

THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 1476 Session of 2023

INTRODUCED BY VITALI, WAXMAN, MADDEN, SANCHEZ, HILL-EVANS, STEELE, KHAN, BRENNAN, HOWARD, PIELLI, HOHENSTEIN, SALISBURY, GREEN AND KRAJEWSKI, JUNE 21, 2023

AS AMENDED ON SECOND CONSIDERATION, HOUSE OF REPRESENTATIVES, DECEMBER 12, 2023

AN ACT

1 Providing for reporting requirements for qualifying crypto-asset
2 mining operations and for an impact study; and imposing
3 duties on the Department of Environmental Protection.

4 The General Assembly of the Commonwealth of Pennsylvania
5 hereby enacts as follows:

6 Section 1. Short title.

7 This act shall be known and may be cited as the
8 Cryptocurrency Energy Conservation Act.

9 Section 2. Declaration of policy.

10 The General Assembly finds and declares as follows:

11 (1) Climate change is the most serious long-term threat
12 to this planet.

13 (2) The world needs to reach carbon neutrality by mid-
14 century to avoid the worst effects of climate change.

15 (3) This Commonwealth is a major emitter of greenhouse
16 gases that contribute to climate change, the vast majority of <--
17 which, APPROXIMATELY 55%, are related to the production and <--

1 ~~consumption of energy~~ TRANSPORTATION AND INDUSTRIAL SECTORS. <--

2 (4) This Commonwealth is committed to reducing
3 greenhouse gas emissions within the Commonwealth in order to
4 help combat climate change, with goals of reducing greenhouse
5 gas emissions by 26% from 2005 levels by 2025 and further
6 reducing greenhouse gas emissions by 80% from 2005 levels by
7 2050 under Executive Order 2019-01.

8 (5) Recently, cryptocurrency mining has expanded greatly
9 in the United States and this Commonwealth, with several
10 major cryptocurrency mining operations expected to come
11 online in this Commonwealth over the next several years.

12 (6) Cryptocurrency mining refers to the process of
13 creating new units of cryptocurrency and verifying
14 transactions by using computers to solve complicated
15 calculations.

16 (7) Cryptocurrency mining requires a substantial amount
17 of energy and currently accounts for as much as 1.7% of
18 energy consumption in the United States, according to a White
19 House report.

20 (8) The cryptocurrency mining industry currently
21 operates with little governmental oversight or regulation.

22 (9) The massive use of energy to produce cryptocurrency
23 is a wasteful use of finite resources.

24 (10) Unchecked cryptocurrency mining in this
25 Commonwealth will prevent this Commonwealth from reaching its
26 stated greenhouse gas emissions reduction goals.

27 Section 3. Definitions.

28 The following words and phrases when used in this act shall
29 have the meanings given to them in this section unless the
30 context clearly indicates otherwise:

1 "Blockchain." A distributed ledger technology in which:

2 (1) the data are shared across a network that creates a
3 digital ledger of verified transactions or information among
4 network participants; and

5 (2) the data are typically linked using cryptography to
6 maintain the integrity of the ledger and execute other
7 functions, including transfer of ownership or value.

8 "Consensus mechanism." A process to achieve agreement among
9 network participants on the current state of a blockchain.

10 "Crypto-asset mining." The process of performing
11 computations to add a valid block of data to the blockchain
12 typically in exchange for a reward or fee, including a proof of
13 work consensus mechanism and excluding those computations
14 required to validate individual transactions.

15 "Department." The Department of Environmental Protection of
16 the Commonwealth.

17 "Power load." The amount of electrical power, in megawatts,
18 that is consumed by a qualifying crypto-asset mining operation.

19 "Qualifying crypto-asset mining operation." The term means:

20 (1) an individual crypto-asset mining operation located
21 in this Commonwealth that has a power load that is greater
22 than or equal to 5 megawatts;

23 (2) a crypto-asset operation located in this
24 Commonwealth comprised of more than one location that has a
25 cumulative power load that is greater than or equal to 5
26 megawatts; or

27 (3) a crypto-asset mining operation located at a natural
28 gas well site in this Commonwealth.

29 "Scope 1 emissions." Greenhouse gas emissions directly from
30 sources that are operated, controlled or owned by an individual

1 or entity performing a qualifying crypto-asset mining operation.

2 "Scope 2 emissions." Indirect greenhouse gas emissions
3 associated with the purchase of electricity, steam, heat or
4 cooling by an individual or entity performing a qualifying
5 crypto-asset mining operation.

6 Section 4. Reporting requirements for qualifying crypto-asset
7 mining operations.

8 (a) Reporting.--No later than six months following the
9 effective date of this subsection, the owner of a qualifying
10 crypto-asset mining operation in this Commonwealth shall submit
11 the following information to the department on a form prescribed
12 by the department:

13 (1) the number and geographic locations of the
14 qualifying crypto-asset mining operation;

15 (2) the number and type of devices engaged in crypto-
16 asset mining, purchased and retired by the qualifying crypto-
17 asset mining operation in the past year;

18 (3) the amount of electric energy consumed by the
19 qualifying crypto-asset mining operation, including the time
20 of electricity usage;

21 (4) the source or sources of electric generation for all
22 electric energy consumed by the qualifying crypto-asset
23 mining operation, including the type of fuel used by the
24 electric generating facility;

25 (5) scope 1 emissions and scope 2 emissions associated
26 with electric generation for all electricity consumed by the
27 qualifying crypto-asset mining operation;

28 (6) water use associated with cooling crypto-asset
29 mining devices used by a qualifying crypto-asset mining
30 operation; and

1 (7) any other information deemed necessary by the
2 department.

3 (b) Ongoing reporting requirements.--

4 (1) Prior to starting operations in this Commonwealth, a
5 qualifying crypto-asset mining operation shall submit the
6 information required under subsection (a) to the department.

7 (2) The department shall require a qualifying crypto-
8 asset mining operation to submit the information under
9 subsection (a) on an annual basis.

10 (c) Form.--The department shall prepare a form that includes
11 all of the information required under subsections (a) and (b) to
12 make available on the department's publicly accessible Internet
13 website.

14 Section 5. Impact study.

15 (a) Report.--No later than one year following the effective
16 date of this subsection, the department, in consultation with
17 the Pennsylvania Public Utility Commission, shall issue a
18 report, including all of the following information:

19 (1) The number and location of any existing or planned
20 qualifying crypto-asset mining operations, including which
21 operations are located in an environmental justice area.

22 (2) The amount of greenhouse gas emissions and other air
23 pollutants that are:

24 (i) released by an onsite energy source used by a
25 qualifying crypto-asset mining operation; and

26 (ii) attributable to offsite-generated electricity,
27 steam, heat or cooling provided to a qualifying crypto-
28 asset mining operation.

29 (3) The anticipated increase of new, and expansion of
30 existing, qualifying crypto-asset mining operations.

1 (4) The potential impacts of electric energy consumption
2 by qualifying crypto-asset mining operations, including by
3 prolonging the use of fossil fuel generators, on the ability
4 of this Commonwealth to achieve stated greenhouse gas
5 emission reduction goals.

6 (5) The ecological impacts, including ecological impacts
7 associated with electronic waste generation and the use or
8 discharge of cooling water, caused by qualifying crypto-asset
9 mining operations.

10 (6) The potential public health impacts due to the
11 reduced air and water quality and increased water stress on
12 communities near qualifying crypto-asset mining operations.

13 (7) The potential public health and ecological impacts
14 from noise generated by qualifying crypto-asset mining
15 operations.

16 (8) The amount of electric energy consumed by each
17 qualifying crypto-asset mining operation, including the time
18 of use of electricity and the potential grid stress posed by
19 the power load of the qualifying crypto-asset mining
20 operation.

21 (9) The source of electric energy consumed by each
22 qualifying crypto-asset mining operation.

23 (10) An analysis of energy use and greenhouse gas
24 emissions by type of consensus mechanism.

25 (11) An analysis of demand-response programs negotiated
26 between qualifying crypto-asset mining operations and
27 electric utilities.

28 (12) An analysis of potential rate-design measures that
29 could be implemented by State and local regulators to reduce
30 the energy consumption and dependence on fossil fuel energy

1 sources of qualifying crypto-asset mining operations.

2 (b) Report submission.--The department shall submit the
3 report required under subsection (a) to the Governor, the
4 chairperson and minority chairperson of the Environmental
5 Resources and Energy Committee of the Senate and the chairperson
6 and minority chairperson of the Environmental Resources and
7 Energy Committee of the House of Representatives no later than
8 one year following the effective date of this subsection.

9 (c) Publication.--The department shall publish the report
10 required under subsection (a) on the department's publicly
11 accessible Internet website.

12 Section 6. Regulations.

13 The department and the Environmental Quality Board shall
14 promulgate regulations as necessary to implement the provisions
15 of this act.

16 Section 7. Effective date.

17 This act shall take effect immediately.