A DEADLY DOUBLE STANDARD

South Korea's Financing of Highly Polluting Overseas Coal Plants Endangers Public Health
Executive summary

South Korea is the third biggest public investor in overseas coal-fired power plant projects among the G20 countries through its public finance agencies (PFAs): Korea Trade Insurance Corporation (K-SURE), Export-Import Bank of Korea (KEXIM) and Korea Development Bank (KDB). Coal is the single worst contributor to global climate change, responsible for almost half the world’s carbon dioxide emissions.\(^1\)\(^,\)\(^2\)

In addition, burning coal releases high amounts of dangerous air pollutants that are known to be responsible for premature deaths by causing and worsening a range of severe diseases.\(^3\)\(^,\)\(^4\)

Most overseas coal power projects financed by South Korea employ air pollution emission control technologies far inferior to those required at home. In effect, South Korea is operating a deadly double standard: Financing coal-fired power plants overseas that create air pollution at levels that would not be legal in South Korea. This study evaluated ten such plants, estimating that 1,600 to 5,000 premature deaths will be caused each year, amounting to between 47,000 to 151,000 total premature deaths over the typical 30-year operation period of such power plants.

The double standard in emission limits for dangerous air pollutants allows South Korea overseas applied the same emission limits as the new coal power plants in South Korea. (either fully or jointly) by South Korea overseas applied the same emission limits as the new coal power plants in South Korea.

The impact of South Korea’s double standard in emission limits is evaluated by comparing the number of premature deaths caused in two different scenarios:

- **Scenario 1:** Predicted coal-fired power plant emissions based on the application of current local emission limits and actual or projected plant utilization.
- **Scenario 2:** Predicted coal-fired power plant emissions if South Korean emission standards for new coal power plants (installed since January 2015) were applied.

In South Korea, public concern about air pollution and strong demands for clean air mean that the emission standards set in South Korea’s Clean Air Conservation Act (2019) for new power plant projects are strict.\(^5\)

We carried out detailed atmospheric modeling and health impact assessments for 10 coal power plants that are located near populated areas and were financed by South Korean PFAs overseas during the period of January 2013 to August 2019. These coal power plants are located in Bangladesh, Indonesia and Vietnam.
Our results indicate that if the South Korean emission standards were applied – not just in South Korea but to all coal power plants financed by South Korean PFAs outside of South Korea – an estimated 1,400 to 4,500 premature deaths would be avoided each year. Over the typical 30-year operation period of such power plants, this amounts to between 42,000 and 136,000 avoidable premature deaths projected to result from the 10 coal power plants financed by South Korean PFAs and operating with poor emission limits.

Most of the premature deaths are projected to occur in the host countries themselves. These countries have existing dangerous air pollution problems separate to the pollution that would be caused by the modeled coal power plants. South Korean investments in coal power will only make it harder for these countries to reduce air pollution and meet public health standards.

Air pollution generated by the modeled power plants was shown to disperse across national borders. As a result, 13% of the projected premature deaths occur in seven neighboring countries which are otherwise uninvolved in the power plant projects.

All countries need to shift immediately away from coal and toward renewable energy sources to avoid catastrophic climate change and prevent the health impacts of coal emissions, including premature death. Countries must work together towards a carbon-neutral economy, and South Korea should play a leadership role in doing so. In contrast to the unethical and deadly double standard that South Korea is applying now to coal power projects – which is linked to illnesses, premature deaths and climate change – South Korea’s PFAs should instead support renewable energy solutions. Renewable energy and energy efficiency are getting cheaper and competitive than building new coal-fired power plants, and rather than exacerbating air pollution and climate change, they provide a solution.
The South Korean Government has announced an energy transition plan with a target for 20% renewable energy by 2030, together with a nuclear phase out plan and an end to permits for new coal projects. In addition, the Government is renewing regulations on air pollution emissions of coal plants every year. Despite this, South Korea’s public finance agencies (PFAs) still invest heavily in coal-fired power plants in other countries. The South Korean Government must take urgent action to end this financing and ensure its PFAs move to fund renewable solutions rather than coal.

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Children play by the beach near a coal power plant in Jepara, Central Java, oblivious to the possible threats to their health © Kemal Jufri / Greenpeace

References

3) Krewski, D. et al. (2009) Extended follow-up and spatial analysis of the American Cancer Society study linking particulate air pollution and mortality. HEI Research Report 140. Health Effects Institute, Boston, MA. http://dx.doi.org/10.1021/acr.est.6b03731
6) South Korean emission standards for new coal power plants (installed since January 2015) were applied.
7) Jawa 9&10 coal power plant is also known as Suralaya 9&10 coal power plant.