

Press release

Thailand's 'clean' gas power plants are emitting more air pollution than Bangkok's car, taxi, and motorcycle traffic combined

Bangkok, 13 November - Thailand's gas power plants release large volumes of toxic air pollutants, with nitrogen oxides (NO_x) emissions alone exceeding those generated by all cars, taxis and motorbikes in the Bangkok Metropolitan Region.¹ That's based on the [Centre for Research on Energy and Clean Air \(CREA\)](https://energyandcleanair.org)'s new comprehensive and up-to-date assessment of gas power air pollutant emissions in the country. The assessment, covering 68 operating and planned gas power plants across Thailand, estimates the plants will release large volumes of toxic air pollutants — 33.4 kilotonnes (kt) of nitrogen oxides (NO_x), 1.7 kt of sulphur dioxide (SO₂), and 0.4 kt of fine particulate matter (PM_{2.5}) every year, once the planned plants are in operation.

These ongoing toxic pollutant emissions further add to Bangkok's already severe air pollution burden and undermine efforts to improve air quality in the region, where smog and haze episodes already exceed safe levels for large parts of the year. While traffic emissions are widely dispersed across the city, emissions from gas-fired power plants are concentrated around a handful of large facilities clustered around Bangkok and the Eastern Economic Corridor. As a result, surrounding communities are exposed to sustained, combined pollution from both gas power plants and heavy traffic.

The findings highlight the need to strengthen emission-control requirements for the gas power sector, including stricter limits on NO_x and better monitoring of plant performance. Targeting pollution-control measures and tightening compliance standards at these plants could therefore deliver significant air-quality and health benefits.

'In Bangkok, annual deaths attributable to PM_{2.5} have more than doubled, from roughly 3,600 in 2000 to over 8,000 in 2019. Recurrent pollution episodes regularly blanket the capital, prompting emergency responses such as temporary school closures and public-health advisories. Our findings

¹ The Bangkok Metropolitan Region includes six provinces: Bangkok, Nonthaburi, Pathum Thani, Samut Prakan, Samut Sakhon, and Nakhon.



show that gas is not a “clean” transition fuel, but rather a growing source of health-damaging and climate-warming pollution concentrated in Thailand’s most densely populated regions. Continuing to expand gas power will lock the country into worsening air pollution and rising greenhouse gas emissions for decades to come,’ said Jamie Kelly, Analyst and Health Impacts Assessment Team Lead at CREA.

‘Thailand’s persisting reliance on gas not only exposes the economy to volatile global fuel markets, it sustains a major source of toxic and climate-warming emissions that now threaten the country’s clean-air goals and its 2050 net-zero target. Phasing down gas power offers immediate and tangible benefits: cleaner air, reduced healthcare costs, and greater energy independence. As global markets move away from fossil fuels, Thailand has an opportunity to lead the region in a clean energy transition—one that prioritises the health of its people and the stability of its economy,’ said Daniel Nesan, Southeast Asia Analyst at CREA.

Gas has long been described as a ‘bridge fuel’ to a low-carbon future. But when methane leaks during extraction, processing, and transport are included, its climate footprint can match or exceed that of coal. Methane is around 80 times more potent than CO₂ over 20 years, meaning even small leakage rates erase the perceived advantage.

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Note to editors

The publication related to this press release can be found [here](#).

All CREA publications can be found here:

energyandcleanair.org/publications



About CREA

The Centre for Research on Energy and Clean Air (CREA) is an independent research organisation focused on revealing the trends, causes, and health impacts, as well as the solutions, to air pollution. CREA was founded in December 2019 in Helsinki and has staff in several Asian and European countries. The organisation's work is funded through philanthropic grants and revenue from commissioned research.

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