

BEFORE THE PENNSYLVANIA HOUSE OF REPRESENTATIVES
ENVIRONMENTAL RESOURCES AND ENERGY COMMITTEE

Testimony of Charles McPhedran, Senior Attorney, Earthjustice
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Chair Vitali, Chair Causer, members of the Committee, thank you for the opportunity to testify today. My name is Charley McPhedran. I'm an attorney with Earthjustice, a public interest law firm, having previously worked with PennFuture and the U.S. Environmental Protection Agency. I have served on DEP's Air Quality Technical Advisory Committee since 2007.

Throughout my career, I have worked to improve Pennsylvania's air quality. Pennsylvania's history of fossil fuel extraction and combustion presents special air pollution challenges. While we have made progress over the decades, significant challenges remain.

Which brings us to cryptocurrency mining. Proof-of-work crypto-mining uses vast amounts of energy, equal to the energy use of some entire countries. This energy use comes at a price. Where crypto-mining depends on fossil fuel combustion, it results in the sort of pollution, including air pollution, associated with that underlying combustion.

It doesn't have to be this way. There are other validation methods besides proof-of-work used by other cryptocurrencies that do not require this exorbitant amount of energy use. For example, when Ethereum, the second most-used cryptocurrency after Bitcoin, switched from proof-of-work validation to proof-of-stake validation, it reduced its energy consumption by 99.9%.

Proof-of-work crypto-mining based on fossil combustion creates carbon dioxide pollution. Carbon dioxide contributes to climate change, which threatens the Commonwealth and the planet. In Pennsylvania, with continuing increases in temperatures, future effects are expected to include more extreme rainfall events and flooding, accompanied by periods of drought, among other things.

Other pollutants from fossil fuel combustion, including combustion that fuels crypto mining, present urgent health issues for Pennsylvanians. Nitrogen oxide contributes to ground-level ozone or smog, a persistent health threat in Pennsylvania. Fine particles pose serious health threats, including asthma attacks, heart attacks, and premature death. Sulfur dioxide emissions also contribute to particle pollution, with these same consequences.

Pennsylvanians in government, industry, and environmental groups, as well as ordinary citizens, have worked hard for clean air. The last thing we need is a new source of greenhouse gases, and local air pollution.

But at Panther Creek in Carbon County and Scrubgrass in Venango County, waste coal combustion powers proof-of-work crypto-mining. Panther Creek's purchase by a crypto-mining

company led to emissions of nitrogen oxides and sulfur dioxide more than tripling from 2021 to 2022.

In Elk County and elsewhere in the Commonwealth, cryptocurrency has also been mined directly at gas wells, where gas-powered generators create electricity to run crypto-mining machines. This practice diverts gas from powering local homes and businesses, and creates significant air pollution. Mining operations also harass neighbors, livestock, and wildlife with noise that has been compared to a jet engine.

For air pollution planning and permitting, we often want to know the baseline level of emissions. How much pollution did this plant emit five years ago? Or, what was the level of pollution in the Commonwealth last year, so we know how to move forward? As to proof-of-work crypto-mining, let's be clear: just a decade ago, this industry and its pollution did not exist in the United States. The baseline was zero. We still have a chance to prevent new air pollution problems from crypto-mining.

There are several possible responses to the crypto-mining pollution problem. The most direct would be to convert proof-of-work crypto-mining to other types of cryptocurrency validation methods. As I mentioned, one form of mining, proof-of-stake validation, would reduce energy use by more than 99%, and prevent much of the air quality impacts I have described.

Next, applying existing laws, the Commonwealth can ensure that emissions from crypto-mining operations are as low as possible. When issuing permits, DEP must be rigorous in applying legal standards. For example, Diversified Production, a company with twenty outstanding environmental violations, should not receive a new permit for its Elk County operations under the Department's own standards. Also, Panther Creek should not receive a permit for a plantwide applicability limit when its application is seven years old and does not reflect the plant's new crypto-mining operations. DEP also must couple strong permits with strong enforcement to ensure compliance, at waste coal plants, wellheads, and wherever fossil-based crypto-mining creates air pollution.

Next, the Legislature should look for opportunities to prevent the harms to communities from crypto-mining. Foremost should be the withdrawal of subsidies. Pennsylvania's Alternative Energy Portfolio Standard currently subsidizes waste coal by treating it as a "Tier 2 alternative energy source", and in turn subsidizes crypto-mining that relies on waste coal generation. The Commonwealth must not encourage a practice that increases carbon dioxide emissions and climate impacts even as we work hard to reduce them elsewhere. This subsidy should be eliminated.

Further, the Legislature should end the Coal Refuse Energy and Reclamation Tax Credit. This subsidy allows an owner of a waste coal generation plant to enjoy a tax credit of \$4 per ton of waste coal used for energy combustion. At waste coal crypto plants like Scrubgrass and Panther Creek, this creates a windfall that ultimately subsidizes more air pollution, including greenhouse gases.

Pennsylvania's Constitution could not be more explicit: the people have a right to clean air. Given how long Pennsylvanians have worked for this goal, and how serious the challenges still are, we call on the Commonwealth and the Legislature to ensure that proof-of-work crypto-mining does not take us backwards on air quality and on climate.