



April 20, 2022

**VIA EMAIL & U.S. MAIL**

New York State Department of Environmental Conservation  
Division of Environmental Permits  
Attn: Christopher Hogan, Project Manager  
Bureau of Energy Project Management  
625 Broadway  
Albany, NY 12233-1750  
chris.hogan@dec.ny.gov

**Re: Response to Greenidge Generation LLC's Additional Information Letter for the Title V Application ID 8-5736-00004/00017**

Dear Mr. Hogan,

While we are dismayed that the decision on the renewal air permit has been delayed again, which allows Greenidge Generation LLC (“Greenidge”) to continue to expand its climate-killing proof-of-work cryptocurrency mining operations, we write to provide additional information in response to Greenidge Generation, LLC’s March 25, 2022 letter offering a so-called “Proposed Mitigation Package.” The Greenidge proposal falls laughably short of the requirements of New York’s Community Leadership and Climate Protection Act (“CLCPA”) because it would permit Greenidge to continue to substantially increase its greenhouse gas emissions, contrary to the requirements that DEC take steps now to reduce GHG emissions in order to meet statutory GHG emission reductions. Moreover, Greenidge fails to provide any substantive information as to how it will achieve what it has offered as its “Proposed Mitigation Package.” The Greenidge air permit should be denied for the same reasons as set forth in our November 19, 2021 comments,<sup>1</sup> because nothing has changed since then.

---

<sup>1</sup> Seneca Lake Guardian, The Committee to Preserve the Finger Lakes, Fossil Free Tompkins, Sierra Club, and Earthjustice Comments on Greenidge Generation’s Title V Application to the DEC, Nov. 19, 2021, at [https://earthjustice.org/sites/default/files/files/2021-11-19\\_slg-cpfl-fft-sc-ej-comments-to-dec.pdf](https://earthjustice.org/sites/default/files/files/2021-11-19_slg-cpfl-fft-sc-ej-comments-to-dec.pdf) (hereinafter “Nov. 19, 2021 Comments”).

First, Greenidge claims that it will attain a “40% reduction in GHG emissions from our current permitted level by the end of 2025 – a full five (5) years before the CLCPA’s statewide target date of 2030.”<sup>2</sup> This promise is utterly meaningless. Greenidge’s current permit allows the power plant to emit 641,000 tons of carbon dioxide annually. A 40% reduction would allow Greenidge to pollute approximately 384,600 tons of carbon dioxide. In 2021, Greenidge’s emissions were 278,846 tons of carbon dioxide, well below the company’s proposed “reduction.” And of course, this proposed “reduction” is in considerable contrast to the power plant’s annual emissions in 2011, 2012, 2013, 2014, 2015 and 2016 – which were zero. This so-called 40% “reduction” would continue to allow Greenidge to increase its operations and significantly increase its greenhouse gas emissions in contravention of the CLCPA.<sup>3</sup>

Greenidge also continues to compare its proof-of-work cryptocurrency mining operations to the power plant’s operations many years before Greenidge purchased the property in 2016 and going back to the 1990s when it operated as a coal plant. Again, this comparison is misleading, the true comparison should be its own operations in 2011, 2012, 2013, 2014, 2015 and 2016 when the facility’s annual CO<sub>2</sub> emissions were zero. The facility’s emissions in 2022 are also a massive increase over the 39,406 tons of CO<sub>2</sub> emitted in 2019, the year before Greenidge began mining proof-of-work cryptocurrency 24 hours a day, as shown in the emissions chart in Appendix A. The power plant’s operations since it began mining cryptocurrency in 2020 is a tremendous *increase* in emissions, and in no way a laudable “reduction” in emissions in the middle of a climate crisis, where the Co-Chair of IPCC Working Group III C recently warned that:

“It’s now or never, if we want to limit global warming to 1.5°C (2.7°F); without immediate and deep emissions reductions across all sectors, it will be impossible.”<sup>4</sup>

Greenidge also continues to tout that the greenhouse gas emissions from its power plant are only .3% of the total emissions in New York State.<sup>5</sup> Greenidge fails to mention that .3% of total emissions is still a massive amount of air pollution – hundreds of thousands of tons of greenhouse gas emissions and local air pollutants when otherwise there would be none, as was the case from 2011 through 2016, when the plant was not operating.

Next, Greenidge states that it will operate a “*zero-carbon emitting power generation facility by 2035*,”<sup>6</sup> but fails to even suggest how it plans to do so. First and foremost, the CLCPA requires “zero emissions,”<sup>7</sup> not zero carbon. In Greenidge’s March 25, 2022 letter, there are no details as to how the power plant’s owners will achieve zero emissions.

---

<sup>2</sup> Greenidge Generation LLC March 25, 2022 Supplemental Letter to DEC, at 2, (hereinafter “Greenidge Letter to DEC”), at [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/greenidge32522letter.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/greenidge32522letter.pdf).

<sup>3</sup> See Attachment A, Emissions Chart, and n.28 below.

<sup>4</sup> UN News, *UN Climate Report: It’s ‘Now Or Never’ To Limit Global Warming To 1.5 Degrees*, Apr. 4, 2022, <https://www.un.org/africarenewal/magazine/april-2022/un-climate-report-it%E2%80%99s-%E2%80%98now-or-never%E2%80%99-limit-global-warming-1-5-degrees>.

<sup>5</sup> Greenidge Letter to DEC, at 2.

<sup>6</sup> Greenidge Letter to DEC, at 2.

<sup>7</sup> CLCPA § 4, codified at N.Y. P.S.L. § 66-p(2).

If Greenidge is referring to carbon offset purchases to address the hundreds of thousands of greenhouse gas emissions from its fossil-fueled power plant,<sup>8</sup> Greenidge should know that the CLCPA does not permit any offsets for an electric generating facility.<sup>9</sup>

If Greenidge's plans are to combust hydrogen at the power plant, such operations will not be zero-emissions, nor will it likely be cost-effective or perhaps even technologically feasible.<sup>10</sup> In fact, hydrogen combustion will likely increase both climate-harming and local air emissions. First, hydrogen itself is a potent GHG, "100 times more potent than CO<sub>2</sub> emissions over a 10-year period (for equal emissions annually during this time)."<sup>11</sup> Second, hydrogen combustion generates NO<sub>x</sub> emissions, a harmful air pollutant and another indirect greenhouse gas<sup>12</sup> that in turn contributes to the formation of ozone, particulate matter, and acid rain.<sup>13</sup> In fact, combusting hydrogen may produce NO<sub>x</sub> emissions at six times the rate of combusting methane.<sup>14</sup> Hydrogen combustion at the Greenidge Generation Station will not qualify as a mitigation measure under the CLCPA. Indeed, such measures have been rejected by the DEC in both the Danskammer and Astoria permit decisions.<sup>15</sup>

In addition, even if Greenidge were able to demonstrate how it will achieve the "zero-emissions"<sup>16</sup> (not zero-carbon) requirements under the CLCPA, the facility will still fall short of compliance with the CLCPA due to numerous other co-pollutants emitted by the plant, as the emissions history at the power plant at Appendix A demonstrates.

---

<sup>8</sup> Greenidge, FERC Form-1, <https://www.ferc.gov/industries-data/electric/general-information/electric-industry-forms/form-1-electric-utility-annual>.

<sup>9</sup> N.Y. E.C.L § 75-0109(4)(f)-(i) discussing offsets approved under the CLCPA and specifically noting that "Sources in the electric generation sector shall not be eligible to participate in such mechanism."

<sup>10</sup> Nov. 19, 2021 Comments, at 35-38.

<sup>11</sup> Mark Brownstein & Beth Track, *Opinion: Houston Can Deliver Clean Hydrogen Energy but Must Manage the Climate Risks*, Hous. Chron. (Mar. 4, 2022), <https://www.houstonchronicle.com/opinion/outlook/article/Opinion-Houston-can-deliver-clean-hydrogen-16977639.php>; Ilissa Oeko & Steven Hamburg, *Climate Consequences of Hydrogen Leakage*, Atmospheric Chemistry & Physics (forthcoming, accepted for review Feb. 2022), <https://acp.copernicus.org/preprints/acp-2022-91/acp-2022-91.pdf>.

<sup>12</sup> Gerhard Lammel & Hartmut Grasl, *Greenhouse Effect of NO<sub>x</sub>*, 2 Env't Sci. Pollution Rsch. Inst. 40 (July 1995), <https://pubmed.ncbi.nlm.nih.gov/24234471/>.

<sup>13</sup> EPA, *Basic Information about NO<sub>2</sub>* (last updated June 2, 2021), <https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects>.

<sup>14</sup> Lew Milford et al., Clean Energy Grp., *Hydrogen Hype in the Air* (Dec. 14, 2020), <https://www.cleanegroup.org/hydrogen-hype-in-the-air/>; Earthjustice, *Reclaiming Hydrogen for a Renewable Future: Distinguishing Oil & Gas Industry Spin From Zero-Emission Solutions*, at 18, at [https://earthjustice.org/sites/default/files/files/hydrogen\\_earthjustice\\_2021.pdf](https://earthjustice.org/sites/default/files/files/hydrogen_earthjustice_2021.pdf).

<sup>15</sup> DEC, *Notice of Denial of Title V Air Permit, Astoria Gas* at 2 (Oct. 27, 2021) [https://www.dec.ny.gov/docs/administration\\_pdf/nrgastoriadecision10272021.pdf](https://www.dec.ny.gov/docs/administration_pdf/nrgastoriadecision10272021.pdf) (hereinafter "Astoria Title V Permit Denial"); DEC, *Notice of Denial of Title V Air Permit, Danskammer Energy Center* at 9-11 (Oct. 27, 2021), [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/danskammerdecision102721.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/danskammerdecision102721.pdf).

<sup>16</sup> CLCPA § 4, codified at N.Y. P.S.L. § 66-p(2).

Finally, Greenidge misleadingly claims that because it is currently operating that it does not create “additional in-state or upstream greenhouse gas emissions associated with the production or transmission of new sources of natural gas or other fossil fuels.”<sup>17</sup> New fossil gas is coming into the plant every day via pipeline. Regardless of it being an existing plant, that is additional fossil gas being transported that has its own “upstream” emissions and leakage. The climate impact from those upstream emissions is most concerning because methane is such a potent greenhouse gas.<sup>18</sup> This is particularly relevant as, historically, upstream emissions make up around 30-40% of sectoral emissions for electricity generation.<sup>19</sup> Under the CLCPA, upstream emissions from a fossil fuel-fired electric generating facility must be included in the calculation of greenhouse gas emissions, regardless of whether it is an operating or new power plant.<sup>20</sup>

\* \* \* \* \*

While Greenidge’s proof-of-work cryptocurrency mining operations create a virtual currency, its climate impacts and local pollution impacts are real. The increasing emissions at the plant are part of a global crisis and will prevent New York State from achieving its climate goals.

The time for action from the DEC is now. There is no room in New York State for one industry to be permitted to significantly increase their emissions, as every other industry seeks to scale down. The DEC must address climate pollution on all fronts, including this new and enormously energy-intensive proof-of-work cryptocurrency mining operation.

Nothing about the operations at this power plant has changed since January 2022, when the DEC said it would announce a decision on the permit – with the major exception that the operations at the plant are growing and its emissions are increasing.<sup>21</sup> Greenidge’s false claims of reductions and unspecified promises of future mitigatory actions are hyperbole that is not and cannot be CLCPA-compliant. Moreover, as we demonstrated in our November 19, 2021 comments,<sup>22</sup> the plant should be subject to both a new source review under the Clean Air Act

---

<sup>17</sup> Greenidge letter to DEC, at 3.

<sup>18</sup> United Nations Environment Programme, *Methane emissions are driving climate change. Here’s how to reduce them* (Aug. 2020) <https://www.unep.org/news-and-stories/story/methane-emissions-are-driving-climate-change-heres-how-reduce-them>; Justin Rowlett, BBC, *Cutting methane gas 'crucial for climate fight'* (May 2021) <https://www.bbc.com/news/science-environment-56933443>; Climate & Clean Air Coalition, *Methane* (“Methane emissions caused by human activities are one of the most significant drivers of climate change.”), <https://www.ccacoalition.org/en/slcp/methane>; Environmental Defense Fund, *Methane: A crucial opportunity in the climate fight*, <https://www.edf.org/climate/methane-crucial-opportunity-climate-fight#:~:text=Methane%20has%20more%20than%2080,by%20methane%20from%20human%20actions>.

<sup>19</sup> N.Y. Climate Action Council, Meeting Presentation (July 2021), at <https://climate.ny.gov/Climate-Action-Council/Meetings-and-Materials>.

<sup>20</sup> The CLCPA requires accounting of GHG emissions associated with the extraction and transmission of fossil fuels imported into the state using a 20-year time horizon. This form of net accounting necessitates using upstream fossil fuel cycle factor data that cover extraction, processing and transmission/distribution of natural gas, coal, and petroleum into the state. N.Y. E.C.L. § 75-0105(3). See also Astoria Title V Permit Denial at 5.

<sup>21</sup> See [Appendix A](#) (number of miners column).

<sup>22</sup> See Nov. 19, 2021 Comments.

based on the facility's fundamentally altered purpose, and a full Type I review under the State Environmental Quality Review Act, before it can continue operating. DEC should deny Greenidge's Title V Renewal immediately.

*Respectfully submitted,*

Kathryn Bartholomew  
Chair  
Roger Downs  
Conservation Director  
**Sierra Club**  
Atlantic Chapter  
744 Broadway  
Albany, NY 12207

Mandy DeRoche  
Deputy Managing Attorney  
Jessamine De Ocampo  
Associate Attorney  
**Earthjustice**  
48 Wall Street  
New York, NY 10005

Joseph Campbell  
President  
Yvonne Taylor  
Vice President  
**Seneca Lake Guardian**  
P.O. Box 333  
Watkins Glen, NY 14981

Abi Buddington  
Secretary  
**Committee to Preserve the Finger Lakes**  
P.O. Box 505  
Penn Yan, NY 14527

Irene Weiser  
Coordinator  
**Fossil Free Tompkins**  
Ithaca, NY 14850

**Appendix A**  
**Facility Emissions (not including upstream emissions)<sup>23</sup>**

Year	Days of Operation <sup>24</sup>	Approx. Annual Capacity Factor <sup>25</sup>	CO2 (tons/ year)	NOx (tons/ year)	SO2 (tons/ year)	# of Miners	Fuel source
2009	267	34%	455,795	371.69	415.584	0	Coal
2010	358	65%	599,105	560.999	448.879	0	Coal
2011	0	0%	0	0	0	0	none
2012	0	0%	0	0	0	0	none
2013	0	0%	0	0	0	0	none
2014	0	0%	0	0	0	0	none
2015	0	0%	0	0	0	0	none
2016	0	0%	0	0	0	0	none
2017	135	17%	124,009	170.26	0.615	0	Gas
2018	147	19%	119,304	94.112	0.604	0	Gas
2019	48	6%	39,406	7.932	0.199	0	Gas
2020	343	42%	228,303	49.51	1.155	6,900 miners <sup>26</sup>	Gas
2021	353	98.5% <sup>27</sup>	278,846	50.389	1.412	15,300 miners <sup>28</sup>	Gas
2022	Every day	Increasing	91,530 (for Jan. 1, 2022 – Mar. 31, 2022) <sup>29</sup>	-	-	32,500 miners <sup>30</sup>	Gas

<sup>23</sup> EPA, *Power Sector Emissions Data*, <https://www.epa.gov/airmarkets/power-sector-emissions-data>.

<sup>24</sup> Days with less than three hours of operation were not included.

<sup>25</sup> Nov. 19, 2021 Comments at n.16.

<sup>26</sup> Greenidge “launched a commercial data center for Bitcoin mining and blockchain services in January 2020, and as of December 31, 2020, [it] had approximately 6,900 miners.” Greenidge Generation Holdings Inc., Sec. & Exch. Comm’n, *Form S-1 Registration Statement* at 2 (Oct. 5, 2021), <https://sec.report/Document/0001193125-21-291578/>.

<sup>27</sup> According to EPA’s *Power Sector Emissions Data*, in 2021, Greenidge operated nearly every day, for a full 24 hours a day. In contrast, in 2020, while they operated most days, their hours of operation varied between 6-18 hours a day. The increase in hours of operations accounts for the more than doubling rate of their capacity factor.

<sup>28</sup> Greenidge added an additional 7,400 miners in early 2021 and “as of July 31, 2021, [it] had approximately 14,300 miners...” and by September 30, 2021, [it] “had approximately 15,300 miners in operation. *Id.*”

<sup>29</sup> Annualized CO2 emissions for 2022, if no more miners are installed (*cf.* n.30) (18,100 more miners ordered), based on these quarterly numbers, there will be approximately 366,120 tons of CO2, conveniently still under the 384,600 tons of CO2 the company plans to voluntarily reduce from its permit.

<sup>30</sup> As of July 31, 2021 Greenidge had “outstanding orders pending for approximately 800 Antminer S19 Pros, 4,500 Antminer S19j Pros, 800 Antminer S19js and 500 Whatsminer M30s.” In August / September 2021, Greenidge placed an additional order for 11,500 S19j Pro Bitmain Antminers. Greenidge thus appears to be expecting an additional 18,100 miners onsite: “With the full deployment of these new miners, our total fleet is expected to comprise approximately 32,500 total miners”. Greenidge Generation Holdings Inc., Sec. & Exch. Comm’n, *Form S-1 Registration Statement* at 2 (Oct. 5, 2021), <https://sec.report/Document/0001193125-21-291578/>.