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PRESS RELEASE

South Korea must phase out gas by 2034 to meet 1.5C target, finds study

Paris Agreement-aligned roadmap means no new gas for the country after 2023, plus canceling coal-to-gas conversions.

March 27, 2023 (SEOUL) – A study by Climate Analytics in collaboration with Solutions for Our Climate (SFOC) finds South Korea must phase out gas from its electricity sector by 2034 to align with the Paris Agreement's 1.5°C temperature limit.

The report lays out a roadmap for policymakers to achieve a fossil gas phase out, with a unit-by-unit schedule for retirement of gas plants, alongside an analysis of the potential for wind and solar to replace fossil fuels by province.

South Korea currently operates 97 LNG—or fossil gas—powered units, the second largest source of electricity after coal. By the end of 2023, 101 units are expected to be operational.

"South Korea is the world's third-largest LNG importer after China and Japan and has the tenth-largest gas plant pipeline in the world. Our work finds that in addition to reducing emissions to combat climate change, implementing a 1.5 degree-aligned gas phase out plan would bring many co-benefits, including: reduced electricity prices, health benefits and increased energy security," commented **Lara Welder, who led the research at Climate Analytics.**

Gas is a lose-lose situation

The South Korean government plans on expanding its gas capacity by 50% by 2036, according to its latest electricity plan. This involves replacing 28 ageing coal-fired power plants with gas plants, which would continue to emit massive amounts of greenhouse gases and toxic air pollutants.

Like coal, gas power plants negatively impact human health in surrounding communities. Another study by SFOC found that, under current policy, gas generation is estimated to cause up to 859 annual deaths, in addition to immeasurable socioeconomic costs.

The report shows that dependence on imported gas makes South Korea vulnerable to rising fuel prices. In 2022, the state-owned utility Korean Electricity Power Corporation (KEPCO) experienced a historical operating loss of KRW 33 trillion, or USD 25 billion due to a rise in gas and coal import prices. Korea Gas Corporation, another publicly owned company and the world's largest LNG buyer, has KRW 9 trillion in debt.

The market unfairly favors fossil gas

To phase out gas by 2034, the country must cancel its new coal-to-gas projects and begin shutting down existing gas plants immediately, according to the Climate Analytics study. While South Korea has ample renewable energy potential—up to 5,000 TWh—to replace gas, major regulatory and market barriers favor fossil fuels over renewables.

“KEPCO guarantees profits for its gas power generation, but similar subsidies do not exist for renewables,” said **Gyuri Cho, Gas Program Lead at SFOC**. “Such market dynamics motivate the fossil fuel generators to continuously construct new plants and delay the phaseout of those that contribute little to the power grid.”

Policymakers must act now

The report arrives amid growing calls locally and globally to phase out fossil fuels to limit global warming to 1.5 degrees.

Following the study launch, communities nationwide held press conferences on Monday to voice their opposition to gas plants, supported by the report’s findings advocating for a fossil gas phase-out.

Jinyoung Jeong, who leads the coal-exit campaign at the Gyeongsangnam-do Environmental Movement Federation stated, “[Our province] has nine coal plants scheduled for conversion to LNG. This not only exacerbates the climate crisis but hurts the province by further embedding fossil fuels, preventing a genuine energy transition.”

The report comes one week after the latest Intergovernmental Panel on Climate Change report, which highlighted the renewable energy transition as one of the most cost-effective measures to limit catastrophic global warming.

“South Korea needs to fulfill its responsibility as a major emitter by implementing net-zero, starting with a plan to phase out fossil gas”, added **SFOC’s Cho**. “The solutions are here—all we need is action.”

The report can be accessed here.

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Climate Analytics is a non-profit institute leading research on climate science and policy in relation to the 1.5°C limit in the Paris Agreement. It has offices in Germany, the United States, Togo, Australia, Nepal and Trinidad and Tobago.

Solutions for Our Climate (SFOC) is a South Korea-based group that advocates for stronger climate policies and reform in power regulations. SFOC is led by legal, economic, financial, and environmental experts with experience in energy and climate policy and works closely with policymakers.

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