



28 February 2021

### **Submission: State Environmental Planning Policy (Design and Place) 2021**

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure with a focus on high-pressure gas transmission. APGA's members build, own and operate the gas transmission and processing infrastructure connecting natural and renewable gas production around the country to demand centres in cities and elsewhere. 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 contribute to the New South Wales Governments' consultation on State Environmental Planning Policy (Design and Place) 2021 (**SEPP, the Consultation**). APGA recommends the SEPP takes a technology neutral approach to emissions reduction provisions and is concerned that the SEPP undermines the states opportunity to achieve least cost net zero emissions by excluding renewable gases such as hydrogen and biomethane from the options available to decarbonise the built environment.

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 in NSW and across the nation.

There is a significant body of evidence forming around the viability of renewable gases to play a role in the decarbonisation of the built environment in Australia. The NSW Hydrogen Strategy is developed in support of this possibility. The approaches taken within the SEPP and adjacent built environment legislation will actively prevent NSW households from being

---

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

<sup>2</sup> Gas Vision 2050, APGA  
[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 Website  
<https://www.futurefuelscrc.com/>

able to choose their pathway to decarbonisation, regardless of whether renewable electricity or renewable gases are the best options for their circumstances. This outcome can be avoided however with a few minor changes to how the SEPP, BASIX and Apartment Design Guide are drafted.

### **APGA Concerns with the SEPP**

APGA takes particular exception to provision 21.a) of the SEPP which specifies the following:

#### **21 Design consideration—resource efficiency and emissions reduction**

The consent authority must consider whether the development—

- (a) for urban design development involving subdivision—minimises, and excludes as far as practicable, the use of on-site gas for cooking, heating and hot water, and

Such a provision would exclude the potential to utilise renewable gases such as hydrogen and biomethane to decarbonise existing energy use. Such a provision reduces the range of options available to NSW households and businesses to minimise the consumption of non-renewable energy and reduce greenhouse gas emissions. This is despite the stated aim of provision 3.g) and provision 21.c) iii.

### **3 Aims of Policy**

- (1) The aims of this Policy are as follows—
  - (a) to provide a consistent set of principles and considerations to guide the design of the built environment,
  - (b) to ensure high quality and innovative design of the built environment,
  - (c) to create places that support the health and well-being of the community,
  - (d) to integrate good design processes into planning and development,
  - (e) to recognise the economic, environmental, cultural and social benefits of high quality design,
  - (f) to ensure sustainable development and conserve the environment,
  - (g) to minimise the consumption of non-renewable energy and reduce greenhouse gas emissions,
  - (h) to achieve better built form and aesthetics of buildings, streetscapes and public spaces,
  - (i) to recognise the importance of Country to Aboriginal people and to incorporate local Aboriginal knowledge, culture and tradition into development.

#### **21 Design consideration—resource efficiency and emissions reduction**

The consent authority must consider whether the development—

- (c) minimises greenhouse gas emissions, as part of the goal of achieving net zero emissions by 2050, including by incorporating the following—

---

  - (iii) the use of renewable energy, and

Impeding the use of gaseous energy in the built environment, and hence the use of renewable gases in the built environment, is in direct opposition of provision 3.g) and 21.c) iii. of the SEPP.

Impeding the use of renewable gas use in this way also acts against the recently released NSW Hydrogen Strategy which seeks to incentivise gas use decarbonisation through the introduction of a renewable gas target. This progressive, nation leading initiative risks being undermined through provision 21.a) of the SEPP which prevents the uptake of gaseous forms of renewable energy. This does not have to be the case. With an understanding of the decarbonisation potential of renewable gases, minor modifications of provision 21.a) can ensure that the SEPPs negative impact on renewable gas uptake can be avoided.

### **Draft Apartment Design Guide**

APGA notes that the Draft Apartment Design Guideline (ADG) includes similar statements which will impede gas use decarbonisation through renewable gas uptake. The All-electric building design guidance within the Draft ADG can be seen to be biased towards electrification despite renewable gas decarbonisation options being available into the future. Picking technology winners fails to pass the no-regrets regulation test, locking NSW residents into decarbonisation pathways which may not turn out to be least cost.

#### **All-electric building**

Preference electricity as the power source for all energy requirements associated with normal operations.

Consider induction cooktops to reduce overheating of apartments, cooling loads and air pollutants.

Locate heat pumps in a central location to reduce urban heat-island effects.

Similar to the SEPP, simple modifications could be made to the Apartment Design Guide to ensure renewable gases are enabled into the future. Preferencing renewable energy in the above sections, rather than electricity, would help enable a broader range of renewable energy options for energy customers.

### **A technology neutral SEPP would create more value for society**

In seeking to achieve the aims of the SEPP as started in provision 3, APGA wishes to propose that the SEPP take a technology neutral approach to considering energy costs and emissions intensity. APGA notes that it will be much more cost-effective for a household to contract 100% renewable gas than replace early life gas appliances in order to achieve emission reductions. A future in which renewable gases are a lower cost net zero energy option relative to electrification is foreseeable in many circumstances considering:

- 100% contracting of available renewable gases blended into existing networks requires no appliance changes while blending maintains appropriate limits for current appliances;

- The impact of wholesale renewable gas cost on retail energy bills is not expected to exceed the impact of wholesale electricity cost<sup>4</sup>; and
- Gas infrastructure costs less than electricity infrastructure today and into the future<sup>5</sup>.

Some Australian households are already receiving blended renewable gas today. Other initiatives are working towards a not-too-distant reality of households and businesses being able to contract renewable gas in much the same way as households can contract renewable electricity today. To this point, APGA notes the following ongoing changes impacting the future of gas supply:

- Customers can purchase decarbonised gas today through offset regimes such as those provided by Origin Energy<sup>6</sup> and AGL<sup>7</sup>;
- The combined DISER, AEMC and AEMO consultations on extending gas market regulation to include hydrogen and other renewable gases brings widespread renewable gas uptake one step closer to customers<sup>8</sup>;
- Recent state-based strategies and analysis of renewable gas use including the NSW Hydrogen Strategy<sup>9</sup> and Victorian Gas Substitution Roadmap<sup>10</sup>;
- Some Adelaide residents are already using renewable gases through a pilot project developed by AGIG<sup>11</sup>, with more to come across coming months<sup>12,13</sup> and years<sup>14</sup>;
- The further development of a renewable gas industry in Australia is expected to make large-scale retail purchase of renewable gases a reality in years to come;

---

<sup>4</sup> State of the Energy Market 2021: Retail energy markets, Australian Energy Regulator 2021  
Figure 6.8 and Figure 6.9

<https://www.aer.gov.au/system/files/State%20of%20the%20energy%20market%202021%20-%20Chapter%206%20-%20Retail%20energy%20markets.pdf>

<sup>5</sup> Pipelines vs Powerlines: a summary, Australian Pipelines and Gas Association 2022

[https://www.apga.org.au/sites/default/files/uploaded-content/field\\_f\\_content\\_file/pipelines\\_vs\\_powerlines\\_-\\_a\\_summary.pdf](https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/pipelines_vs_powerlines_-_a_summary.pdf)

<sup>6</sup> Green Gas, Origin Energy

<https://www.originenergy.com.au/electricity-gas/green/>

<sup>7</sup> Carbon Neutral Energy, AGL

<https://www.agl.com.au/residential/carbon-neutral>

<sup>8</sup> Extending the national gas regulatory framework to hydrogen blends and renewable gases, DISER

<https://www.energy.gov.au/government-priorities/energy-ministers/priorities/gas/gas-regulatory-framework-hydrogen-renewable-gases>

<sup>9</sup> NSW Hydrogen Strategy

[https://www.energy.nsw.gov.au/sites/default/files/2021-10/GOVP1334\\_DPIE\\_NSW\\_Hydrogen\\_strategy\\_FA3%5B2%5D\\_0.pdf](https://www.energy.nsw.gov.au/sites/default/files/2021-10/GOVP1334_DPIE_NSW_Hydrogen_strategy_FA3%5B2%5D_0.pdf)

<sup>10</sup> Victorian Gas Substitution Roadmap, Victorian Government DELWP

[Help Us Build Victoria's Gas Substitution Roadmap | Engage Victoria](https://www.vic.gov.au/help-us-build-victoria-s-gas-substitution-roadmap-engage-victoria)

<sup>11</sup> Hydrogen Park South Australia, AGIG

<https://www.agig.com.au/hydrogen-park-south-australia>

<sup>12</sup> Western Sydney Green Gas Project, Jemena

<https://jemena.com.au/about/innovation/power-to-gas-trial>

<sup>13</sup> Malabar Biomethane Project, Jemena

<https://jemena.com.au/about/innovation/malabar-biomethane-project>

<sup>14</sup> ARENA Hydrogen Announcement

<https://arena.gov.au/news/over-100-million-to-build-australias-first-large-scale-hydrogen-plants/>

- Decarbonisation of gas infrastructure is likely to be achievable at half the additional cost of electrification based on research conducted by the gas industry<sup>15</sup>.

These initiatives are contributing to the growing base of evidence indicating that renewable gas uptake may represent a least cost approach towards gas use decarbonisation in Australia as seen in Figure 1 below<sup>16</sup>.

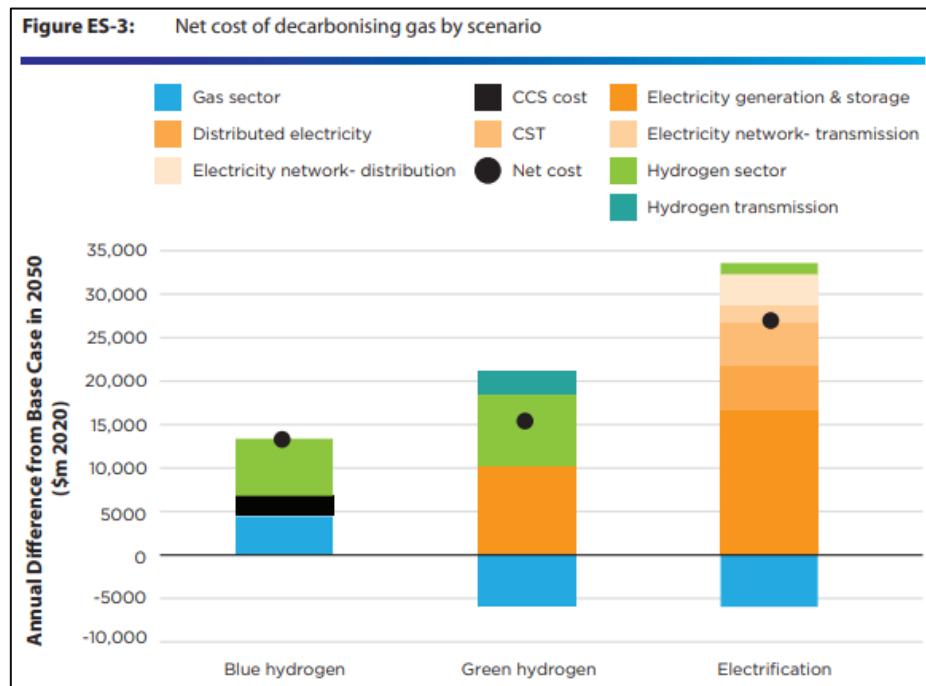


Figure 1: Net cost of decarbonising gas by scenario as seen in Gas Vision 2050<sup>15</sup>

Zero emission gas and electricity can both be contracted by households today. Contracting zero emission energy represents a real, tangible opportunity for new and existing households to reduce their energy emissions, often at lower cost than appliance replacement. Emissions conscious developers who choose to achieve the aims of the SEPP by providing access to renewable gas should not be impeded by the SEPP based their choice of how to achieve the aim of the SEPP.

Some forms of zero emission electricity and gas rely on carbon offsets, while some forms deliver energy from renewable sources. It is important to recognise that both approaches to emissions reduction are recognised as viable emissions reduction solutions by the federal government and contracting of produced renewable gas is already occurring at a wholesale level. Allowing NSW households and businesses to utilise renewable gases puts a wider range of decarbonisation options on the table, providing energy customers with broader choice in how they achieve net zero emissions within the built environment.

<sup>15</sup> Gas Vision 2050, APGA

[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>16</sup> The Benefits of gas infrastructure to decarbonise Australia, Frontier Economics 2020

[https://www.apga.org.au/sites/default/files/uploaded-content/field\\_f\\_content\\_file/frontier-2020-decarbonise-australia\\_0.pdf](https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/frontier-2020-decarbonise-australia_0.pdf)

## **BASIX**

APGA further notes that proposed changes to BASIX will result in a negative cost outcome for NSW households<sup>17</sup>. APGA expects that this is due to following in the footsteps of the National Construction Code 2022 (NCC2022) which was determined to have a negative NPV through its own Consultation Regulatory Impact Statement analysis. APGA refers the NSW Government to its submissions to the [Draft NCC 2022 consultation](#) and [NCC 2022 CRIS consultation](#) process in which it identified that:

- The NCC 2022 incentivises higher emission households over lower emission households through the application of undisclosed variables within its whole-of-home energy efficiency calculations; and
- *Costs [of the NCC 2022] are estimated to outweigh its benefits by a significant margin* – ACIL Allen.

As a result of following NCC 2022 modelling, BASIX too risks incentivising higher emission homes over lower emission homes while increasing overall energy costs for households.

The existing electricity mix in NSW has a higher carbon intensity than natural gas due to its heavy reliance on non-renewable generation. New housing developments will have access to renewable generation, but without sufficient storage (i.e. batteries) being mandated, new housing developments will source their electricity from the grid during the evening peaks. Electrification initiatives will increase demand for carbon intensive electricity generation during periods of low renewable generation. Until lower carbon electricity can adequately support evening peak demand, natural gas will continue to deliver lower emission energy than electricity during the periods when it is used the most.

### **APGA Recommendations**

APGA recommends the simple removal of provision 21.a) within the SEPP. In the event that the provision cannot be removed altogether, APGA propose that provision 21.a) be rewritten to focus on an emissions related outcome, rather than the blacklisting of appliances with the ability to use carbon free energy. Aside from the fact that gas use is lower emission than electricity use today, gas is on a decarbonisation pathway just like electricity. A SEPP which allows for affordable decarbonisation of energy demand through renewable gases supports a least cost pathway to energy decarbonisation in NSW while being aligned with broader State energy policy<sup>18</sup>.

The uptake of renewable gases should be supported by planning policy, not impeded, just like renewable electricity has been supported in order to get NSW where it is today.

---

<sup>17</sup> National Construction Code 2022 Consultation Regulatory Impact Statement, ACIL Allen 2021 [https://acilallen.com.au/uploads/projects/377/ACILAllen\\_RISProposedNCC2022\\_2021.pdf](https://acilallen.com.au/uploads/projects/377/ACILAllen_RISProposedNCC2022_2021.pdf)

<sup>18</sup> NSW Hydrogen Strategy, NSW Department of Planning, Industry and Environment 2021 [https://www.energy.nsw.gov.au/sites/default/files/2021-10/govp1334-dpie-nsw-hydrogen-strategy-fa2\\_accessible\\_final.pdf](https://www.energy.nsw.gov.au/sites/default/files/2021-10/govp1334-dpie-nsw-hydrogen-strategy-fa2_accessible_final.pdf)

Further, APGA recommends that NSW reconsider founding the future of the BASIX program on the NCC 2022 which is known to incentivise higher emission homes and cost energy customers more in doing so.

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,

A handwritten signature in black ink, appearing to be 'JM', written in a cursive style.

JORDAN MCCOLLUM  
National Policy Manager  
Australian Pipelines and Gas Association