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VIA U.S. MAIL AND ELECTRONIC MAIL

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RE: Greenidge Station, Dresden, New York
Greenidge Generation LLC
Air Title V Facility Permit 8-5736-00004/00017

Dear Mr. LaLone and Mr. Snyder:

The conversion of retiring, retired or peaking power plants for data centers, bitcoin mining, and the like threatens to sharply increase emissions of greenhouse gases in New York State, which is wholly inconsistent with the State's Climate Leadership and Community Protection Act ("CLCPA") emissions reduction requirements.¹

One of these bitcoin mining centers, on the shores of Seneca Lake, is in the midst of repowering behind-the-meter now, over the objections of the local community^{2 3}, and moving forward in what seems to be a gap in regulatory oversight by the State with regard to CLCPA compliance. The Department of Environmental Conservation ("DEC") must take strong action

¹ See, e.g., N.Y. Times, *Why Bill Gates Is Worried About Bitcoin : It's all about the carbon footprint.* (Mar. 9, 2021) <https://www.nytimes.com/2021/03/09/business/dealbook/bill-gates-bitcoin.html> ("Bitcoin uses more electricity per transaction than any other method known to mankind.")

² There are major concerns with the impacts of this facility on the waters of Seneca Lake. This letter addresses only concerns with the greenhouse gas increases at the facility with regard to the air permit, within the framework of the CLCPA.

³ Residents of Dresden and Torrey have already expressed their concerns about the environmental impacts of Greenidge's conversion via a September 15, 2020 letter to the DEC concerning the plant's existing permits.

to address power plants, like this one, from converting to around-the-clock operations for off-grid power generation.

The Title V permit for the Greenidge Generating Station in Dresden, New York (“Greenidge”) is up for renewal and we urge the DEC to scrutinize the permit – namely, to reject any version of this permit that will allow increased emissions of greenhouse gases (“GHGs”) and that will not reverse the current and troubling trend of increasing GHG emissions discussed below.

Greenidge’s current air permit, for its use as a peaker plant only, allows annual emissions of up to 641,878 tons of carbon dioxide equivalent (“CO₂eq”). In 2019, the Greenidge boiler alone—excluding emissions from auxiliary equipment like the diesel generator, diesel emergency fire pump, and natural gas heater—released 61,601 tons of CO₂eq, or 9.5 percent of the permit limit, while operating at just 5 percent of capacity (approx. 600,000 MWh).⁴

As of now, Greenidge allocates 19 of its 106 MW capacity to power 7,000 existing data mining units,^{5 6} in 2020. This output is several multiples over the plant’s 2019 output, consuming over a billion cubic feet of natural gas.

To put Greenidge’s emissions growth into context, 2020 air emissions data obtained pursuant to the Freedom of Information Law reveal that, in just one year, CO₂eq and NO_x emissions from the facility increased **ten-fold**. Greenidge’s emissions of CO₂eq went from 28,301 tons when bitcoin data mining first began at the facility in January 2020 to 243,103 tons in December 2020 and NO_x emissions jumped from 5.2 to 49.2 tons in that same period. That is despite the fact that in 2020, the plant only operated at 13% of its capacity.

Greenidge has proposed ramping operations up to 55 MW soon, which will result in boiler-alone emissions of 551,569 tons of CO₂eq, per year. If left unchecked, Greenidge will reach 106 MW capacity shortly, which will cause emissions to skyrocket to 1,063,024 tons of CO₂eq per year, or 165 percent of the existing permit limit. As a press release about Greenidge’s IPO recently noted, the company has no plans to slow down – it is actively expanding capacity at the site and beyond, noting that it hopes to have 500 MW of energy for bitcoin mining by 2025.⁷

⁴ Includes upstream natural gas emissions and assumes the 20-year Global Warming Potential (“GWP”) of methane (72) as per the CLCPA framework. Excluding upstream natural gas emissions and a GWP for methane of 25, Greenidge’s boiler emitted 34,098 tons of CO₂eq.

⁵ *NY gas plant adds cryptocurrency mining units*, S&P GLOBAL, Mar, 11, 2020, at <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/ny-gas-plant-adds-cryptocurrency-mining-units-57467392>.

⁶ Support.com, *Merger Announcement* (Mar. 22, 2021), <https://corporate.support.com/wp-content/uploads/2021/03/Greenidge-SPRT-Merger-Announcement-032221-FINAL.pdf>.

⁷ *See, e.g.*, at 14 (“Expansion to new sites: Active development pipeline of new sites expected to achieve at least 500 MW of mining by 2025; Active development pipeline of new sites expected to achieve at least 500 MW of mining by 2025; ...”); *Id.* at 30 (“Atlas Entities own and operate 1,164 MW (gross) of merchant power generation assets in New York and New England”)

In addition, Greenidge’s existing Title V Permit allows the plant to operate two diesel backup generators. We understand that to properly cool the thousands of data mining units, significant temperature control is needed onsite. Additional backup generators will likely be needed in the case of power outages or when the facility will need to send MWs to the grid to continue its obligations as a peaking unit, which will likely increase over time with extreme weather events. Moreover, most diesel generators will not just operate in outages or during peaking times, they also need to run regularly for maintenance. Additional diesel generators will increase GHGs and decrease local air quality even further than imagined above – the generators “can release 200 to 400 times as much smog-forming nitrogen oxides per megawatt as a new natural gas plant, and 10 times as much as a coal plant,” and there are toxic pollutants in the exhaust.⁸

When the DEC evaluates the renewal of the Title V permit at this facility, which has fundamentally changed its operations from a peaker plant to a 24/7 bitcoin mining data center, the DEC should take a hard look at its GHG emissions and whether changes in operating conditions are consistent with the CLCPA commitments, described more fully below.⁹ We also request that the DEC scrutinize the permit application and plant operations for possible triggering of new source review and prevention of significant deterioration requirements, due to the wholesale repurposing of this facility by its new owners.

In light of this possibly precedent-setting decision and the projected increases of GHGs on the site, the DEC should require that the facility prepare a public participation plan for public outreach about the Title V permit application, per 6 NYCRR Section 621.3(a)(3). The DEC must allow for the participation of interested community members and groups, as well as those directly impacted by the facility, for a full and accurate environmental impact assessment. We request that the DEC initiate a review pursuant to the State Environmental Quality Review Act (“SEQRA”) for the Title V permit assessment, serve as lead agency, and initiate a full Environmental Impact Statement (“EIS”).

We also request that the DEC hold an adjudicatory hearing under 6 NYCRR Section 624 to determine “whether the department’s review raises substantive and significant issues” and “where any comments received from members of the public or other interested parties raise substantive and significant issues relating to the application.” 6 NYCRR § 621.8(b).

⁸ *Dirty diesel generators test EPA, demand-response industry*, E&E News, Jul. 10, 2012, at <https://www.eenews.net/stories/1059967047>.

⁹ *Gas plant permit policy still murky*, Politico, Jan. 27, 2021, (“We have the ability to ask questions of project proponents pursuant to CLCPA,” Seggos responded. “We’re making sure we’re asking the important climate questions so we don’t have a regrets scenario.”), at <https://subscriber.politicopro.com/states/new-york/city-hall/whiteboard/2021/01/27/gas-plant-permit-policy-still-murky-9425259>.

THE SCOPE OF THE PROBLEM ACROSS NEW YORK STATE

The DEC's action on the Title V permit for Greenidge will likely have far-reaching impacts across the state. Operators of data centers and bitcoin mining units are hungry for space and fossil fuels. "In 2014, data centers in the U.S. consumed an estimated 70 billion kWh, representing about 1.8% of total U.S. electricity consumption...U.S. data centers are projected to consume approximately 73 billion kWh in 2020."¹⁰

The scope of the problem in New York may be significant. Greenidge aims to help other power generators in the so-called blockchain ecosystem to replicate its model.¹¹ And the Greenidge power plant is one of nearly 30 power plants in upstate New York with the potential to be converted to full-time operation for Bitcoin mining and other high-energy data tasks.¹²

At present, at least two of the region's power plants are proceeding with plans for full-time data center conversion. For example, Beowulf Energy, which owns the Cayuga facility in Lansing, New York and the Somerset plant in Barker, New York, has plans to convert the facilities to data centers that would operate at 500 MW and 100 MW, respectively.¹³ If approved, these two plants in Lansing and Barker could operate at a combined maximum capacity that is six times that of Greenidge. The GHG emissions from these two plants alone could be over **6 million tons** of CO₂eq.

Other towns in New York State have already grappled with this problem. For example, due to increased GHG emissions and increased demand for electricity to power these data centers, electricity prices for residential customers increased as well, prompting at least one local utility in Plattsburgh, New York to declare a moratorium on Bitcoin data mining operations.¹⁴ We encourage the state to comprehensively address this looming threat to CLCPA compliance, rather than leaving it to town-by-town fights.

MEETING OUR CLCPA COMMITMENTS WILL BE DIFFICULT IF FACILITIES LIKE THIS CONTINUE TO BE PERMITTED AS A MATTER OF COURSE

Additional scrutiny of the Greenidge air permit under the CLCPA is essential to prevent the floodgates opening for other retiring power plants or peaker plants to follow Greenidge's

¹⁰ See n.1., see also Inês Azevedo et al., *United States Data Energy Usage Report*, ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY (June 2016), <https://eta.lbl.gov/publications/united-states-data-center-energy>.

¹¹ Support.com, *Merger Announcement*, at 14 (Mar. 22, 2021), <https://corporate.support.com/wp-content/uploads/2021/03/Greenidge-SPRT-Merger-Announcement-032221-FINAL.pdf>.

¹² See U.S. Energy Information Administration Form 860 (2019) (reviewing power plants that are retired or will be retiring, or are peaker plants with excess generation capacity) at <https://www.eia.gov/electricity/data/eia860/>.

¹³ *Our Projects*, BEOWULF ENERGY (Feb. 8, 2021), <http://beowulfenergy.com/our-projects/>.

¹⁴ Peter Maloney, *Bitcoin Mining Helps Boost a Growing Data Center Market*, ENGINEERING NEWS-RECORD (Nov. 18, 2020), <https://www.enr.com/articles/50762-bitcoin-mining-helps-boost-a-growing-data-center-market>.



example. Without it, the state would face grave challenges to meeting the CLCPA requirements for reductions in New York's carbon emissions of 40 percent by 2030 and 85 percent by 2050.

Greenidge's new operations may also be non-compliant with and may undermine CLCPA energy source regulations, which require that 70 percent of the electricity generated in New York come from clean energy sources by 2030, and 100 percent by 2040. These targets apply to load serving entities that send power to the grid. All power produced by Greenidge serves the bitcoin data mining center exclusively and does not reach the grid, *i.e.*, Greenidge operates behind-the-meter. While Greenidge should be accountable to the CLCPA timetable, the CLCPA regulations may not apply to the behind-the-meter mode of operation—although emissions will significantly contribute to the very problem that the CLCPA seeks to address.

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The DEC must take action on Greenidge to prevent the increased GHG emissions from these 24/7 data centers from overwhelming New York's CLCPA goals. We ask the DEC to strongly consider the following, to make sure this plant does not fall in the regulatory loophole it seems to be exploiting, where neither the DPS nor the DEC can prevent a rapid escalation of GHG emissions from this power plant (and perhaps others soon behind it):

1. Initiate and lead a full EIS under SEQRA before issuance of any the air permit renewal for the Greenidge plant;
2. Require Greenidge to prepare a public participation plan for public outreach about the Title V permit application, per 6 NYCRR Section 621.3(a)(3);
3. Impose new limits on Greenidge's Title V permit to reduce GHG emissions as much as possible, to be more in line with its service to the grid as peaking unit;
4. Review Greenidge's operations to see if additional air quality requirements apply, such as a new source review/prevention of significant deterioration requirements, or additional limits on its use of diesel generators on-site;
5. Initiate and lead an adjudicatory hearing under 6 NYCRR Section 624.

Thank you for your consideration. Please contact either of us with any questions.

Sincerely,

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