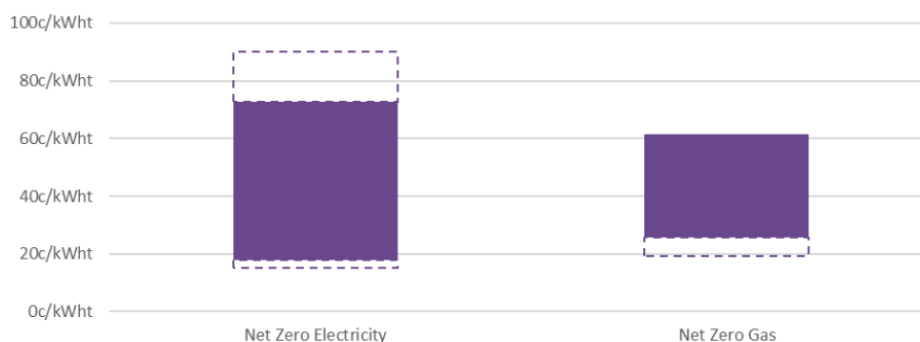
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<sup>4</sup> APGA, 2022, *Supply chain analysis methodology for total customer cost*, [https://www.apga.org.au/sites/default/files/uploaded-content/website-content/supply\\_chain\\_analysis\\_methodology\\_for\\_total\\_customer\\_cost\\_-\\_final.pdf](https://www.apga.org.au/sites/default/files/uploaded-content/website-content/supply_chain_analysis_methodology_for_total_customer_cost_-_final.pdf)

Study summary:

<https://www.apga.org.au/sites/default/files/uploaded-content/website-content/supplychainv5.pdf>

Figure 1: Customer cost of heat in the home, FY2020-21, for a freestanding house in Victoria.



Source: APGA, 2022, *Supply chain analysis methodology for total customer cost*

Figure 1 displays study results for customer cost of zero emission heat in the home for freestanding homes in Victoria which currently using gas for heat, founded upon 2020-21 financial year price data. The solid bars display the ranges of total customer cost of heat, including retail energy and appliance costs in a net zero energy future, and include sensitivities (dotted bars).

As demonstrated in Figure 1, retail net zero gas is cost-competitive with (and can be cheaper than) retail net zero electricity for heating free standing homes in Victoria which use gas appliances today. This makes renewable gases a viable, cost-efficient option for gas use decarbonisation, even where it may not be the most energy efficient option.

### Current energy efficiency rating tools

In addition to the requirements around gas connections, Amendment C376 includes a minimum mandatory requirement that all new developments must achieve minimum scores in the City of Melbourne’s Green Factor Tool, and minimum BESS, NatHERS or NABERS ratings for building sustainability, depending on development size. Development applications must achieve a certain number of ‘points’ on one of these scales to qualify for approval.

NABERS and other schemes are based upon the National Construction Code, which with respect to sustainability, intends to regulate to discourage energy inefficient building design and therefore reduce emissions.

Unfortunately, as designed, the National Construction Code actually acts to incentivise higher emission electric homes over lower emissions gas homes. In our response to the consultation process on reforms to the National Construction Code 2022 (NCC2022)<sup>5</sup>, APGA identified that the energy efficiency requirements for residential buildings would, in fact, incentivise higher emission households (Table 1).

<sup>5</sup> APGA, 2021, *Submission: National Construction Code 2022 public comment draft (stage 2) consultation*,

[https://www.apga.org.au/sites/default/files/uploaded-content/field\\_f\\_content\\_file/211015\\_apga\\_submission\\_-\\_ncc\\_public\\_comment\\_draft\\_stage\\_2\\_consultation.pdf](https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/211015_apga_submission_-_ncc_public_comment_draft_stage_2_consultation.pdf)

APGA, 2021, *Submission: National Construction Code 2022 Consultation Regulation Impact Statement*, [https://www.apga.org.au/sites/default/files/uploaded-content/field\\_f\\_content\\_file/211109\\_apga\\_submission\\_-\\_ncc2022\\_cris.pdf](https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/211109_apga_submission_-_ncc2022_cris.pdf)

Table 1: Comparison of <6 Star Gas Home and <2.5 Star Heat Pump Home (VIC6, EF\*\* = 2.320)

Home Appliance Composition	NCC 2022 <u>EE*</u> Rating	Average Efficiency	kgCO2e per kWh Input (2019)	kgCO2e per kWh Heat Output
Heat Pump <2.5 Star	2.057	300%	1.02	0.340
Gas <6 Star	3.223	88%	0.186	0.211

\* EE = Energy Efficiency Rating (lower values encouraged); \*\* EF = regional Energy Factor

Source: APGA, 2021, *Submission: National Construction Code 2022*

Under changes to the NCC2022, the heat pump home is in fact more emissions-intensive than the gas-heated home, but the latter would be required under the Code to install additional solar photovoltaic system to comply with the code because its EE rating of 3.223 is higher than the Victorian region EF factor of 2.320. These figures are hard-coded via undisclosed means within NCC2022 Whole of Home variables set under the scheme. The outcome is considerable additional cost to the consumer with gas appliances which acts as a financial penalty for producing lower emissions.

APGA urges the City of Melbourne to exercise caution when considering building sustainability criteria in its planning scheme where pursuing energy efficiency is the only factor relevant to decarbonisation, particularly when considering rating schemes such as NABERS.

To discuss any of the above feedback further, please contact me on +61 422 057 856 or [jmccollum@apga.org.au](mailto:jmccollum@apga.org.au).

Yours Sincerely,



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