

THE FUTURE OF COOKING IS ELECTRIC

It's time for a safe cooking revolution



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What is the Global Cooksafe Coalition?

The Global Cooksafe Coalition (GCC) is an unprecedented alliance of public health, climate, aid and development organizations, billion-dollar property developers and leading chefs, joining forces to call for universal access to safe, sustainable cooking. GCC founding members and corporate partners support the phase-out of dangerous fuels from our kitchens, and urgent action to ensure low-income communities around the world benefit from the renewable energy revolution.

The Coalition comprises:

- Lendlease (Partner)
- GPT (Partner)
- The European Public Health Alliance (Member)
- Green Building Council Australia (Member)
- World Green Building Council (Member)
- MECS (Member)
- CLASP (Member)
- The Climate Council (Member)
- Nightingale Housing (Member)
- Asthma Australia (Member)
- International WELL Building Institute (Member)

The Coalition is also grateful for the support of leading chefs from around the world who are committed champions of electric cooking, including James Lowe (UK), James Edward Henry (France), Neil Perry (Australia), Palisa Anderson (Australia), to name a few.

What is our vision?

The Coalition exists to promote universal access to safe and sustainable cooking. That means fossil fuel-free cooking with energy-efficient electric appliances, on rapidly decarbonizing grids, or distributed solar.

Because no matter where you live or work, you deserve access to safe, sustainable, affordable cooking.

Global Cooksafe Coalition members and partners support:

- By at least 2030, all new kitchens in OECD countries will use energy efficient-electric cooking appliances, powered by a rapidly decarbonizing grid or distributed renewable energy.
- By 2035, all new kitchens worldwide will use energy-efficient electric cooking appliances, powered by a rapidly decarbonizing grid or distributed renewable energy.
- By at least 2040, all existing kitchens in OECD countries will use energy-efficient electric cooking appliances, powered by a rapidly decarbonizing grid or distributed renewable energy.
- By 2045, all existing kitchens worldwide will use energy efficient-electric cooking appliances, powered by a rapidly decarbonizing grid or distributed renewable energy.
- An immediate, urgent increase in public finance allocated to electrification of cooking in lower- and middle-income countries.
- Fiscal policy supporting households and small businesses to transition to energy efficient-electric appliances.
- Fiscal policy assisting vulnerable health cohorts to access effective rangehoods.
- Improved ventilation standards in national buildings codes.



“Gas leaks toxic pollutants even when it is not being burned.”

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WHY SHOULD WE ELECTRIFY OUR COOKING?

1 Most of the world is still cooking with fuels that cause indoor air pollution that is, at its best, bad for our health and, at worst, deadly.

Gas, a polluting fossil fuel, remains the dominant cooking fuel globally. The World Health Organization (WHO) [estimates](#) that 50% of the global population currently relies on gas, including LPG, as their primary cooking fuel, representing almost 70% of all urban dwellers and 30% of rural populations.¹

While many parents today would not expose their children to second-hand cigarette smoke, the effect of gas cooktops on the burden of childhood asthma is comparable to the impact of passive smoking in the household.² A 2013 meta-analysis found that children across the globe living in a home with a gas stove had a 42% increased risk of having current asthma, and a 24% greater chance of being diagnosed with asthma at some point in life (Lin et al., 2013).³

This should come as no surprise, given the gas we burn in our homes releases toxic pollutants including nitrogen dioxide, carbon monoxide and formaldehyde.

Gas stoves leak methane and other air pollutants even when they're not being used. A [new study](#) released in October 2022 found that unburned gas contains harmful air pollutants, including toluene, hexene, xylenes, and benzene.⁴ Benzene has been linked to anaemia, reproductive disorders, and various forms of cancer.

In low- and middle-income countries, the situation is starker. 3 billion people around the world rely on solid fuels such as wood, coal, charcoal or animal waste for cooking and heating.⁵

The World Health Organisation (WHO) estimates [3.2 million die prematurely each year](#) from illnesses attributable to the household air pollution caused by cooking with solid fuel and kerosene.⁶

➔ *For more details, refer to the Coalition's [Health Factsheet](#).*



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“...the effect of gas cooktops on the burden of childhood asthma is comparable to the impact of passive smoking in the household.”



2 Gas cooking drives climate change.

Burning gas remains the most common cooking method globally, but gas is a toxic fossil fuel that is driving dangerous climate change. The 498 Mt of CO₂ emissions generated by cooking in 2020 is roughly equivalent to the total CO₂ emissions of Australia⁷. However, even this emissions footprint is just the tip of the iceberg.

Gas pollutes even when it is not being burned and when the stoves are off.⁸ It pollutes during production, processing and transport, when there are leaks. And since its primary component, methane, has more than 80 times the warming power of CO₂ in its first 20 years in the atmosphere,⁹ the potential for climate damage is even greater.

➔ [For more details, refer to the Coalition's Climate Factsheet.](#)

3 Electric cooking is affordable, safer and more sustainable.

Induction technology has advanced to offer the most sophisticated cooktop experience today. Induction technology is safer, cooler and easier to clean, which is why it is championed by leading chefs globally.

While gas prices skyrocket around the world, solar power is the cheapest energy source in history. This has the power to transform safe cooking in residential homes and commercial kitchens.

➔ [For more details, refer to the Coalition's Electric Cooking Factsheet.](#)

4 Electrifying equity.

Historically, electricity hasn't been considered a practical solution for communities experiencing energy poverty. But expert research shows that solutions like electric pressure cookers and low wattage induction cooktops are now cheaper than LPG in many regions.

This is not to diminish the efforts of communities working to deliver the most immediately available cleaner cooking solutions in local contexts, from ethanol and rocket stoves to community-scale biomass digesters; but to recognise that renewable power is transforming energy markets. This offers the opportunity to integrate safe cooking solutions into national energy plans and affordable, longer term solutions connected to delivery of United Nations Sustainable Development Goals.

➔ [For more details, refer to the Coalition's Equity Factsheet.](#)



“In lower- and middle-income countries, meanwhile, solar power provides a cheaper, more sustainable, longer-term solution to overcoming safe cooking deficits.”



5 Commercial kitchens cash-in.

All-electric kitchens save a significant amount of money in new construction projects by eliminating the need for gas utility connections and indoor gas plumbing systems. In a net-zero world, this reduces the risks of stranded assets and increases the longevity of investments for developers. Operational savings are also significant. Industry modelling has captured savings stemming from energy efficiency to increased throughput and reduced staff costs.

➔ *For more details, refer to the Coalition's [Built Environment Factsheet](#).*



LEARN THE FACTS

- Health** Children living in a home with a gas stove have a 42% increased risk of having current asthma.
- Climate** CO₂ emissions generated by cooking in 2020 is roughly equivalent to the total CO₂ emissions of Australia.
- Cost** Solar PV, an alternative to gas, is the cheapest source of power in many parts of Africa and will outcompete all sources continent-wide by 2030, even in rural areas.

Sources

- 1 "Population with Primary Reliance on Fuels and Technologies for Cooking, by Fuel Type (in Millions)." 2022. World Health Organization. May 1. www.who.int/data/gho/data/indicators/indicator-details/GHO/population-with-primary-reliance-on-fuels-and-technologies-for-cooking-by-fuel-type.
- 2 "Invisible Danger: Gas, Asthma and Our Children | Climate Council." Climate Council. June 5, 2021. www.climatecouncil.org.au/resources/invisible-danger-gas-asthma-children/.
- 3 Linet al. Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking. International Journal of Epidemiology, Volume 42, Issue 6, December 2013.
- 4 Lebel, Eric D., et al. "Composition, Emissions, and Air Quality Impacts of Hazardous Air Pollutants in Unburned Natural Gas from Residential Stoves in California." *Environmental Science & Technology*, 20 Oct. 2022, doi.org/10.1021/acs.est.2c02581.
- 5 "Energy." United Nations Sustainable Development Goals, United Nations, 2022, www.un.org/sustainabledevelopment/energy.
- 6 "Household Air Pollution and Health." Newsroom, World Health Organization, July 2022, www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health.
- 7 IEA (2021).
- 8 "Rethinking Cooking with Gas | Stanford News." Stanford News. news.stanford.edu, January 27, 2022. news.stanford.edu/2022/01/27/rethinking-cooking-gas/.
- 9 Harvard Gazette. "Urban Areas across U.S. Are Undercounting Greenhouse Gas Emissions." news.harvard.edu, October 26, 2021. news.harvard.edu/gazette/story/2021/10/urban-areas-across-u-s-are-undercounting-greenhouse-gas-emissions.

