

May 2, 2023

**Memorandum Opposing Statements by Buncombe County in their Memorandum Supporting Compliance with N.C. Gen. Stat. § 160D-107.**

To: Buncombe County Board of Commissioners

The memorandum fails on the following grounds:

1. Cryptocurrency mining uses the same mix of electricity generated for any other residential, commercial or light industrial use in Buncombe County and produces no greenhouse gas emissions in and of itself. The county incorrectly attributes the greenhouse gas emissions created by fossil fuel electrical generation to a single industry user and does not extend the same critical analysis to say the banking industry, electronic entertainment, social media, or manufacturing of tangible products as examples.

The current average mix of resources supplying Duke Energy North Carolina customers includes Gas (34%), Nuclear (22%), Coal (17%), Hydro (3%), Renewables (10%), Energy Storage and Energy Efficiency (8%) and Other (6%)<sup>1</sup>

Additionally, the Bitcoin Mining Council, a consortium of over 50 industry specialists reports that in Q4 2022 Bitcoin mining:

- i. Used an inconsequential amount of global energy (17 bps) and generates negligible carbon emissions (11 bps)
- ii. Bitcoin mining hash rate is up 45% YoY while energy usage is up 25% YoY, due to an increase in efficiency of 16 %
- iii. Bitcoin is the industry leader in sustainability with a 58.9% sustainable energy mix.<sup>2</sup>

The memorandum states that it “seeks to develop standards and mitigation methods for intensive land uses that may pose detrimental harm to the natural environment...” but has failed to provide any evidence of “detrimental harm to the natural environment.”

2. The memorandum statement on e-waste was based partly on testimony from Commissioner Wells stating, “I think those little servers or whatever are about the size of a toaster oven and about after 12 months or so they're having to replace those so you do end up with a pretty significant amount of E-Waste.”<sup>3</sup>

Commissioner Wells incorrectly stated the industry retools annually creating a high degree of turnover in computer hardware. In fact the industry retools every four years and models from the

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<sup>1</sup> [Duke Energy 2021 data](#) 2023 Prospective Product Content Label

<sup>2</sup> [Bitcoin Mining Council 4Q2022 Presentation](#)

<sup>3</sup> [Buncombe County Board of Commissioners' Briefing](#) (February 21, 2023) 1:03:13

previous retooling cycle continue to operate where electrical costs are lowest.

According to the Global E-Waste Monitor (2017) this has become an emerging problem worldwide, with an estimated 40 million tons of e-waste being generated every year, with less than 30 percent being recycled. The remaining e-waste materials are discarded in landfills or incinerated.<sup>4</sup> Industry reports Bitcoin mining only contributes to less than one-tenth of a percent or 0.075% of all e-waste produced yearly.<sup>5</sup>

3. Noise and other local impacts to communities is consistent with any other land use plan that would be in a light industrial or commercial zoning. The County has a noise ordinance that should mitigate similar concerns under existing guidelines. In fact, local noise ordinances exempt “Noises resulting from the normal operations of any commercial or industrial enterprise, except electronically amplified sound.”<sup>6</sup>

4. The County has neither shown that a pending application is creating any hardship of time requiring it to develop standards and mitigation methods nor any detrimental harm to the natural environment through a zoning request to change a parcel otherwise designated as light industrial or commercial as a standard land use plan for such an application.

5. No evidence of other alternative solutions are outlined in this memorandum. It is not sufficient to satisfy the mandate of N.C.G.S. 160D-107 by merely stating that there were no alternatives to consider. The strong showing at this meeting refutes the contention that there are no alternatives to consider. To avoid a statutory violation, this board should postpone approving the moratorium and create a task force to study alternatives to an outright moratorium. It could also evaluate how cryptocurrency mining in this county could improve payment systems and new employment opportunities. This board should not just simply confine its study to the unincorporated areas and the subject of this moratorium.

The County erroneously seeks to specifically define cryptocurrency mining as a specific land use, separate and apart from other data centers.

N.C. Gen. Stat. § 105-164.13(55a) is effective January 1, 2016 and provides the sale at retail or the storage, use, or consumption in this State of “electricity for use at a qualifying datacenter and datacenter support equipment to be located and used at the qualifying datacenter” on or after January 1, 2016 is exempt from sales and use tax.<sup>7</sup>

Clive Humby, a UK Mathematician and architect of Tesco’s Clubcard, 2006 is widely credited as the first to coin the phrase, “Data is the new oil. It’s valuable, but if unrefined it cannot really be used. It has to be changed into gas, plastic, chemicals, etc to create a valuable entity that drives

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<sup>4</sup> EPA Science Matters: [Helping Communities Manage Electronic Waste](#)

<sup>5</sup> Bitcoin Magazine: [HOW BITCOIN MINING IS SOLVING OUR E-WASTE CRISIS](#)

<sup>6</sup> [Buncombe County Article IV Sec 26-184 \(4\)](#).

<sup>7</sup> <https://www.ncdor.gov/important-notice-qualifying-datacenter>

profitable activity; so must data be broken down, analyzed for it to have value.”<sup>8</sup>

At the time of its enactment the statute was written very narrowly around the data center design of its day and it was never contemplated that a data center could produce an intangible product. Therefore, what Buncombe County is attempting to do is regulate what type of data can be refined and stifle innovation in Buncombe County, by narrowing its land use definition to only one niche use of data in direct conflict with the state’s definition which intends to offer sales and use tax incentives to create economic development in the state. The County’s proposed action would constitute a gross regulatory overreach that would stifle innovation and seek to pick winners and losers in technology.

The Memorandum captioned ***Buncombe County Board of Commissioners Request for Board Action Meeting Date: 5/2/2023*** is the first statement by the County claiming a need to protect the public interest and welfare of the residents. This memorandum should fail as it attempts to raise the level of the Board’s action to a need for public safety and has not supported that claim with any imminent threat. This proposal would also give preferential treatment to centralized data businesses like Google or Pornhub that extract and refine data in compliance with the state’s definition for sales and use tax exemptions. It would penalize Digital Asset Data Centers that specialize in producing a decentralized intangible asset, a use not contemplated or existing on an industrial level at the time of the statute, does not.

The Commission has failed to support that language with findings and the Board should deny the moratorium based on insufficient background information to support the Planning Commission’s findings.

Respectfully submitted,



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<sup>8</sup> <https://www.linkedin.com/pulse/data-new-oil-llew-adamson>