# 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:**

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

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

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

(c) To mitigate the current and future effects of climate change, the State of New York implemented the Climate Leadership and Community 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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reduced eighty-five percent by 2050 and that the state has net zero emissions in all sectors of the economy by that time;

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

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

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

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

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

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

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

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

**2. The department shall not approve an application to renew an existing permit or issue a renewal permit pursuant to this article for an electric generating facility that utilizes a carbon-based fuel and that provides, in whole or in part, behind-the-meter electric energy consumed or utilized by a facility that uses proof-of-work authentication methods to validate blockchain transactions if the renewal application seeks to increase or will allow or result in an increase in the amount of electric energy consumed or utilized by a facility that uses proof-of-work authentication methods to validate blockchain transactions.**

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

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

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

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

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

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

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

(vi) the potential impacts of electric energy consumption by consolidated operations that use proof-of-work authentication methods to validate blockchain transactions on the state's ability to meet the greenhouse gas emission reduction goals set forth in article seventy-five of the environmental conservation law;

(vii) the water quality and other ecological impacts, if any, of cooling water use by consolidated operations that use proof-of-work authentication methods to validate blockchain transactions;

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

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

(x) the social and economic costs and benefits, if any, of consolidated operations that use proof-of-work authentication methods to validate blockchain transactions.

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

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

§ 6. For the purposes of this act:

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

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

§ 7. This act shall take effect immediately.