



September 8, 2023

The Honorable Ron Wyden  
Chairman  
Committee on Finance  
United States Senate  
Washington, DC 20510

The Honorable Mike Crapo  
Ranking Member  
Committee on Finance  
United States Senate  
Washington, DC 20510

Dear Chairman Wyden & Ranking Member Crapo,

The Digital Energy Council (DEC) welcomes the opportunity to discuss with the Committee current challenges in tax policy regarding digital assets and how digital asset mining can support tax policy objectives. Our comments focus exclusively on Proof of Work (PoW) digital asset mining and its benefits.

The DEC supports a fair and sensible tax reporting framework with greater clarity, making it easier for businesses to appropriately comply with requirements; undertake long-term planning to innovate and create a healthy and competitive industry that supports energy and national security goals; and better illuminate use cases for PoW mining. Our letter provides further concrete recommendations for the Committee to consider as they undertake work on digital asset tax policy, and we would be happy to provide further supplementary material as required.

### ***About the Digital Energy Council***

The Digital Energy Council is a non-profit advocacy organization whose members work at the forefront of energy security and modernization, strengthening grid resilience and creating new, alternative energy channels to power communities. DEC is a leading authority for energy policy development. It is the voice for energy and digital asset mining industry leaders and a key resource for facilitating dialogue between industry, policymakers, and regulators around the bipartisan issues of digital asset mining, U.S. energy security, sustainability, and grid modernization. DEC also promotes best practices for industry data collection and dissemination.

At the Digital Energy Council, we support the development of energy via the PoW consensus mechanism. The most prominent use case for digital asset mining and PoW is Bitcoin. The Digital Energy Council is digital asset agnostic and references to the Bitcoin blockchain, and bitcoin are for illustrative purposes.<sup>1</sup>

### ***About Proof of Work Consensus***

Proof of Work refers to the method by which a blockchain is secured and verified - the confirmation of a set of transactions to be recorded permanently on the distributed ledger, via a consensus mechanism.

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<sup>1</sup> Bitcoin (upper case) refers to the blockchain and bitcoin (lower case) refers to the digital asset, which is also denoted as BTC.



The term ‘work’ refers to the competition between digital asset miners to be the first to solve a complex cryptographical problem, or locate the ‘winning lottery ticket,’ achieved via proposing continuously different numeric keys in a function called ‘hashing’. The winning miner is given the right to validate new transactions and add these to the blockchain in the form of a ‘block’. In return for this work, they receive a predetermined amount of digital assets as a reward.

There are two components to PoW mining rewards: (1) transaction fees paid by users that miners collect when creating new blocks on the ledger, and (2) new digital assets created with each new block to reward successful miners, according to a specified amount maintained by the network’s algorithm.

For example, most of a Bitcoin miner’s revenue comes from the block reward of the newly minted bitcoin. After obtaining the block reward, miners can sell or dispose of bitcoin, often via bitcoin to exchanges. The reward for creating a new block is currently 6.25 BTC, although this decreases over time, with a reward anticipated to fall to 3.125 BTC at some point in 2024; this is an inbuilt method to continuously lower the amount of new supply is a deliberate limitation on inflation within the asset.

As a proven, robust way of maintaining a secure network, PoW supports open and decentralized systems, since anyone is able to participate in the activity via public, permissionless blockchains. Miners often work together in ‘pools’ to aggregate their total ‘hashrate’, with greater computation power increasing the likelihood of successfully adding a block and receiving the reward. Mining pools split rewards proportionally amongst miners, according to contribution, with miners able to subsequently withdraw their share of the reward.

PoW is tied to the real world through operating costs, particularly energy and machinery costs. These in turn make PoW the most secure consensus mechanism, as the costs of attacking the network are overwhelming and prohibitive, and the difficulty of the cryptographical problem is adjusted periodically to respond to competition (e.g., the more miners competing, the higher the difficulty of the puzzle to ensure a consistent transaction time is kept). This ensures that security of the system is kept, even as computation power involved may vary in response to incentives (such as digital asset prices, or energy costs). Further, blockchains are designed so that each block in the blockchain is encrypted and transactions are conducted in a transparent manner as they are viewable and auditable via a block explorer.

## ***Recommendations***

### **1. Timing and Source of Income from Staking and Mining**

- a. How should returns and rewards received for validating (mining, staking, etc) be treated for tax purposes? Why? Should different validation mechanisms be treated differently? Why? Should the character and timing of income from mining and staking be the same? Why or why not?**

### ***Digital Asset Mining-related Tax Policy Should be Consistent with Established Principles for Commodities***

Currently, the IRS treats for tax purposes digital assets as property; mining rewards are taxed as ordinary income when received, based on the value of the digital asset on the date it is mined. The amount of tax owed by a miner depends on whether the mining operation is classified as a business or a hobby. These



rewards are then taxed again when disposed of, with recent IRS guidance clarifying the range of activities that qualifies as disposal, including ordinary sales. As recognized by the U.S. Commodity Futures Trading Commission (CFTC), digital assets, referred to as "virtual currencies" "have been determined to be commodities under the Commodity Exchange Act."<sup>2</sup> Further, the U.S. Securities and Exchange Commission (SEC) has stated that bitcoin is a commodity.<sup>3</sup> Indeed, federal courts, in the growing jurisprudence around digital assets, have determined that bitcoin, the leading PoW-based digital asset, is a commodity.<sup>4</sup> Further, like other commodities, PoW digital assets are designed to incorporate the concept of purposeful digital scarcity - achieved through the PoW mechanism that converts a scarce, finite resource (energy) into a financial output - resulting in a limited, depletable, commodity-like resource pool.

Therefore, at present, the taxation of digital asset mining departs from the established tax policy that applies to other commodities, such as precious metals, whereby the asset is taxed only when a disposition occurs, as opposed to when the asset is discovered. Ensuring consistency across commodity industries by recognizing mining rewards based on their actual makeup would not only rectify this departure from principles, but simplify the tax code, and make compliance easier for companies and individuals.

The DEC further recommends, to promote a fair and consistent approach to digital asset mining taxation, that a principles-based approach is taken, including the following principles:

**Digital Asset Mining as a Commodity-based Business Activity:** For profit digital asset miners are engaging in legitimate business activities and should be treated no different than other businesses, which means availing themselves of relevant tax treatment relevant tax treatment on business expenses and removal of double taxation through recognizing self-created property. This means taxing digital asset mining income as ordinary income. It also allows miners to deduct reasonable and necessary business expenses, such as electricity costs, hardware expenses, and maintenance, to accurately determine their taxable income.

**Clear Record Keeping and Reporting:** Require the IRS to implement clear guidelines for digital asset miners to keep accurate records of their mining activities, including timestamps of mined digital assets, their value at acquisition, expenses, and subsequent transactions. This promotes transparency and simplifies tax reporting.

**Educational Support:** Task the IRS with providing resources and educational materials to help digital asset miners understand their tax obligations and navigate the complexities of digital asset taxation.

**Research & Development Incentives:** Consider offering tax incentives or credits for research and development efforts related to improving energy efficiency and sustainability in mining operations. This promotes innovation in the field.

**Simplicity and Clarity:** Design the tax framework to be as simple and clear as possible, minimizing ambiguity and reducing the compliance burden on miners.

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<sup>2</sup> [Introduction to Virtual Currencies](#), CFTC (Dec. 2019); see also [Bitcoin Basics](#), CFTC (Feb. 2018).

<sup>3</sup> See [Funds Trading in Bitcoin Futures – Investor Bulletin](#), SEC (June 10, 2021).

<sup>4</sup> See *CFTC v. Patrick K. McDonnell*, 287 F. Supp. 3d at 228 (Mar. 6, 2018).



**International Harmonization:** Direct the IRS to collaborate with international bodies and other countries to establish consistent guidelines for digital asset taxation. This reduces confusion for miners operating across borders.

**Regular Review and Adaptation:** Digital assets and blockchain technology are evolving rapidly. Regularly review and adapt the tax framework to ensure it remains relevant and effective in addressing new challenges and opportunities.

***b. What factors should be most important when determining when an individual is participating in mining in the trade or business of mining?***

Mining is generally considered to be a trade or business if the activity is conducted for profit. That is, unless a taxpayer repeatedly generates a loss and does not anticipate profit (i.e., activity is a “hobby”) taxpayers generally treat mining activities as a trade or business. Individuals who participate should evaluate whether the activity should fall under the §183 hobby loss rules.

Indications of a business rather than a hobby could include maintaining detailed records, holding separate banking and financial services, and undertaking significant investments in mining equipment.

***c. Please provide feedback on the Biden Administration’s proposal to impose an excise tax on mining.***

*The Proposed Digital Asset Mining Excise Tax Inappropriately Singles out Digital Asset Mining and Will Deter Investment in Renewables, Energy Modernization, and Grid Resilience*

President Biden has proposed that a 30% Digital Asset Mining Excise (DAME) tax should be placed on digital asset mining relating to the cost of electricity used, to address perceived negative externalities.

**The DEC believes that the proposed DAME tax is misguided, and would significantly undermine the industry.** Not only would the proposal be unprecedented in targeting a single industry's use of resources, creating an unwelcome precedent, it would further stifle innovation in an industry that uses less than 1% of electricity in the United States<sup>5</sup> and is a tool for supporting renewable energy use and demand, energy infrastructure modernization, and energy security. This would also undermine national security, result in job losses, particularly in rural areas, and decrease tax revenue from the industry overall.

Some of the main issues with the DAME tax include:

**Selectively taxing some industrial resources of power over others, effectively picking winners and losers.** The proposed DAME tax arbitrarily picks winners and losers by targeting digital asset miners over other businesses - a dangerous precedent. As a first-of-its-kind limitation based on what the energy is being used for, this makes the DAME tax a giveaway to other industries with large carbon footprints with no incentive to clean up their act. Digital asset mining is a legitimate economic activity that contributes essential security to a regulated U.S. commodity market valued at almost \$1 trillion dollars. Digital asset miners are no different than traditional data centers. They purchase energy from the grid and that

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<sup>5</sup>[Climate and Energy Implications of Crypto-Assets in the United States](#), Office of Science and Technology Policy (Sept. 2022).



electricity is then used to power computers. In fact, digital asset miners are better able to react to grid-load and support resilience in times of high demand than many data centers.

**Failing to distinguish between renewable and non-renewable power.** Digital asset mining is not all the same. Many digital asset miners use renewable energies and contribute to incentivizing renewable production. Indeed, regardless of energy source, mining does not directly emit any EPA criteria air pollutants or greenhouse gasses (GHG). From a Scope 1 emissions perspective, digital asset mining is fully electrified and emits zero-emissions.<sup>6</sup>

Furthermore, most of the digital asset mining (over 50%<sup>7</sup>) is based on sustainable power - far more than the average industry. If digital asset mining is discouraged through the DAME tax, then this would mean renewable energy plants, such as hydropower plants, which profit from selling digital asset miners energy from surplus energy that cannot be stored due to lack of storage capacity, would lose out on income, and be less able to serve the local communities and businesses that depend on their energy. This could potentially lead to increased costs for renewable energy use and less incentive for energy companies to invest in renewable energy sources, weakening the economic cases for strengthening electricity grids and expanding renewable energy sources in under-resourced areas.

**Undercutting incentives to enable and use new renewable power, undermining grid resilience.**

Digital asset mining offers an incentive to build renewable energy to meet demand; and to do so in rural areas where grid connectivity is limited. Even where permitting is behind demand, mining offers a short-term solution to companies, allowing them to make a return on their investment before they are connected to the grid, in turn ensuring that under-resourced areas are better served in the long-term. By driving demand for power, digital asset mining allows companies to expand, and use benefits of scale to deliver low cost, renewable energy for consumers. KPMG recently said that Bitcoin ‘can be a useful ally in the transition to more renewable energy sources and reduce emissions.’<sup>8</sup>

Digital asset mining also provides grid resilience. On November 29, 2022, the Electric Reliability Council of Texas (ERCOT) published a report on seasonal assessment and resource adequacy for the ERCOT region. ERCOT’s study indicates that Bitcoin mining operations are flexible operations that can be beneficial to the Texas grid during winter and extreme peak load times. The ERCOT report stated that Texas Bitcoin mining facilities were able to curtail 1.7 GW if needed in the wintertime.<sup>9</sup>

**Undermining US-based miners against international competition, driving away local sources of jobs and economic growth.** A U.S. excise tax would encourage mining operations relocating away from the US - where not only are they using comparatively renewable forms of energy production but bring jobs and economic growth to more rural and often overlooked areas. This would see operations shift to foreign jurisdictions, which would capture the benefits, and generally rely on sustainable forms of energy. It would also give national competitors - including Russia, Iran, and Venezuela - the opportunity to gain a foothold in the industry, undermining U.S. competitiveness globally on a scarce-resource. Therefore, any tax would likely increase the gross impact of mining rather than decrease it by incentivizing renewable use.

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<sup>6</sup> See [Scope 1 and Scope 2 Inventory Guidance](#), EPA (Aug. 21, 2023).

<sup>7</sup> [Bitcoin Mining Council 2023 First Half Data Collection](#), Bitcoin Mining Council (Aug. 9, 2023).

<sup>8</sup> [Bitcoin’s Role in the ESG Imperative](#), KPMG (2023).

<sup>9</sup> See [Seasonal Assessment of Resource Adequacy for the ERCOT Region](#), ERCOT (Nov. 29 2022).



**Creating a false dichotomy between digital asset mining and domestic use of energy.** Bitcoin accounts for roughly 0.18% of global energy consumption<sup>10</sup>, and the Cambridge Bitcoin Electricity Consumption Index (CBECI) - a commonly used reference point - has recently indicated it has previously overestimated the electricity consumption of the industry.<sup>11</sup> Despite the claims of some narratives, digital asset mining does not take away from domestic energy uses. In fact, the ability of digital asset mining to grid-load and respond to demands mean that digital asset miners are uniquely positioned to provide resilience for domestic energy sources - whether that be at half-time during the Super Bowl, or during a heatwave or storm - by ensuring there is sufficient ‘surge’ capacity in the first instance.

### ***Conclusion***

When the Committee assesses digital asset mining tax policy, it must consider the perspectives highlighted above. Today, the United States is fortunate to be a hub of digital asset mining, where roughly 30-40% of global Digital asset mining occurs across the country, primarily in rural areas. Digital asset miners are the foundation of the digital asset ecosystem. If policymakers continue to dismiss and disparage the industry rather than examining how digital asset mining can support energy modernization, national security, and economic competitiveness objectives, the United States will be delivering the industry to places like China, Russia, Iran, and Kazakhstan where there is less energy regulation. The United States has an opportunity to lead in the development and deployment of digital asset mining and mining technology, but that opportunity is slipping away. Policymakers must act now to ensure that digital asset miners can continue to operate in the United States with sensible and certain regulation.

Please do not hesitate to reach out if you have any questions.

Very truly yours,

A handwritten signature in black ink, appearing to read "Tom Mapes", written over a circular stamp or seal.

Tom Mapes  
Founder and President

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<sup>10</sup> See [Cambridge Bitcoin Electricity Consumption Index](#), Cambridge Centre for Alternative Finance (Last visited Sept. 7, 2023).

<sup>11</sup> [Bitcoin electricity consumption: an improved assessment](#), Alexander Neumueller, Research Lead – Climate Aspects, Cambridge Digital Assets Programme, Cambridge Centre for Alternative Finance (Aug. 31, 2023).