

# Gas Comms Guide

## Health risks of gas.

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# Key Messages

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- Contrary to the myths the gas industry has paid billions of advertising dollars over many years to create,<sup>1</sup> gas is unhealthy, bad for the environment and one of the key drivers of worsening climate change and related extreme weather events.
- Cooking with gas is estimated to be responsible for up to 12 percent of the childhood asthma burden in Australia;<sup>2</sup> meaning that a child living with gas cooking in the home faces a comparable risk of asthma to a child living with household cigarette smoke.
- A significant study from Stanford University in the US has shown that cooking with gas stoves raises indoor levels of the cancer-causing chemical Benzene to levels above those in secondhand tobacco smoke.<sup>3</sup>
- Gas extraction and processing involves many hazardous substances including those that, with sufficient exposure, can cause cancer, interfere

# Key Messages

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with hormones, and trigger asthma. These chemicals can also contaminate the clean air and water people rely on for good health.

- Smart, electric heaters, cooking appliances and hot water systems are cleaner and cheaper to run than any gas alternative.
- Making the switch from gas to electric appliances is a win for reducing our cost of living, as well for our health and climate.<sup>4</sup>
- Continued expansion of the gas across Australia puts the health and well-being of more Australians at risk.

# Communications tips

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- Highlight shared values, such as the health benefits of clean air, and the people and places that will be protected by moving away from polluting fossil fuels like gas.
- Focus on the health and economic benefits of switching to renewables and away from gas. Message testing with gas users showed that health messages were most engaging on an emotional level, while a clear cost savings breakdown engaged them on a rational level. Having both is key.
- Provide examples of how switching to electric appliances can help provide desirable cooking and home heating and cooling options, and save money.
- Focus on the positive, cleaner and cheaper renewable energy powered future that we want to see, and how this is a better option than continuing to support polluting and expensive fossil fuels.

## Polluting your home with gas

Far from the “clean and natural” image that the gas industry markets, there is a growing body of scientific evidence that the use of gas indoors carries health risks.<sup>5</sup>

Within homes, the indoor air pollution from gas disproportionately affects children’s health.

Better ventilation, including modern extraction fans over stoves, flues for gas heaters and other safety measures like ensuring appliances are properly serviced or opening windows can reduce – but not eliminate – these risks.

While today’s gas may have once been a welcome upgrade from still dirtier fuels such as town gas, wood, coal or kerosene for cooking and heating, expensive and polluting gas appliances have fast been displaced by more efficient and healthier electric alternatives, like induction cooktops.

## Cooking with chemicals

Research shows that children living in a home with gas stoves have a 42 per cent increased risk of currently having asthma, and a 24 per cent greater chance of being diagnosed with asthma at some point in their lives.<sup>6</sup>

Cooking with gas is estimated to be responsible for up to 12 percent of the childhood asthma burden in Australia; meaning that a child living with gas cooking in the home faces a comparable risk of asthma to a child living with household cigarette smoke.<sup>7</sup>

A 2023 study<sup>8</sup> from the USA found around 650,000 cases of childhood asthma in that country were attributable to cooking with gas stoves in the home.<sup>9</sup>

Other studies have shown gas stoves leak methane and other air pollutants even when they’re not in use.<sup>10</sup> A Stanford University study published in October 2022 found that unburned gas contains harmful air pollutants including toluene, hexene, xylenes, and benzene.<sup>11</sup> In 2023, Stanford University researchers found that cooking with gas stoves can raise indoor levels of the carcinogen benzene above those found in secondhand smoke.<sup>12</sup>

Benzene has been linked to anaemia, reproductive disorders, and various forms of cancer.<sup>13</sup>

Lower income households can be more exposed to the

harmful effects of gas appliances; they are often less able to afford proper maintenance, and more likely to be renting or living in public housing where they rely on old, and poorly-maintained gas appliances.

## Gas extraction is also dangerous

Unconventional gas development, including fracking, is exposing Australian communities to unnecessary health risks.<sup>14</sup>

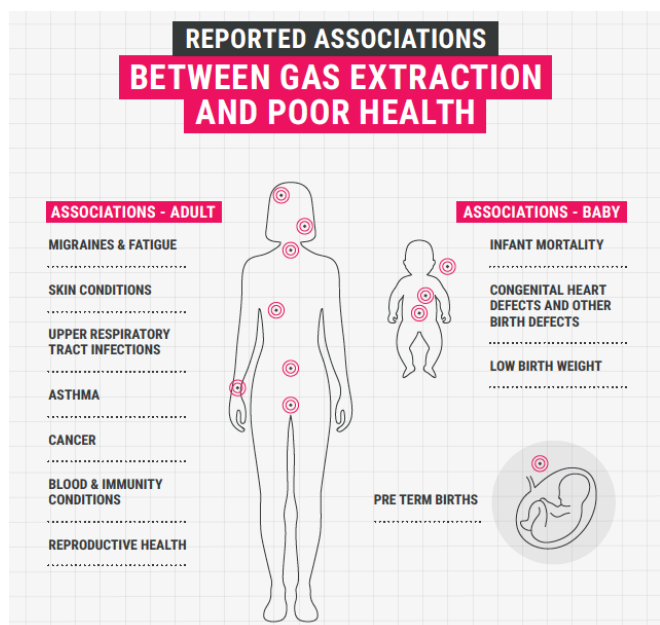
Gas extraction and processing involves many hazardous substances including those that, with sufficient exposure, can cause cancer, interfere with hormones, trigger asthma and contaminate the local environment<sup>15</sup> through airborne pollution and wastewater.

Unconventional gas extraction, including coal seam gas and shale gas - with or without fracking - introduces further health risks, particularly for the very young.

Fracking is one of the most environmentally damaging ways to extract gas<sup>16</sup> and can harm human health,<sup>17</sup> kill native animals, contaminate local land and pollute water supplies.<sup>18</sup>

There is growing international evidence of health impacts on communities living close to gas wells, including on reproductive and respiratory health and impacts upon early-life development.<sup>19</sup>

Continued expansion of gas across the country will harm more Australians.



## References

- 1 Rebecca Leber, "The end of natural gas has to start with its name", Vox, February 10, 2022, [https://www.vox.com/22912760/natural-gas-methane-  
rename](https://www.vox.com/22912760/natural-gas-methane-rename)
- 2 Hilary Bambrick, Kate Charlesworth, Simon Bradshaw and Tim Baxter, "Kicking the gas habit: how gas is harming our health", Climate Council. 6 May 2021, [https://www.climatecouncil.org.au/resources/gas-habit-how-gas-  
harming-health/](https://www.climatecouncil.org.au/resources/gas-habit-how-gas-harming-health/)
- 3 Rob Jordan, "Study finds combustion from gas stoves can raise indoor levels of chemical linked to a higher risk of blood cell cancers", Stanford News, June 16, 2023, [https://news.stanford.edu/2023/06/16/cooking-gas-stoves-emits-  
benzene-2/](https://news.stanford.edu/2023/06/16/cooking-gas-stoves-emits-benzene-2/)
- 4 Climate Council Report, "Switch and Save: How Gas is Costing Households", 13 October 2022, [https://www.climatecouncil.org.au/resources/switch-and-  
save-how-gas-is-costing-households/](https://www.climatecouncil.org.au/resources/switch-and-save-how-gas-is-costing-households/)
- 5 Hilary Bambrick, Kate Charlesworth, Simon Bradshaw and Tim Baxter, "Kicking the gas habit: how gas is harming our health", Climate Council. 6 May 2021, [https://www.climatecouncil.org.au/resources/gas-habit-how-gas-  
harming-health/](https://www.climatecouncil.org.au/resources/gas-habit-how-gas-harming-health/)
- 6 Weiwei Lin, Bert Brunekreef, Ulrike Gehring, Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children, International Journal of Epidemiology, Volume 42, Issue 6, December 2013, Pages 1724–1737, <https://doi.org/10.1093/ije/dyt150>
- 7 Hilary Bambrick, Kate Charlesworth, Simon Bradshaw and Tim Baxter, "Kicking the gas habit: how gas is harming our health", Climate Council. 6 May 2021, [https://www.climatecouncil.org.au/resources/gas-habit-how-gas-  
harming-health/](https://www.climatecouncil.org.au/resources/gas-habit-how-gas-harming-health/)
- 8 Talor Gruenwald, Brady A. Seals, Luke D. Knibbs and H. Dean Hosgood III, "Population Attributable Fraction of Gas Stoves and Childhood Asthma in the United States", International Journal of Environmental Research and Public Health. 2023; 20(1):75. <https://doi.org/10.3390/ijerph20010075>
- 9 Oliver Milman, "One in eight cases of asthma in US kids caused by gas stove pollution – study", The Guardian, January 6, 2023, <https://www.theguardian.com/environment/2023/jan/06/us-kids-asthma-gas-stove-pollution>
- 10 Eric D. Lebel, Colin J. Finnegan, Zutao Ouyang, and Robert B. Jackson, "Methane and NOx Emissions from Natural Gas Stoves, Cooktops, and Ovens in Residential Homes", Environmental Science & Technology 27 January 2022, <https://pubs.acs.org/doi/10.1021/acs.est.1c04707>
- 11 Eric D. Lebel, Drew R. Michanowicz, Kelsey R. Bilsback, Lee Ann L. Hill, Jackson S. W. Goldman, Jeremy K. Domen, Jessie M. Jaeger, Angélica Ruiz, and Seth B. C. Shonkoff, "Composition, Emissions, and Air Quality Impacts of Hazardous Air Pollutants in Unburned Natural Gas from Residential Stoves in California", Environmental Science & Technology, 20 October 2022, <https://pubs.acs.org/doi/10.1021/acs.est.2c02581>
- 12 Rob Jordan, "Study finds combustion from gas stoves can raise indoor levels of chemical linked to a higher risk of blood cell cancers", Stanford News, June 16, 2023, [https://news.stanford.edu/2023/06/16/cooking-gas-stoves-emits-  
benzene-2/](https://news.stanford.edu/2023/06/16/cooking-gas-stoves-emits-benzene-2/)
- 13 The American Cancer Society, "Benzene and Cancer Risk", Feb 1, 2023, <https://www.cancer.org/cancer/risk-prevention/chemicals/benzene.html>
- 14 The Climate Council, "Kicking The Gas Habit: How Gas Is Harming Our Health", May 6, 2023, [https://www.climatecouncil.org.au/resources/gas-  
habit-how-gas-harming-health/](https://www.climatecouncil.org.au/resources/gas-habit-how-gas-harming-health/)
- 15 Anna Lin-Schweitzer, Yale School of Public Health, "Integrated effort needed to mitigate fracking while protecting both humans and the environment", March 30, 2022, [https://ysph.yale.edu/news-article/integrated-effort-  
needed-to-mitigate-fracking-while-protecting-both-humans-and-the-  
environment/](https://ysph.yale.edu/news-article/integrated-effort-needed-to-mitigate-fracking-while-protecting-both-humans-and-the-environment/)
- 16 The Climate Council, "The Future of gas is small and dwindling", June 9, 2023, [https://www.climatecouncil.org.au/resources/future-of-gas-is-small-  
and-dwindling/](https://www.climatecouncil.org.au/resources/future-of-gas-is-small-and-dwindling/)
- 17 Natasha May, "Fracking projects in NT risk exposing people to cancer and birth defects, report finds", The Guardian, September 4, 2023, [https://www.theguardian.com/australia-news/2023/sep/04/fracking-projects-in-nt-risk-  
exposing-people-to-cancer-and-birth-defects-report-finds](https://www.theguardian.com/australia-news/2023/sep/04/fracking-projects-in-nt-risk-exposing-people-to-cancer-and-birth-defects-report-finds)
- 18 The Wilderness Society, "The truth about fracking and the environment", [https://www.wilderness.org/news/article/truth-about-fracking-and-  
environment](https://www.wilderness.org/news/article/truth-about-fracking-and-environment)
- 19 Karen O'Leary, "Fracking linked to adverse birth outcomes", Nature Medicine, April 11 2022, <https://www.nature.com/articles/d41591-022-00049-5>



This guide was finalised by Dylan Quinnell at the CMC, in consultation with the Climate Council and Global Cooksafe Coalition in November 2023.

# Speak with us.

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