The Crypto-Asset Environmental Transparency Act of 2022 One-Pager

The explosive growth in crypto-assets, such as Bitcoin, over the last decade has led to rapidly increasing energy demands and carbon dioxide emissions, threatening the ability of the United States to meet its climate change goals. In the U.S., Bitcoin crypto-asset mining facilities use up to 1.4% of domestic electricity—the same as the electricity needed to light every home in the country, causing as much carbon dioxide emissions as 7.5 million gasoline-powered cars. The Intergovernmental Panel on Climate Change has warned that soaring electricity use by crypto-asset mining is likely to "be a major global source of CO_2 if the electricity production is not decarbonized."

Crypto-asset mining facilities also negatively affect the local environment and electricity grid. Mining facilities are responsible for noise, air, and water pollution, as well as creating electronic waste. These local impacts can exacerbate environmental justice issues for underserved communities. The additional power demand can raise prices for other consumers, as well as placing strain on already fragile grids. In Texas, crypto-miners are forecast to use more energy than the city of Houston by mid-2023, at a time when residents continue to suffer from unreliable power.

The significant environmental impacts are primarily due to the most energy-intensive approach to creating crypto-assets and verifying blockchain transactions called "proof-of-work." This method, which is used by the Bitcoin blockchain, awards crypto-assets to miners through the energy-intensive process of using computers to solve increasingly complex puzzles, or cryptographic equations. One blockchain, Ethereum, decreased its energy consumption by 99.9% when it stopped using the proof-of-work method. The massive energy consumption of crypto-asset mining threatens to undermine decades of progress towards achieving climate goals, and threatens grids, utilities, communities, and ratepayers.

A recent report by The White House Office of Science and Technology Policy called for more data on factors such as cryptomining energy usage, fuel mix, co-located generation, power purchase agreements, and emissions. Legislators, regulators, and the American public need greater transparency on the current and future environmental impacts of cryptomining, including local water and noise pollution, the demands on the energy grid, and the resulting carbon dioxide emissions at a time of climate crisis. As a first step to protecting community and our climate goals, it is necessary to understand the full effect that crypto-miners have on communities and the environment.

The Crypto-Asset Environmental Transparency Act of 2022 requires cryptomining operations consuming more than 5 megawatts of power to report their carbon dioxide emissions under the Clean Air Act, as well as requiring a detailed interagency study, led by the Environmental Protection Agency, of the environmental impacts of crypto-asset mining in the United States.

What the bill does:

- Instructs the EPA to revise part 98, title 40 of the Code of Federal Regulations in order to require the reporting of scope 1 and scope 2 carbon dioxide emissions from cryptomining operations consuming more than 5 megawatts of power.
- Directs the EPA to lead an interagency study of the environmental impacts of cryptomining, including locating existing or planned cryptomining facilities about 5 megawatts, analyzing the impact of energy demand on carbon dioxide emissions, examining local impacts on noise and water pollution of cryptomining facilities, and investigating demand response programs negotiated between mining centers and utilities.
- Expands data center energy efficiency programs to include cryptomining facilities.

The Crypto-Asset Environmental Transparency Act of 2022 Section-by-Section

Section 1. Title
Provides that the short title of the bill is the "The Crypto-Asset Environmental Transparency Act of 2022"

Section 2. Findings
- The bill findings include:
    - Human activity is the dominant cause of observed climate change in the past century;
    - Crypto-asset mining operations often rely on fossil fuels for power, significantly contributing to greenhouse gas emissions;
    - There is no comprehensive independent study of the resource mix and associated greenhouse gas emissions of crypto-asset mining operations.

Section 3. Definitions
- Defines technical terms including blockchain, block, consensus mechanism, crypto-asset and crypto-asset mining.
- Defines a "qualifying crypto-asset mining operation" as one that has a power consumption of 5 megawatts or more.

Section 4. Compliance with the Clean Air Act
- (a) directs the Environmental Protection Agency (EPA) to amend part 98 of title 40, CFR, to require qualifying crypto-asset mining operations to report their carbon dioxide emissions as part of the Greenhouse Gas Reporting Program.
- (b) directs the EPA to issue information requests under section 114(a) of the Clean Air Act, including identifying the extent to which any qualifying crypto-asset mining operations are improperly operating without a valid and up-to-date permit under that Act.

Section 5. Impact Study
- Directs the EPA, in collaboration with the Department of Energy, Federal Energy Regulatory Comission, and Energy Information Administration, to conduct a study on the environmental impacts of crypto-asset mining in the United States.
- Subsection (b) lists specific requirements of what the study shall cover, including the number and location of any existing or planned cryptomining operations above 5 megawatts, the impact of these operations on carbon dioxide emissions, and ecological impacts such as water and noise pollution.

Section 6. Energy Efficiency of Data Center Buildings
- Amends the Energy Independence and Security Act of 2007 to include cryptomining facilities in the definition of data center buildings for the purpose of related reporting and energy efficiency programs.