

BIT DIGITAL

February 18, 2022

The Hon. Elizabeth Warren
United States Senator
309 Hart Senate Office Building
Washington, DC 20510

Dear Senator Warren and Colleagues:

This document is in response to the questions posed to our company in your letter received on January 27.

As a sustainability-focused bitcoin miner with operations across the U.S., we welcome this opportunity to share information regarding our evolving operation and industry. At Bit Digital, we understand that to be successful, our company's operations must drive innovation and economic progress for all members of society, while doing so in a sustainable and eco-friendly manner.

Both our executive leadership team and key investors agree that it is correct and warranted for policymakers to demand that our nation's digital mining industry take shape in a manner that contributes to the long-term economic and environmental benefit of all.

With almost 170 million viewers recently witnessing an array of digital asset related advertisements and commercials during this year's Super Bowl webcast and telecast, there is little doubt that this technological revolution is upon us all. Fortunately, the United States stands well-positioned to maintain and grow its prominent status in this new financial frontier—while doing so in a more eco-friendly manner than nearly any other participating country around the globe.

We believe that Bit Digital is, and will continue to be, a leading partner in helping achieve and shape the environmental mitigation objectives that are shared by many policymakers. Our company welcomes this inquiry and dialogue, as we have a strong commitment to environmental sustainability, and the growing track-record to prove it.

Enclosed please find additional information and data provided by our company.

Sincerely,



Bryan Bullett
Chief Executive Officer
Bit Digital, Inc.

Cc: Offices of Hon. Sheldon Whitehouse, Hon. Jeffrey A. Merkley, Hon. Margaret Wood Hassan, Hon. Edward J. Markey, Hon. Rashida Talib, Hon. Jared Huffman, and Hon. Katie Porter

Investor Notice

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risks, uncertainties and forward-looking statements described under “Risk Factors” in Item 3.D of our most recent Annual Report on Form 20-F for the fiscal year ended December 31, 2020. If any material risk was to occur, our business, financial condition or results of operations would likely suffer. In that event, the value of our securities could decline, and you could lose part or all of your investment. The risks and uncertainties we describe are not the only ones facing us. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. In addition, our past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results in the future. Future changes in the network-wide mining difficulty rate or Bitcoin hash rate may also materially affect the future performance of Bit Digital’s production of bitcoin. Additionally, all discussions of financial metrics assume mining difficulty rates as of September 2021. See “Safe Harbor Statement” below.

Safe Harbor Statement

This document may contain certain “forward-looking statements” relating to the business of Bit Digital, Inc., and its subsidiaries. All statements, other than statements of historical fact included herein are “forward-looking statements.” These forward-looking statements are often identified by the use of forward-looking terminology such as “believes,” “expects,” or similar expressions, involving known and unknown risks and uncertainties. Although the company believes that the expectations reflected in these forward-looking statements are reasonable, they do involve assumptions, risks and uncertainties, and these expectations may prove to be incorrect. Investors should not place undue reliance on these forward-looking statements, which speak only as of the date of this press release. The Company’s actual results could differ materially from those anticipated in these forward-looking statements as a result of a variety of factors, including those discussed in the Company’s periodic reports that are filed with the Securities and Exchange Commission and available on its website at <http://www.sec.gov>. All forward-looking statements attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by these factors. Other than as required under the securities laws, the Company does not assume a duty to update these forward-looking statements.

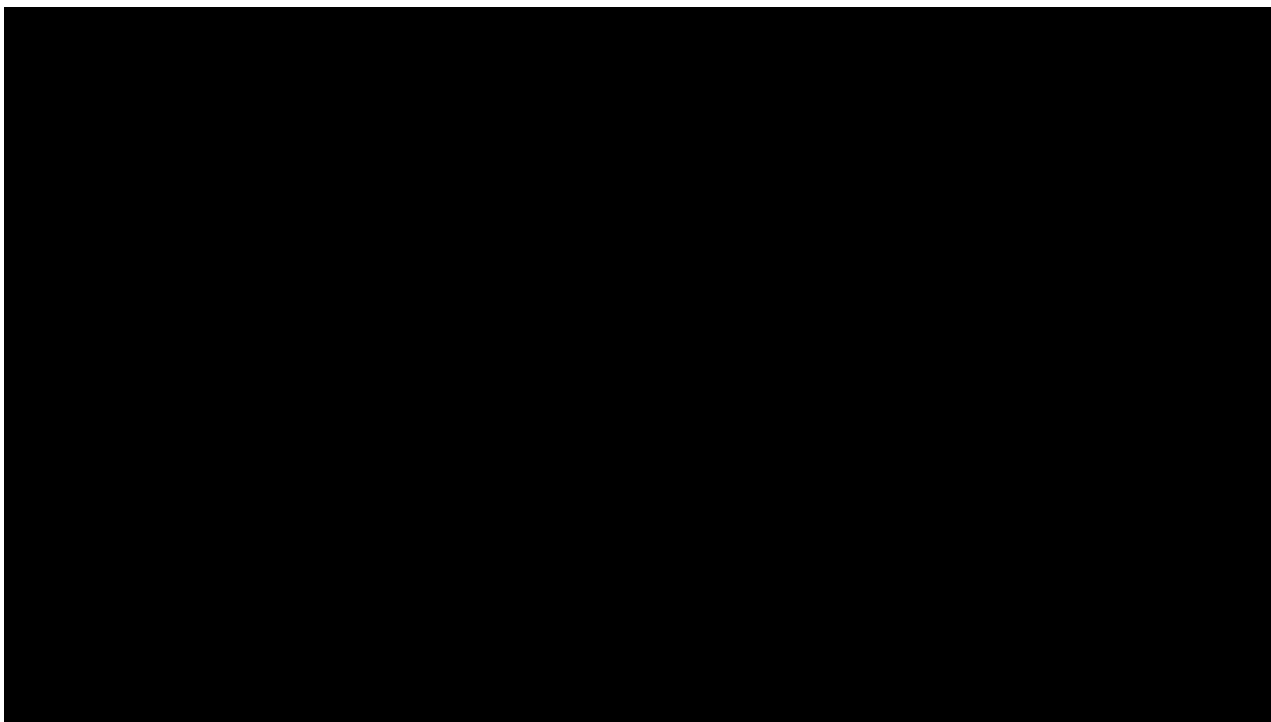
QUESTION 1: Please describe your U.S.-based cryptomining facilities, including where they are located, the mining capacity of each facility, and the number of mining units at each facility.

Bit Digital does not currently own cryptocurrency mining facilities. The Company has signed services agreements with third party hosting partners in North America. Our partners operate specialized mining data centers, where pursuant to our agreements, they install and operate our miners and provide IT consulting, maintenance, and repair work on-site on our behalf.

As of December 31, 2021, Bit Digital's miners operated at five such third-party sites in the U.S. Our mining facilities in Nebraska and Texas are owned and operated by Compute North LLC. Our mining facilities in New York State are maintained by BlockFusion USA, Inc. and Digihost Technology Inc. Our mining facility in Georgia is owned and operated by Core Scientific, Inc.

The following information summarizes our operations as of December 31, 2021 at each third-party facility, and total power capacity contracted by Bit Digital with each partner, including unidentified future sites.¹

Table 1: Summary of third-party hosting facilities as of December 31, 2021



Redacted for Confidentiality Purposes

¹ Reflects Bit Digital's contracted capacity, not total site capacity. Bit Digital does not own the sites, and only has current or future access to power for which it has contracted, not the total site capacity.

The following is an overview of significant Bit Digital operating and/or identified third-party data center sites, including commentary on power generation sources: ²

Compute North, Kearney, NE

Chosen for its ideal location in America's heartland and its direct access to a variety of energy sources, this 100MW-capacity data center utilizes a containerized model, built to optimize power and heat management in a tightly integrated framework, specifically designed for high-computing needs. Key statistics:

- MW: 100
- Provider: NPPD
- 65%+ Carbon-Free

Compute North, Big Spring, TX

Our Texas data center facility, strategically located for access to cost-effective energy sources, is a former World War II hanger. It is a large, robust building with the core infrastructure to adapt to the evolving needs of blockchain colocation. Key statistics:

- MW: 15
- Provider: MP2
- 33.7% Carbon-Free

Blockfusion USA, Niagara Falls, NY

- Blockfusion's Frontier Ave site is located in Niagara Falls, New York and pulls electricity from NYISO's Western Zone (Zone A). National Grid is the local distribution utility and Blockfusion has the ability to pull up to ~40MW's of electricity from their system.
- Upstate New York benefits from abundant hydroelectric generation as well as carbon free nuclear generation. The electricity used at Frontier Ave is supplied by the upstate New York generation mix, which is more than 90% zero emissions, and 50% renewable.
- This data was published by the NYISO in it's annual "Power Trends" report, but also highlighted in the recently issued "10 GW Distributed Solar Roadmap" (DMM CASE 21-E-0629) by the NYS Department of Public Service, which stated, *"Although Downstate development carries unique challenges, it also has crucial benefits. According to the NYISO's Power Trends 2021 report, the Upstate region, defined as NYISO load zones A – E, is supplied by 90% zero-emission resources, while the Downstate region (zones F - K) is supplied by 77% fossil fuel-fired generation."* Having abundant zero emissions generation played a significant role in site evaluation and ultimately choosing Western New York as a location for our facility.
- Blockfusion has further reduced its carbon footprint through its participation in demand side reduction programs. Due to the unique flexibility of its load, Blockfusion's Frontier Ave facility offers significant benefits to grid reliability, but can shut down load during peak times of

² Information provided by hosting partners.

demand. Shutting down power during peak demand periods means that the grid operator won't need to import fossil fuel generation from a neighboring ISO, or fire up a rapid start generation unit to meet the increase in demand. Typically, the units dispatched to meet increases in demand are fueled by Natural Gas – given their quick response time.

- Blockfusion is also in the process of entering into a long-term Community Solar Agreement with its local supply partner. This deal would enable Blockfusion to remotely connect their utility account to a nearby large-scale solar project, and receive credits for the participation. Committing to a long-term contract to be the “Anchor” subscriber helps aid in the development of renewable generation projects, and also helps NYS achieve its ambitious renewable energy goals.

Blockfusion will be the anchor on a 6.25MWdc project which produces approximately 9,000 MWh's of renewable electricity each year. The 9,000 MWh's of renewable electricity offsets approximately 2,780 metric tons of carbon, which would have been generated by fossil fuel generation.

Digihost Technologies, Buffalo, NY

- Digihost's East Delevan site is located in Buffalo, New York and pulls electricity from NYISO's Western Zone (Zone A). Upstate New York benefits from abundant hydroelectric generation as well as carbon free nuclear generation. East Delevan has the capability to pull roughly 19 MW's of electricity directly from National Grid.
- The electricity used at East Delevan is supplied by the upstate New York generation mix, which is more than 90% zero emissions, and 50% renewable.
- This data was published by the NYISO in it's annual “Power Trends” report, but also highlighted in the recently issued “10 GW Distributed Solar Roadmap” (DMM CASE 21-E-0629) by the NYS Department of Public Service, which stated, *“Although Downstate development carries unique challenges, it also has crucial benefits. According to the NYISO's Power Trends 2021 report, the Upstate region, defined as NYISO load zones A – E, is supplied by 90% zero-emission resources, while the Downstate region (zones F - K) is supplied by 77% fossil fuel-fired generation.”* Having abundant zero emissions generation played a significant role in site evaluation and ultimately choosing Western New York as a location for our facility.
- In addition to the physical electricity being more than 90% emission free, Digihost has entered into a long-term Community Solar contract for its East Delevan facility. This enables Digihost to remotely connect to a New York State solar facility, and receive credits for its participation in the project. This long-term commitment aids in the development of current and future renewable projects, and helps NYS achieve its ambitious renewable energy goals. Digihost will be the anchor subscriber on a 6.25 MWdc project, which will generate more than 9,000 MWh's of clean electricity each year. This is enough electricity to power roughly 100 average homes each year. The 9,000 MWh's of renewable electricity offsets approximately 2,780 metric tons of carbon, which would have been generated by fossil fuel generation.

Digihost Technologies, North Tonawanda, NY

- Digihost's 1070 Erie Ave location is located in North Tonawanda, NY. This facility is also located in NYISO's Western Zone (Zone A).
- This facility will generate electricity primarily fueled by Natural Gas, and will supply on site load. It also includes a heat recapturing system which powers a steam turbine, increasing load by 50% with no additional fuel or carbon emissions.
- Digihost is working with local partners to source physical Renewable Natural Gas (RNG) produced by nearby landfill & Ag projects that generate the Natural Gas.
- The RNG will be transported via firm pipeline capacity from the RNG facility and to the end use facility in North Tonawanda.
- Digihost is planning to source approximately 5,100 Dths of this RNG daily, or roughly 50% of its daily natural gas consumption.
- Digihost plans on purchasing the remainder of its natural gas supply in the form of "Responsibly Sourced Gas" (RSG) from nearby vertical wells in New York State. This Natural Gas is produced by companies whose operations have been verified as meeting certain environmental standards including air emissions, water stewardship and environmental impact.

QUESTION 2: What is the annual electricity consumption used for Bitcoin and other cryptocurrency mining at each of your facilities in the United States? What are the estimated emissions, in terms of metric tons of carbon dioxide equivalent, produced by generating this energy?

The following table presents Bit Digital’s total energy consumption and estimated CO2 emissions for the twelve months ended December 31, 2021, based on internal calculations. Please see table footnote for details on the calculation methodology used. For conservatism, this table presents what we believe to be a high estimate of CO2 emissions, as the underlying data source is national marginal CO2 emissions, and Bit Digital’s facilities generally operate in locations with a significantly higher percentage of carbon-free generation sources than the national average (see also 2. a. above). As a result, Bit Digital’s actual 2021 carbon emissions were likely significantly lower than the estimate below.

Table 2: Total energy consumption and estimated CO2 emissions for the twelve months ended December 31, 2021

Site Owner/Operator	Location	KWh	CO2 tons ⁽¹⁾
Compute North	Big Spring, TX	1,733,742	1,229
Compute North	Kearney, NE	111,909,603	79,344
Blockfusion USA	Niagara Falls, NY	12,777,375	9,059
Digihost Technologies	Buffalo, NY	1,102,090	781
Core Scientific	Dalton, GA	2,370,181	1,680
Total		129,892,991	92,094

Notes:

(1) Calculation methodology based on the Economic Input-Output Life Cycle Assessment (EIO-LCA), Scope 2, Carnegie Mellon University, <http://www.eiolca.net/>. Emission factor: 1,562.4 lbs CO2/MWh \times (4.536 \times 10⁻⁴ metric tons/lb) \times 0.001 MWh/kWh = 7.09 \times 10⁻⁴ metric tons CO2/kWh (AVERT, U.S. national weighted average CO2 marginal emission rate, year 2019 data).

QUESTION 2. a: Your website states that “The majority of our fleet runs on carbon-free energy, making us leaders in sustainability within the bitcoin mining industry,” and that in the U.S. your operations are 47% carbon-free. Please describe the sources of this electricity.

As of December 31, 2021, Bit Digital’s run-rate percentage of carbon-free energy generation sources for our deployed miner operations is 67.3%.³ The generation data supporting this calculation, based on information from publicly available sources and hosting partners, is as follows:

Table 2a-1.1: Energy generation sources

Blockfusion USA and Digihost Technology New York Upstate (Zones A-E) ⁽¹⁾	
Generation Source	%
Hydro	42.7%
Nuclear	41.2%
Wind	6.5%
Hydro Pumped Storage	0.6%
Other Renewables	1.2%
Gas	7.0%
Oil	0.0%
Dual Fuel (Gas/Oil)	0.7%
Coal	0.2%
Total	100.0%
Carbon-Free	90.0%

Table 2a-1.2: Energy generation sources

Compute North Kearney, NE ⁽²⁾	
Generation Source	%
Nuclear	48.6%
Wind	8.3%
Hydro	8.0%
QLG ⁽³⁾	0.1%
Purchases	9.9%
Gas/Oil	5.2%
Coal	19.9%
Total	100.0%
Carbon-Free	65.0%

Table 2a-1.3: Energy generation sources

Compute North Big Spring, Texas ⁽⁴⁾	
Generation Source	%
Wind	24.8%
Nuclear	4.9%
Solar	3.8%
Other	1.9%
Storage	0.2%
Natural Gas	51.0%
Coal	13.4%
Total	100.0%
Carbon-Free	33.7%

Table 2a-1.4: Energy generation sources

Core Scientific Dalton, Georgia ⁽⁵⁾	
Generation Source	%
Nuclear	N/A
Coal	N/A
Natural Gas	N/A
Hydro	N/A
Solar	N/A
Total	N/A
Carbon-Free	N/A

Notes:

(1) Source: New York Independent System Operator (NYISO), <https://www.nyiso.com/-/fuel-for-the-wire-power-trends-2020>.

(2) Source: Nebraska Public Power District, <https://www.nppd.com/powering-nebraska/energy-resources>.

(3) Qualified Local Generation includes renewable energy facilities installed by wholesale customers and in NPPD retail communities.

(4) Source: Compute North LLC.

(5) Source: Dalton Utilities. Note: percentages not publicly available.

³ Although Core Scientific’s Dalton, GA site includes carbon-free generation sources including nuclear, hydro and solar, for purposes of this analysis the site is assumed to be 0% carbon-free, as the breakout is not currently publicly available.

Based on the above generation sources and Bit Digital's deployed operations as of December 31, 2021, we calculate Bit Digital's run-rate percentage of carbon free energy as follows:

Table 2a-2: Calculation of carbon-free energy percentage as of December 31, 2021

Site Owner/Operator	Location	Run-Rate Power Consumption (MwH)	Carbon-Free Percentage
Blockfusion USA	Niagara Falls, NY	5.2	90.0%
Digihost Technologies	Buffalo, NY	0.3	90.0%
Compute North	Kearney, NE	18.9	65.0%
Compute North	Big Spring, TX	2.0	37.5%
Core Scientific ⁽¹⁾	Dalton, GA	0.3	0.0%
Total / Weighted Average		26.7	67.3%

Notes:

(1) Although Core Scientific's Dalton, GA site includes carbon-free generation sources including nuclear, hydro and solar, for purposes of this analysis the site is assumed to be 0% carbon-free, as the breakout is not currently publicly available.

QUESTION 2. b: You have a goal of 100% clean energy usage. What is your timeline for achieving that goal, and what measurable intermediate steps have you set in working towards that?

Bit Digital has taken a step towards decarbonization by signing the Crypto Climate Accord (CCA). Inspired by the Paris Climate Agreement, the CCA is a private sector-led initiative for the entire crypto community focused on decarbonizing the cryptocurrency and blockchain industry in record time. As a CCA signatory, Bit Digital has committed to achieve net-zero emissions from the electricity consumption associated with its respective crypto-related operations by 2030 and to report progress towards this net-zero emissions target using best industry practices.

Bit Digital has also become a member of the Bitcoin Mining Council (BMC). The BMC's mission is to promote industry transparency, share best practices and educate the public on the benefits of bitcoin and mining. Bit Digital has participated in the latest BMC survey of sustainable power and is currently refining its strategy to further prioritize the use of carbon-free energy to support Digital's goal of operating on 100% carbon-free power.

To move tangibly towards our goal of 100% clean energy usage, our Company has added more clean power through recent hosting services agreements.

One of our key new locations is in Niagara Falls, New York: a former coal-burning power plant that has been converted into an innovative, sophisticated, and nearly carbon-free operation. Through our partnership with Blockfusion USA, Inc., who actively manages the site, this operation directly and indirectly employs more than 50 area residents via well-paying, skilled jobs (with plans to rapidly increase this workforce). Our energy at the Niagara Falls facility is 90% from carbon-free sources, notably hydropower provided by the nearby Robert Moses Niagara Hydroelectric Power Station (one of the largest in hydro generation sites the nation).

Our efforts in Niagara Falls have been recently chronicled by the *Wall Street Journal* and NBC. And many municipal leaders and constituents have recognized the forward progress—practically and symbolically—in converting a former fossil fuel facility to use clean power. The coal is gone, but this renewed facility has brought back jobs to an economically depressed area.

Additionally, working with certain hosting partners, Bit Digital has evaluated opportunities to participate in the development of new renewable energy generation projects as a customer and/or a sponsor. In such scenarios, bitcoin mining is generally envisioned as a base load customer for a project with capacity in excess of the miner client that would be available to the power grid.

Finally, Bit Digital has also evaluated opportunities to utilize novel and emerging technologies with potential to deliver green power at scale, as potential alternative energy sources. We have done so in part through our relationship with a leading CleanTech-focused investment company.

QUESTION 2. c: You also claim that “We aim to contribute to the acceleration of bitcoin’s decarbonization and act as role models in our industry, responsibly stewarding digital assets.” Please describe what other actions you are taking to work towards this stated goal.

Bit Digital has engaged Apex ESG, to monitor, set targets, provide transparency, and drive sustainability initiatives. This involves becoming one of the first publicly listed bitcoin miners to receive an independent ESG rating on its operations.

Additionally, Bit Digital recently adopted an internal Environmental Policy. This policy is designed to articulate the approach that Bit Digital takes in establishing its environmental objectives and addressing its environmental impact. This manifests through a commitment to identifying and addressing environmental risks and value creation opportunities throughout its operations. The policy also aims to disclose the key environmental goals and strategies of the organization and in subsequent years the efforts made to achieve these goals.

A further objective of this policy is to communicate the environmental approach of Bit Digital to its key stakeholders. This policy covers all employees, contractors and joint ventures. Therefore, the policy will be communicated to all stakeholders to ensure they are aware of the organization’s environmental objectives and values.

In terms of actions, the organization commits to measure and report greenhouse gas emissions at least annually and implement decarbonization strategies in line with the Paris Agreement. This will be achieved through real business change and innovations, including efficiency improvements, renewable energy, materials reductions and other carbon emission elimination strategies.

Bit Digital has identified the organization’s main environmental impacts and the associated management approaches to mitigate them. These environmental impacts are outlined in the Policy.

In addition to input energy sources, another significant environmental impact reviewed will be the amount of e-waste produced from operations. Bit Digital therefore aims to monitor the annual waste generated, waste reused or recycled and hazardous waste annually starting in 2022. Bit Digital has also begun monitoring the miner manufacturing environmental impact using the Economic Input-Output Life Cycle Assessment (EIO-LCA) data model. This model estimates the materials and energy resources required for, and the environmental emissions resulting from, activities in our economy. Bit Digital aims to use this data to help quantify the environmental impacts of its operations.

In terms of the organization’s climate change governance, Bit Digital aims to ensure that its management and board have a high level of oversight to monitor and manage the organization’s climate-related risks and opportunities. Progress on climate change targets and metrics will also be regularly reported to the board and senior management.

QUESTION 3: Your website states that Bit Digital has an “aggressive growth plan focused on increasing capacity month-on-month.” Please describe your plans, if any, to scale your cryptomining operations.

As of December 31, 2021, our currently-owned mining fleet comprised 27,744 bitcoin miners and 731 Ethereum miners, representing approximately 1.6 exahash (EH/s) of computing power. We recently announced a forward purchase agreement with supplier Bitmain for an additional 10,000 bitcoin mining units representing 1.0 EH/s of computing power. We anticipate delivery of these units from March through June 2022, with 2,500 units expected each month. On a pro forma basis, including expected deliveries, our fleet is expected to represent 37,744 units and 2.6 EH/s.

Going forward, we anticipate purchasing additional miners through both the spot market and direct manufacturer purchase agreements, subject to market conditions and capital resources. Initially, newly purchased miners are expected to be deployed into excess hosting capacity for which we have contracted.

We have illustrated our potential expansion capacity as follows. As of December 31, 2021, Bit Digital had contracted for 73.6 MW of hosting in excess of the needs of our currently owned fleet and announced purchases. If current-generation 100 TH/s miners were deployed into this excess hosting capacity, this would imply an additional 24,546 miner units and an additional 2.5 EH/s of computing power. The following table illustrates this expansion capacity:

Expansion power contracted as of 12/31/2021	73.6 MW
Unit power consumption	0.003 MW
Implied fleet growth capacity	24,546 Units
Hash rate per unit	100.0 TH/s
Implied hash rate expansion	2.5 EH/s

Note: Not a guarantee of future results.

QUESTION 3. a: What is your projected electricity consumption for cryptomining across all of your U.S. facilities combined over the next five years? What are your projected associated carbon emissions for that mining?

The table below presents Bit Digital’s estimated run-rate energy consumption for its mining operations as of the end of each year, based on currently contracted hosting capacity and management’s current estimates of deployment timing for sites currently under development or as-yet unidentified, and assuming full utilization. Please see table footnotes for details of the calculation methodology used.

Note that for conservatism, this table presents what we believe to be a high estimate of CO2 emissions, as the underlying data source is national marginal CO2 emissions. Bit Digital’s facilities generally operate in locations with a higher percentage of carbon-free generation sources than the national average (see also 2. a. above). As a result, Bit Digital’s actual future carbon emissions may be materially less than the estimate below.

Table 3a: Projected energy consumption and CO2 emissions based on contracted hosting capacity as of December 31, 2021

	Run-rate as of year-end				
	2022	2023	2024	2025	2026
MW	173	195	195	195	195
MWh	1,516,356	1,698,650	1,698,650	1,698,650	1,698,650
CO2 tons ⁽¹⁾	1,075,096	1,204,343	1,204,343	1,204,343	1,204,343

Notes:

(1) Calculation methodology based on the Economic Input-Output Life Cycle Assessment (EIO-LCA), Scope 2, Carnegie Mellon University, <http://www.eiolca.net/>. Emission factor: 1,562.4 lbs CO2/MWh × (4.536 × 10⁻⁴ metric tons/lb) × 0.001 MWh/kWh = 7.09 × 10⁻⁴ metric tons CO2/kWh (AVERT, U.S. national weighted average CO2 marginal emission rate, year 2019 data).

QUESTION 3. b: What specific plans do you have to address the environmental impact of your increased operations?

As stated elsewhere herein, Bit Digital expects to continue the following practices to address environmental impacts as our operations grow:

- Prioritize carbon-free power in our sourcing and selection of new hosting facility agreements.
- Continue to evaluate opportunities to participate in the development of new renewable energy generation projects as a customer and/or a sponsor, with objective of activating new renewable energy sources that become available more broadly than just to power our operations; and when possible, act on such opportunities.
- Continue to evaluate novel and emerging technologies with potential to deliver green power at scale, as potential alternative energy sources.
- With respect to any current or future facilities with on-site gas generation, work with hosting partners and facility operators to ensure that at least 50% of input fuels are in the form of RNG, with the remainder sourced from Responsibly Sourced Gas (RSG).
- Adhere to and evolve our Environmental Policy, and continually collect data to assess progress and guide data-driven decision making.

QUESTION 4: Bit Digital is a “participant in a voluntary energy-curtailement program.” Please describe in detail your purchasing agreements with electricity providers, including provisions regarding Bit Digital’s responsibilities when demand for electricity outstrips supply on the grid.

Through our hosting partners, Bit Digital participates in demand side curtailment programs, where available. Participating in such programs means we voluntarily allow the grid operator to shut us down when it needs to, generally during extreme weather events and other periods of peak demand. This redirects power to households and mission-critical users such as hospitals. By reducing overall demand, the grid operator is less likely to call on rapid generation from fossil fuels.

A unique aspect of mining is that it does not need to run 24/7, so it can be a critical load-balancing partner to the grid. Load balancing will become increasingly important as more intermittent renewables are brought online nationwide. Renewables such as solar and wind power present challenges for many areas of the grid, which often lacks the flexibility to accommodate such sources, which may result in renewable supplies going unused in favor of the more steady output produced by fossil fuels.

Mining is an ideal grid partner for intermittent renewables, like wind and solar, because it can be turned off without damage. Participating in curtailment programs is another way in which miners like Bit Digital are contributing to our energy future.

Recognizing the importance of load-balancing, we would respectfully submit that the legislature considers rewarding miners who participate in curtailment programs, where such programs are available, and encouraging them where they are not.

Following is a summary of demand response and curtailment programs at each of Bit Digital’s partner’s sites (information provided by our partners):

Compute North (Kearney, NE and Big Spring, TX)

- Big Spring, TX – We’re a load resource for ERCOT providing demand response services. In addition to this, we also have voluntary curtailment at points where we see cautionary or strained systems on the ERCOT grid.
- Kearney, NE – We’re an operating reserves asset for SPP providing load balancing / grid balancing services. In addition to this, we have a great working relationship with the local utility in the instances where the local utility needs support they can (and have) called upon us to reduce load to support the local grid.
- In both cases (Big Spring and Kearney), we can respond in less than 10 minutes to curtail our load and reduce our usage to essentially 0. We can do this in the event that the utility calls, the grid operator calls, or in a known potential emergency situation as we see the grid being constrained we’ll proactively curtail ahead of any call.
- See also: [Press Release – Compute North Supports Request to Reduce Energy Use During Storm Restoration by Nebraska Public Power District](#)

Blockfusion USA, Niagara Falls, NY

- National Grid and the wholesale system operator, the New York Independent System Operator (NYISO), offer programs to customers to reduce electricity usage when demand on the grid is highest. Known as demand response programs, they help avoid overload, reduce emissions, and avoid expensive equipment upgrades. Large energy users can participate in a demand response program and receive payments for reducing the use of electricity from the grid during periods of highest electricity demand. These periods of extreme energy use usually occur on the hottest days in the summer.
- Blockfusion participates in 3 Demand Side programs (currently testing DSASP but has telemetry installed to enter into market withing the next 30 days):
 - **NYISO Special Case Resources (SCR) Program** – This is a “Reliability” program offered by the NYISO
 - **National Grid Commercial System Relief Program (CSRP)** – This is another “Reliability” program offered from the local distribution utility
 - **NYISO Demand Side Ancillary Services Program (DSASP)** – This is an “Economic” program offered by the NYISO.
- Both the SCR & CSRP programs are geared towards Blockfusion lowering its electricity usage during peak demand periods of the grid. The DSASP program is an “Economic” program that is essentially a fast demand response program with a direct and instantaneous communication between the customer and the NYISO. There aren’t many resources that can participate in this program, but due to the ability of Blockfusion to reduce load via software and remotely, they are a perfect fit.
- **National Grid CSR Program:** Aims to reduce peak demand at the network level by calling on customers to reduce energy use during a Load Relief Period. Load Relief Periods for a Planned CSR Program Event can be requested during the Capability Period, Monday-Friday, excluding federal holidays. For a Planned CSR Program Event, a day-ahead advisory notice (21 hours or more prior to dispatch) is triggered when the day-ahead system peak demand forecast reaches 92% of the overall summer peak demand forecast. The forecast must remain at 92% or higher on the day of the event or the event can be cancelled. A day-of notification is sent at least two hours ahead of each respective customer’s call window. Less than 21 hours of notice may be provided for an Unplanned CSR Program Event.
- **NYISO SCR Program:** Similar to National Grid’s reliability program, the NYISO has its own demand reduction program aimed at ensuring grid stability. Large users of electricity with an hourly interval meter can enroll in this program, and reduce load during peak demand days. Participants drop a predetermined amount of load when called upon, typically for 4 hours of the afternoon. These “events” are generally called between 2pm-7pm on Monday through Friday. Given the unique flexibility of Blockfusion’s operations, we typically enter in more than 90% of our electricity load into these demand response programs. When called on, we reduce power down to nearly zero, which offers immediate relief to the grid.

- **NYISO DSASP Program:** This relatively new NYISO level program is essentially a rapid response Demand Response program, where the participant has sophisticated telemetry equipment installed at their site, and has direct communication and integration with the NYISO control center. Resources that participate in this program, when an event is called, follow commands from the NYISO and regulate load upwards or downwards in specific kW blocks. For example, when an event is called, Blockfusion will need to regulate load from 8 MWs, down to 7.3 MWs, and then back up to 8.3MWs. This program provides unique ancillary service to the NYISO grid, and provides rapid location specific load regulation when needed.
- For further information, please see:
 - Education video documenting a recent shutdown event at Blockfusion site: <https://vimeo.com/678853573>
 - Appendix: Sample actual recent curtailment order, Blockfusion USA
 - Appendix: Demand Response Programs Detail, Blockfusion USA

Digihost Technology, Buffalo, NY

- Digihost has further reduced its carbon footprint through its participation in demand side reduction programs. Due to the unique flexibility of its load, Digihost’s East Delevan facility offers significant benefits to grid reliability, but can shut down load during peak times of demand. Shutting down power during peak demand periods means that the grid operator won’t need to import fossil fuel generation from a neighboring ISO, or fire up a rapid start generation unit to meet the increase in demand. Typically, the units dispatched to meet increases in demand are fueled by Natural Gas – given their quick response time.
- Recently Digihost was featured in a press release from its partner CPower, showcasing its participation in these programs (<https://www.prnewswire.com/news-releases/cpower-introduces-cpowered-performance-solutions-for-data-centers-to-optimize-distributed-energy-resources-301403910.html>) “Today, the company announced that Digihost, a blockchain technology company primarily focused on bitcoin mining, avoided nearly 150 metric tons of marginal CO2, with just 29 hours of demand response participation at its facility in Buffalo, New York. This is the equivalent of mitigating more than 164 tons coal burning avoidance or sequestering 182 acres of US forests for one year. Digihost's site reduced marginal carbon emissions by 5.1 tons per hour of demand response participation – the equivalent of 5,637 tons of coal burned per hour”
- Digihost was nominated for the Data Center Dynamics (DCD) Carbon Champion award for its Demand Response participation and performance in 2021.

QUESTION 5. Does Bit Digital have any estimates or models regarding the impacts of your facilities on energy costs to local families and businesses? If so, what do these estimates or models show? Have local residential electricity costs increased since Bit Digital began its cryptomining operations? What measures are you taking to ensure that local consumers and small businesses are not bearing the costs of Bit Digital’s energy consumption?

Bit Digital has not produced such estimates or models, in part because it is counterintuitive to believe that our operations would have any meaningful impact on energy costs to other users. Bitcoin mining is often referred to as the energy user of last resort, because it is both portable and tends to seek out the lowest-cost power available. Lower-cost power is generally the result of an oversupply or waste of power, limited demand, or a combination. Accordingly, Bit Digital’s operations tend to be located in lower-density, industrial or rural areas, generally with significant supplies of power and a limited local user base.

An example of this dynamic may be seen in the Buffalo – Niagara Falls (New York) region, where Bit Digital has current and future planned operations through its partners Blockfusion USA and Digihost Technology. The area was a former manufacturing powerhouse. In the last century, industry flocked to the region in part due to the abundant, affordable hydroelectric power generated from the Niagara River. In recent decades, however, large swaths of the manufacturing base left the area due to “offshoring”. Today, the region retains a significant installed base of electrical infrastructure, and thanks to its proximity to the Robert Moses Niagara Hydroelectric Power Station (one of the largest in the nation), an ample supply of clean power with fewer alternate users. This has attracted bitcoin mining companies including Bit Digital, bringing needed technology jobs to this economically depressed area. [Number of jobs in Niagara Falls].

Another factor suggesting that Bit Digital, and bitcoin mining in general, is unlikely to impact energy costs is its very small energy footprint on a relative basis. On average, during 2021, Bit Digital consumed only 0.0179% of the total energy generation in states in which it operated. The following table summarizes Bit Digital’s 2021 energy consumption as a percentage of total energy in each state:

Table 5: Bit Digital's 2021 electricity consumption as a percentage of total electricity generation, by state and total

	New York ⁽¹⁾	Nebraska ⁽²⁾	Texas ⁽³⁾	Georgia ⁽⁴⁾	Total
State total electricity generation (TWh)	135.8	37.3	429.8	122.3	725.2
Bit Digital 2021 consumption (KWh)	13,879,465	111,909,603	1,733,742	2,370,181	129,892,991
Bit Digital as a % of total generation	0.0102%	0.3000%	0.0004%	0.0019%	0.0179%

Notes:

(1) Source: U.S. Department of Energy, https://www.energy.gov/sites/prod/files/2016/09/f33/NY_Energy%20Sector%20Risk%20Profile_0.pdf

(2) Source: U.S. Department of Energy, <https://www.energy.gov/sites/default/files/2021-09/Nebraska%20Energy%20Sector%20Risk%20Profile.pdf>

(3) Source: U.S. Department of Energy, https://www.energy.gov/sites/prod/files/2016/09/f33/TX_Energy%20Sector%20Risk%20Profile.pdf

(4) Source: U.S. Department of Energy, https://www.energy.gov/sites/prod/files/2016/09/f33/GA_Energy%20Sector%20Risk%20Profile.pdf

At the global level, bitcoin mining consumes only 0.14% of global energy supply. Further, considering that a third of all worldwide energy is wasted, mining represents only 0.44% of the world's wasted energy.⁴

Putting mining's energy consumption into context in this way illustrates the negligible impact mining is likely to have on energy costs, if any.

⁴ Source: Global Bitcoin Mining Data Review, Q4 2021, Slide 5, <https://bitcoinminingcouncil.com/wp-content/uploads/2022/01/2022.01.18-BMC-Q4-2021.pdf>

Conclusion

The world needs to decarbonize. And the prospect of driving the global economy toward a more sustainable path through the realization of digital assets is one of the great opportunities of the 21st century. We in the digital mining industry—as well as policymakers—have a real opportunity to help contribute to the most pressing issue of our time. At Bit Digital, we call this “Satoshi’s second gift.”

We welcome you calling on Bit Digital and for any insights, information, or operational knowledge we may share as you look to advance future studies or regulation related to digital mining in the United States.

While there are certainly less sustainability-focused actors operating within the U.S., it is critical that those who have built their business models on a sustainable platform of growth be the ones who are called on to collaborate on the future of digital mining laws and regulations at the State and Federal government levels.

Thank you once again for your time and attention to this response.

Appendix: Sample actual recent curtailment order, Blockfusion USA

From: CPower Dispatch <cpowerdispatch@mg.cpowerenergymanagement.com>

Date: Wed, Feb 16, 2022 at 9:29 AM

Subject: URGENT: New York State Grid Operator - SCR - Demand Response TEST today - Wednesday, February 16, 2022

To: Kant Trivedi <kant.trivedi@blockfusion.com>

URGENT: New York State Grid Operator - SCR - Demand Response TEST today - Wednesday, February 16, 2022

Hi, this is Rory from the CPower Dispatch Team, with an important **CURTAILMENT** alert for you.

New York State Grid Operator has informed CPower of a **SCR - Demand Response TEST today, Wednesday, February 16, 2022 starting at 06:00 PM (EST)**. The test start time found below is the time your load or loads need to be fully curtailed and you should remain down until the test end time.

- Dispatch Test For: **New York State Grid Operator - SCR - Demand Response**
- **This is a mandatory TEST, you must curtail your load**
- Test will Start at: **06:00 PM (EST) On 02/16/2022 - begin curtailing your load at least 10 minutes before**
- Test will End at: **07:00 PM (EST) On 02/16/2022 - do not begin to increase load until after this time**
- Impacted Zones: **A, B, C**

Below you will find the list of specific facilities impacted by this dispatch.

Facility Name	Address	Account Number	Dispatch Target
Northeast Data Niagara Falls NY	14, Niagara Falls NY 14304	1699937197	A

If you have any questions about this notification, please call the CPower Dispatch Team at (410) 346-5907 right away. You make it happen. We're here to help.

Thank you,

CPower Dispatch Team

24x7 Phone: (410) 346-5907

Email: CPowerDispatch@CPowerEnergyManagement.com



Appendix: Demand Response Programs Detail, Blockfusion USA

1. **What is Demand Response** – Demand Response (DR) is the practice of reducing a customer's electric demand from its normal usage pattern. Load curtailment, load shifting, use of (compliant) backup generation or other distributed energy resource (DER) technologies can all be viable methods of achieving the load reduction desired. Customers may participate in DR activities for a variety of purposes, the most common of which include for helping manage electric utility costs (commonly referred to as load management, peak shaving, etc.) or through programs administered by wholesale market operators or distribution utilities. Many utilities offer DR programs, although they come in various forms (such as interruptible rate tariffs, tariff riders) and can be focused on meeting different needs of the distribution system (such as reducing overall system peak demand, providing localized load relief to prevent disruption to specific distribution circuits, etc.). Wholesale market DR programs allow customers able to control their loads to provide wholesale market services including capacity (to meet resource adequacy requirements and primarily called upon during disturbances/emergencies on the bulk electric system), energy (DR resources competing against traditional generators on price), and ancillary services (providing operating reserves or regulation services to help wholesale market operators to maintain the supply/demand balance). It is also important to provide distinction between energy efficiency (EE) and DR, where EE involves implementing measures that provide a permanent load reduction, whereas DR is a load reduction for a discrete time interval (varying from seconds to minutes to multiple hours) that is achieved in response to the applicable program's dispatch trigger.

2. **Current DR Participation by EnergyMark's customers** –
 - **NYISO Installed Capacity (ICAP) Special Case Resources (SCR)** – NYISO's SCR program is an emergency capacity-style program that allows customers to participate in NYISO's ICAP market as a supply-side capacity resource, enrolling on a monthly basis for participation during summer (May-Oct) and winter (Nov-Dec) Capability Periods. SCR's must be able to provide a response 24/7 in each month in which it has enrolled and sold its capacity to the NYISO. The program is dispatched in response transmission system disturbances and as part of the NYISO's emergency operating procedures. The NYISO provides a day-ahead notice at least 21-hrs in advance of events and tests, as well as a confirmation/cancellation of the event/test at least two (2) hours prior of the event window. SCR participants required to demonstrate their load reduction at least once per seasonal Capability Period (during a test/audit event if no actual SCR events have been activated by the NYISO). SCR participants must be available to reduce their load down to or below a specified kW demand for at least four (4) hours (or for one hour for a test). Participants are compensated based upon the NYISO's ICAP Market clearing price for the Capacity Zone in which the participant is located for capacity committed and sold to the NYISO in each month. Participants are evaluated for performance against the amount of certified Unforced Capacity (UCAP) sold to the NYISO. The

amount of UCAP capacity available to be sold for a participant is based upon the difference between the participant's metered load during the event hour(s) and the calculated "Average Coincident Load" (ACL) (further adjustments are taken to account for transmission line losses, historic performance of the participant, and other factors). Each participant's ACL is based upon its average usage from the top 20 hours of usage taken from the top 40 peak NYISO Load Zone hours (as identified by the NYISO) from the prior like-Capability Period (ex. summer 2022 ACLs are calculated based upon hourly usage during summer 2021) . If a customer underperforms against its committed capacity obligation, or experiences a significant change in its load, the NYISO may assess penalties against the Responsible Interface Party (RIP) that represents the SCR participant as the NYISO Market Participant. Underperformance as well impacts the amount of UCAP that may be sold into future seasonal Capability Periods. In addition to the capacity payments made to SCR participants, energy payments are made for the kWh of load relief provided during events and any test/audit. A participant-specific baseline (called the Customer Baseline, or CBL) is calculated based upon the participant's highest electric usage during the event window hour(s) from the top five (5) of the previous ten (10) eligible days. A weather adjustment factor may also be applied in the case of weather-sensitive loads that may adjust the CBL up or down by +/- 20% to account for weather and temperature differences from the baseline day period and the event/test day. The kWh for performance eligible for energy payment is calculated based upon the participant's metered load during the event hour(s) subtracted from the CBL. The kWh reduced is paid at the applicable NYISO Location Based Marginal Price (LBMP) for the NYISO Load Zone in which the participant is located.

1. **Responsibilities of Participants** – SCR participants must be capable of providing four hours of DR capability when provided at least 21-hours of notice by the NYISO. Participants must also demonstrate their load reduction capability to drop to or below a specific load level at least once during each seasonal Capability Period in which it was enrolled and had capacity sold for in one month. Performance calculations performed after the fact inform payments and any penalties arising from non-performance or other potential violations of NYISO's tariff.
- **National Grid Commercial System Relieve Program (CSR)** – National Grid's CSR program allows customers capable of providing four (4) consecutive hours of load relief when called upon during the program season to help reduce National Grid's summer peak demands and help defer or avoid the need for traditional distribution system upgrades to meet peak demand. The CSR program season runs from May through September each year. National Grid may call upon participants on non-holiday weekdays within the program season when the day-ahead forecasted system-wide peak demand is 92% or higher of the seasonal forecasted system-wide peak demand. National Grid provides a day-ahead notice at least 21-hrs in advance of events and tests, as well as a confirmation/cancellation

of the event/test at least two (2) hours prior of the event window. Participants enroll to participate for the entire season (either directly with the utility, or through a utility-approved DR aggregator) with a load reduction value that can be achieved when called upon to do so. While there is no defined call window that participants must be available to provide their committed load reduction, events typically are called during the late afternoon and early evening hours. If no events are called, National Grid may administer a one (1) hour test to verify participants' load relief capability. Performance during events and tests is calculated using a participant-specific baseline (called the Customer Baseline, or CBL) is calculated based upon the participant's highest electric usage during the event window hour(s) from the top five (5) of the previous ten (10) eligible days. A weather adjustment factor may also be applied in the case of weather-sensitive loads that may adjust the CBL up or down by +/- 20% to account for weather and temperature differences from the baseline day period and the event/test day. Event/test performance is determined by comparing the average hourly metered load during the event window hour(s) subtracted from the CBL and compared with the enrolled kW value. Monthly performance factors are calculated to determine Reservation payments (payments to be available to provide the service) by averaging the individual event/test performance factors from all events within a month. The monthly performance factor is carried forward for calculating payments until the next month during which performance is observed. While there are no out-of-pocket penalties for under-performance, payments are made commensurate with the most recently-calculated monthly performance factor. If a participant has a monthly performance factor of 25% or less, the participant receives Reservation payment for months during which that performance factor remains in effect. The kWh for performance eligible for Performance payments is calculated based upon the participant's metered load during the event hour(s) subtracted from the CBL. Reservation and Performance payment rates are administratively set within National Grid's tariff, and the cost-effectiveness of the program is reviewed on an annual basis by National Grid and the New York State Public Service Commission.

1. **Responsibilities of Participants** – CSRP participants must be capable of providing four hours of DR capability when provided at least 21-hours of notice by National Grid. Participants must also demonstrate their load reduction capability to drop to or below a specific load level at least once during the CSRP program season. Performance calculations performed after the fact inform payments due to the participant.
- **NYISO Demand Side Ancillary Services Program (DSASP)** – NYISO's DSASP program allows participants that meet the NYISO's qualification requirements and are represented by a registered DSASP Provider Market Participant to participate in the NYISO's ancillary services (AS) market. DSASP Resources must be capable of: 1) providing at least 1MW of response capability in every month of the year (aggregation of multiple customer facilities within a NYISO Load Zone can satisfy this requirement); 2) meet the NYISO's metering and real-time telemetry

communications requirements (bi-directional communications through a direct ICCP between the NYISO, DSASP Provider, and the Resource at 6-second intervals with no more than 10-sec latency each way, or 20-sec round-trip); and 3) satisfy all registration documentation and credit requirements. NYISO's AS market has several different services with different requirements applicable to each service. There are two non-synchronous operating reserves (for resources not synchronized to the grid – DSASP Resources that utilize backup-generation in support of their DSASP participation may only provide non-synchronous reserves) products available; one for resources capable of responding within 10-min, and one for resources capable of responding within 30-min. There is also a 10-min synchronous operating reserves product that requires participants to be synchronized to the grid and be able to achieve the response requested by the NYISO within 10-min. All operating reserve products require Resources to be capable of following 5-min dispatch basepoint signals provided via the telemetry signal from the NYISO, provided every 6-sec. There is also a Regulation product that requires participants to have automatic generation control (AGC) equipment installed, and to follow basepoint signals (either to ramp its usage up or down) telemetered to the Resource every 6-seconds. Once the registration, NYISO network modeling updates (to incorporate the Resource into NYISO's dispatch model), and communication test processes have been completed, the DSASP Resource may begin participating in the AS market providing the service(s) it is qualified to provide. Within the first two weeks of a Resource being approved to begin participating, it must conduct a load-shed test to validate its capability. In each subsequent seasonal Capability Period (see the NYISO SCR response above for additional info), the Resource must be audited by the NYISO; if the Resource has been dispatched to provide the service, operational data may be used to satisfy the audit requirement. Participation is facilitated through the DSASP Provider offering the Resource into the NYISO's day-ahead market (DAM) with a price/quantity pair for each of the 24 hours for the (following) operating day. If a Resource is awarded for any hours for which offers clear, the Resource is scheduled to provide the service. For operating reserve products, this means the resource must be available to provide the service if it were to be called (via a Reserve Pickup Event). For the Regulation product, the Resource must provide that service in all hours in which it is scheduled to do so. After the DAM schedule has been set, if any changes in the Resource's availability to provide the service(s) for which it has been scheduled arise, the DSASP Provider must notify the NYISO and update the Resource's offers in the real-time market (RTM). Resources are paid based upon the cleared MW quantity multiplied by the hourly zonal clearing price for the AS product for which the Resource has received a schedule. If adjustments must be made in the RTM, any quantities bought or sold will be charged or paid at the hourly zonal clearing price for the respective AS product. If the Resource deviates from the telemetered dispatch instructions, additional charges or credits may be applied at settlement. If a DSASP Resource fails to perform during an audit or event, it is suspended from being offered into the DAM/RTM until it successfully completes an audit administered by the NYISO. Performance when the Resource is

required to respond (as described above) is judged based upon the 6-sec telemetry data from the Resource compared to the basepoint signals from the NYISO. Depending on the lead time required for the AS operating reserve product the last 6-second load level telemetered to the NYISO prior to the basepoint response signal has being sent establishes the baseline, and then following the basepoint signals (6-sec/5-min) for the duration of the event (and returning to the load level at the event's start).

1. **Responsibilities of Participants** – Participants must be capable of meeting the NYISO AS product qualification, metering, and telemetry requirements, and be available to respond to provide the service(s) in all hours for which it has received an award and schedule in the DAM/RTM. If any changes occur following receiving a DAM schedule for an AS product to the Resource's ability to provide the service, the DSASP Provider must update its schedule to ensure it reflects its ability to provide the service. If the RTM market has closed by the time during which the DSASP Resource knows it will have a change to its availability, the DSASP provider must notify the NYISO's control room. When dispatched by the NYISO, the Resource must follow the telemetered basepoint signals.