

# STATE OF NEW YORK

7389--B

2021-2022 Regular Sessions

## IN ASSEMBLY

May 6, 2021

Introduced by M. of A. KELLES, LUPARDO, ENGLEBRIGHT, THIELE, GLICK, MAGNARELLI, EPSTEIN, BURDICK, STECK, J. D. RIVERA, CLARK, NIOU, FAHY, WALLACE, BARRETT, CARROLL, L. ROSENTHAL, SEAWRIGHT, GALLAGHER, GONZALEZ-ROJAS, DE LA ROSA, BURKE, STIRPE, MAMDANI, SIMON, GRIFFIN, ANDERSON, McMAHON, MITAYNES, OTIS, McDONALD, GOTTFRIED, GALEF, DINOWITZ, PRETLOW -- 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 -- again reported from said committee with amendments, 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,

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

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1 safety and welfare of the people of the state and their overall economic  
2 and social well-being;

3 (c) To mitigate the current and future effects of climate change, the  
4 State of New York implemented the Climate Leadership and Community  
5 Protection Act, requiring that statewide greenhouse gas emissions be  
6 reduced eighty-five percent by 2050 and that the state has net zero  
7 emissions in all sectors of the economy by that time;

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

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

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

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

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

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

41 § 19-0329. Moratorium on permit issuance and renewal.

42 1. For the period commencing on the effective date of this section and  
43 ending three years after such date, the department shall not approve a  
44 new application for or issue a new permit pursuant to this article for  
45 an electric generating facility that utilizes a carbon-based fuel and  
46 that provides, in whole or in part, behind-the-meter electric energy  
47 consumed or utilized by a facility that uses proof-of-work authentica-  
48 tion methods to validate blockchain transactions.

49 2. For the period commencing on the effective date of this section  
50 and ending three years after such date, the department shall not approve  
51 an application to renew an existing permit or issue a renewal permit  
52 pursuant to this article for an electric generating facility that  
53 utilizes a carbon-based fuel and that provides, in whole or in part,  
54 behind-the-meter electric energy consumed or utilized by a facility that  
55 uses proof-of-work authentication methods to validate blockchain trans-  
56 actions if the renewal application seeks to increase or will allow or

1 result in an increase in the amount of electric energy consumed or  
2 utilized by a facility that uses proof-of-work authentication methods to  
3 validate blockchain transactions.

4 § 3. Generic environmental impact statement. (a) The department of  
5 environmental conservation shall prepare, pursuant to article eight of  
6 the environmental conservation law, a generic environmental impact  
7 statement on statewide consolidated operations that use proof-of-work  
8 authentication methods to validate blockchain transactions.

9 (b) The generic environmental impact statement shall address, at a  
10 minimum:

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

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

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

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

21 (v) the anticipated increase, if any, of consolidated operations that  
22 use proof-of-work authentication methods to validate blockchain trans-  
23 actions in the state and the anticipated expansion, if any, of existing  
24 operations;

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

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

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

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

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

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

52 § 5. The department shall issue a final generic environmental impact  
53 statement after close of the public comment and public hearing period  
54 and no later than two years after the effective date of this act.

55 § 6. For the purposes of this act:

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

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

9 § 7. This act shall take effect immediately.