

STATE OF NEW YORK

7389--A

2021-2022 Regular Sessions

IN ASSEMBLY

May 6, 2021

Introduced by M. of A. KELLES, ENGLEBRIGHT, LUPARDO, THIELE, GLICK, MAGNARELLI, EPSTEIN, BURDICK, STECK, J. D. RIVERA, CLARK, NIOU, FAHY, WALLACE, BARRETT, CARROLL, L. ROSENTHAL, HEVESI, SEAWRIGHT, GALLAGHER, GONZALEZ-ROJAS, DE LA ROSA, BURKE, PICHARDO, STIRPE, MAMDANI, SIMON, GRIFFIN, ANDERSON -- read once and referred to the Committee on Banks -- reference changed to the Committee on Environmental Conservation -- committee discharged, bill amended, ordered reprinted as amended and recommitted to said committee

AN ACT to amend the environmental conservation law, in relation to establishing a moratorium on consolidated operations that use proof-of-work authentication methods to validate blockchain transactions; and to require a comprehensive generic environmental impact statement review

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

1 Section 1. Legislative findings. The legislature hereby finds and
2 declares that:

3 (a) Climate change threatens the health, welfare, and economy of the
4 state with increasingly severe and widespread impacts to our communities
5 due to flooding, sea level rise, heat waves, coastal erosion, erratic
6 and unpredictable weather patterns, shifting climatic zones, loss of
7 wildlife, increased harmful algal blooms and invasive species, and
8 increased risk of disease, in part, which leads directly to loss of
9 life, property damage and reduction in value, ecological damage, and
10 increased infrastructure costs;

11 (b) It is the policy of the State of New York to conserve, improve and
12 protect its natural resources and environment and to prevent, abate and
13 control water, land and air pollution, in order to enhance the health,
14 safety and welfare of the people of the state and their overall economic
15 and social well-being;

16 (c) To mitigate the current and future effects of climate change, the
17 State of New York implemented the Climate Leadership and Community
18 Protection Act, requiring that statewide greenhouse gas emissions be

EXPLANATION--Matter in italics (underscored) is new; matter in brackets
[-] is old law to be omitted.

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1 reduced eighty-five percent by 2050 and that the state has net zero
2 emissions in all sectors of the economy by that time;

3 (d) Data centers running proof-of-work authentication methods to vali-
4 date blockchain transactions are an expanding industry in the State of
5 New York, often, but not exclusively, located in retired or converted
6 fossil fuel power stations, including in dormant peaker plants;

7 (e) The magnitude of computer processing output required to authenti-
8 cate a single block of a blockchain with a proof-of-work method uses as
9 much energy as an average American household uses in a month. The annual
10 global energy use for proof-of-work authentication is equivalent to that
11 of the country of Sweden and exceeds the energy consumption of all the
12 global activity of major tech companies like Amazon, Google, and Face-
13 book combined;

14 (f) The continued and expanded operation of data centers running
15 proof-of-work authentication methods to validate blockchain transactions
16 will greatly increase the amount of energy usage in the State of New
17 York, and it is reasonable to believe the associated greenhouse gas
18 emissions will irreparably harm compliance with the Climate Leadership
19 and Community Protection Act in contravention of state law;

20 (g) Consolidated operations that use proof-of-work authentication
21 methods to validate blockchain transactions often use large amounts of
22 water, which, when discharged, can raise the temperature of adjacent
23 water bodies to levels that harm aquatic life, including fish species
24 that are important for local tourism, and may increase the amount and
25 frequency of harmful algal blooms on lakes, ponds and streams; and

26 (h) Many fossil fuel power plants have been shut down across the state
27 in recent years due to reduced energy demand, improved transmission
28 capacity and non-economic carbon-based fuel sources. Consolidated oper-
29 ations that use proof-of-work authentication methods to validate block-
30 chain transactions are bringing these plants back online, with behind-
31 the-meter operations that greatly exceed the previous intermittent
32 usage, and can cause significant negative impacts to air quality espe-
33 cially in environmental justice communities.

34 § 2. The environmental conservation law is amended by adding a new
35 section 19-0329 to read as follows:

36 § 19-0329. Moratorium on permit issuance and renewal.

37 1. The department shall not approve a new application for or issue a
38 new permit pursuant to this article for an electric generating facility
39 that utilizes a carbon-based fuel and that provides, in whole or in
40 part, behind-the-meter electric energy consumed or utilized by a facili-
41 ty that uses proof-of-work authentication methods to validate blockchain
42 transactions.

43 2. The department shall not approve an application to renew an exist-
44 ing permit or issue a renewal permit pursuant to this article for an
45 electric generating facility that utilizes a carbon-based fuel and that
46 provides, in whole or in part, behind-the-meter electric energy consumed
47 or utilized by a facility that uses proof-of-work authentication methods
48 to validate blockchain transactions if the renewal application seeks to
49 increase or will allow or result in an increase in the amount of elec-
50 tric energy consumed or utilized by a facility that uses proof-of-work
51 authentication methods to validate blockchain transactions.

52 § 3. Generic environmental impact statement. (a) The department of
53 environmental conservation shall prepare, pursuant to article eight of
54 the environmental conservation law, a generic environmental impact
55 statement on statewide consolidated operations that use proof-of-work
56 authentication methods to validate blockchain transactions.

1 (b) The generic environmental impact statement shall address, at a
2 minimum:

3 (i) the number and location of existing consolidated operations that
4 use proof-of-work authentication methods to validate blockchain trans-
5 actions in the state;

6 (ii) the amount of electric energy consumed by each such operation;

7 (iii) the sources of electric energy consumed by each such operation
8 and the type of fuel used by each energy source;

9 (iv) the amount of greenhouse gas emissions and co-pollutants released
10 by each energy source attributable to providing electric energy to
11 consolidated operations that use proof-of-work authentication methods to
12 validate blockchain transactions;

13 (v) the anticipated increase, if any, of consolidated operations that
14 use proof-of-work authentication methods to validate blockchain trans-
15 actions in the state and the anticipated expansion, if any, of existing
16 operations;

17 (vi) the potential impacts of electric energy consumption by consol-
18 idated operations that use proof-of-work authentication methods to vali-
19 date blockchain transactions on the state's ability to meet the green-
20 house gas emission reduction goals set forth in article seventy-five of
21 the environmental conservation law;

22 (vii) the water quality and other ecological impacts, if any, of cool-
23 ing water use by consolidated operations that use proof-of-work authen-
24 tication methods to validate blockchain transactions;

25 (viii) the potential public health impacts, if any, due to reduced air
26 and water quality in communities near consolidated operations that use
27 proof-of-work authentication methods to validate blockchain trans-
28 actions;

29 (ix) the potential statewide public health impacts, if any, from
30 increased greenhouse gas emissions released by statewide consolidated
31 operations that use proof-of-work authentication methods to validate
32 blockchain transactions; and

33 (x) the social and economic costs and benefits, if any, of consol-
34 idated operations that use proof-of-work authentication methods to vali-
35 date blockchain transactions.

36 § 4. Any generic environmental impact statement draft shall be subject
37 to 120 days of public comment from the date of issuance. The department
38 of environmental conservation shall conduct at least one public hearing
39 in each of the following regions of the state: western New York, the
40 finger lakes, the southern tier, central New York, the Mohawk valley,
41 the north country, the capital region/Hudson valley, and the City of New
42 York/Long Island, as defined by the Empire State Development Corpo-
43 ration.

44 § 5. The department shall issue a final generic environmental impact
45 statement after close of the public comment and public hearing period.

46 § 6. For the purposes of this act:

47 (a) "proof-of-work" shall mean a consensus algorithm in a blockchain
48 network used to confirm and produce new blocks to the chain, where
49 competitors complete new blocks and where the algorithm changes the
50 complexity of the competition in a manner that is designed to and/or
51 results in increased energy usage for each competitor when the complexi-
52 ty is increased; and

53 (b) "blockchain" shall mean a digital ledger in which transactions are
54 recorded chronologically and publicly.

55 § 7. This act shall take effect immediately.