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The White House
Office of Science and Technology Policy
725 17th Street NW
Washington, D.C.

**Re: Request For Information; Digital Assets Research and Development, Document Number 2023-01534**

To Whom It May Concern,

Blockchain Association (the "Association") submits this letter in response to the Office of Science and Technology Policy's ("OSTP") Request For Information ("RFI") titled "Request for Information; Digital Assets Research and Development."[1]

Blockchain Association is the leading nonprofit membership organization dedicated to promoting a pro-innovation policy environment for the digital asset economy. The Association endeavors to achieve regulatory clarity and educate policymakers, courts, and the public about how blockchain technology can pave the way for a more secure, competitive, and consumer-friendly digital marketplace. The Association represents nearly 100 member companies reflecting the wide range of the dynamic blockchain industry, including software developers, infrastructure providers, exchanges, custodians, investors, and others supporting public blockchain ecosystems.

Blockchain technology offers the opportunity to solve many systemic issues affecting the legacy financial system and our increasingly digital lives. Since 2009, Bitcoin — the world's first crypto network — has allowed individuals to quickly and cheaply transact with each other without relying on intermediaries like banks or payment processors. Blockchain technology, which powers Bitcoin and other crypto networks, has sparked a paradigmatic shift in the way people interact with each other online. For Americans to realize the benefits of blockchain technology, U.S. policymakers must ensure that American entrepreneurs, developers, and other builders may freely innovate here at home.

[1] Request for Information; Digital Assets Research and Development, 88 Fed. Reg. 5043 (Jan. 26, 2023), https://www.federalregister.gov/documents/2023/01/26/2023-01534/request-for-information-digital-assets-research-and-development.

Not only has blockchain technology offered new ways for Americans to interact online, it has helped to secure the dollar's status as the global reserve currency. The United States has a unique opportunity to use blockchain technology to spread the dollar and strengthen our economy by supporting dollar-denominated stablecoins. However, if the United States were to encourage adoption of a Central Bank Digital Currency ("CBDC"), rather than a privately-issued stablecoin, it could thwart goals to align the technology's potential with American values unless such a CBDC network were open-source, permissionless, and privacy-preserving. If a CBDC program does not embody these core characteristics, the United States risks violating Americans' constitutional rights and raising national security concerns by mirroring China's surveillance state. Instead, U.S. policymakers should welcome privately-issued stablecoins and focus on enacting narrowly-tailored legislation that aims to regulate centralized stablecoin issuers.

It is crucial for policymakers to understand the unique characteristics of blockchain technology and why it solves many of the problems rooted in our legacy financial system. Thus, it is necessary that data provided to Congress and regulators be peer-reviewed, technology-neutral, and impartial. This should help ensure that any regulation or legislation targeted toward blockchain technology or digital assets requisitely factors in its unique characteristics and reflects the latest understanding of the technology and its use cases.

Due to blockchain networks' unique characteristics, regulators and legislators ought to focus their efforts on mitigating risks posed by custodial intermediaries and establishing standards for disclosures, audits, and reserves, rather than restricting access to decentralized services, including decentralized finance ("DeFi"). This focus derives both from actual risk and available information. Many of the risks posed by custodial intermediaries are well understood and have been evident in high profile cases, while the most well-respected DeFi services use software rules to mitigate or eliminate these risks and have not failed even during market uncertainty.

Finally, it is particularly important that industry experts have the opportunity to provide robust and accurate information to lawmakers to help them avoid creating legislation with unintended consequences. It is all too easy for legislators to make knee jerk reactions to recent market events, but this would do more harm than good. Sweeping actions against the larger industry could have a chilling effect on crypto innovation, sending this promising technology overseas. As with other industries, the focus should be on punishing bad actors, deterring future misconduct, and creating pathways forward for good actors: this is essential to creating a regulatory landscape in which innovation can thrive in the United States.

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***Public Blockchains Solve Decades-Long Problems in the Legacy Finance and Information Technology Industries by Removing the Main Source of Risk and Abuse: Intermediaries.***

During the depths of the 2008 financial crisis, an anonymous author published a whitepaper to a mailing list for cryptography researchers.[2] The paper described a distributed ledger technology that would allow for the transfer of value without an intermediary, or a "peer-to-peer electronic cash system," which the author termed "Bitcoin." This major breakthrough in the world of cryptography and computing solved the Byzantine Generals problem, which in game theory describes the difficulty decentralized parties have reaching consensus without relying on a trusted central party. The underlying technology would come to be known as "blockchain."

The Bitcoin network allows anyone anywhere in the world to send and receive value using nothing more than a computer and an internet connection. Before the advent of Bitcoin and blockchain technology, reliance on financial intermediaries, like banks, was necessary to make payments over the internet. For most traditional online payments today, multiple intermediaries are involved in a single transaction and act as gatekeepers, making electronic payment slow and expensive. These intermediaries have a history of exposing Americans' sensitive financial information to corrupt institutions, being vulnerable to cyber attacks, discriminating against underserved communities, and exploiting their own customers in the pursuit of profit.[3]

Current financial regulations are designed to protect against risks posed by these intermediaries. Cryptocurrencies and blockchain technology, however, mitigate traditional finance risks by replacing centralized intermediaries with a decentralized ledger that allows anyone to send payments across the world almost instantly, without needing permission, and at almost no cost. Government agencies and individuals can leverage a blockchain's transparency for enhanced analysis and use it as an investigation tool. It is a common misconception that cryptocurrency is completely anonymous and untraceable; rather, the transparency provided by many cryptocurrencies' public ledgers is much greater than that of other traditional forms of value transfer. The open and permanent record of the blockchain natively solves regulatory problems that previously could only be solved by imposing compliance obligations on trusted third parties.

Unlike the legacy banking system, which is dominated by large, private financial institutions, crypto networks are public payments infrastructure: digital cash for the digital era. And although digital cash was the first use case for crypto networks, it is far from the last. American innovators,

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[2] Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, Bitcoin.org (Oct. 31, 2008), https://bitcoin.org/bitcoin.pdf.

[3] *Terrorism and Cryptocurrency: Industry Perspectives Before the H. Subcomm. on Intel. and Counterterrorism*, 117th Cong. (2022) (statement of Kristin Smith, Executive Director, Blockchain Association), https://theblockchainassociation.org/wp-content/uploads/2023/02/Intelligence-and-Counterterrorism-Subcommittee-Hearing-Written-Testimony.pdf.

entrepreneurs, and developers are now building applications with blockchain technology, constructing the next iteration of the internet — sometimes referred to as "Web3."[4]

"Web1" refers to the early internet of the 1990s, when users could only do basic tasks like read static web pages or send emails. "Web2" refers to the internet we have today, with all its interactive applications and services, including social media. But just like the banking system, Web2 is dominated by a few large companies, or "tech giants," which wield outsized power and influence for their own profit at the expense of the American public. While today's internet has opened enormous benefits for the American economy, the vast wealth created has been captured by a small number of corporations.

Web3 — born from and built on crypto networks — is the solution to this imbalance of power. Web3 not only allows individuals to own their data and content,[5] but it also allows them to possess digital goods and property. The implications of this span a wide-range of applications including digital identity solutions, supply chain management, real estate, and healthcare.[6] Importantly, these applications run largely on decentralized networks, without incumbent entities capturing value in the form of excessive fees or targeted advertising. Individuals and small business owners[7] stand the most to gain. This revolutionary shift in our digital future will increase equity, lower barriers to entry, and enhance democratic values.

For the United States to realize the full benefits of Web3 and ensure we remain the global leader in this space, American entrepreneurs must have the freedom to innovate.

***Reliance on Peer-Reviewed Reports and Impartial Data is Crucial for OSTP to Maintain Accuracy and Integrity in its Reporting.***

On September 8, 2022, OSTP published a report on the climate and energy implications of crypto assets in the United States.[8] The Association appreciates OSTP's request in the RFI for feedback on this report. In response to OSTP's request, the Association wishes to respectfully

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[4] Thomas Stackpole, *What is Web3?*, Harv. Bus. Rev.: Big Idea Series (May 10, 2022), https://hbr.org/2022/05/what-is-web3.

[5] Unstoppable Domains, *Control Your Personal Data in Web3 with Web3 Domains*, Unstoppable Domains: Blog Posts (Jun. 27, 2022), https://unstoppabledomains.com/blog/categories/web3-domains/article/control-your-personal-data-in-web3.

[6] Forbes Tech. Council, *15 Industries That Could Significantly Benefit From Blockchain Technology*, Forbes (Jun. 10, 2022), https://www.forbes.com/sites/forbestechcouncil/2022/06/10/15-industries-that-could-significantly-benefit-from-blockchain-technology/?sh=45e7de777af2.

[7] Shai Bernstein & Christian Catalini, *How Digital Currencies Can Help Small Businesses*, Harv. Bus. Rev. (May 25, 2022), https://hbr.org/2022/05/how-digital-currencies-can-help-small-businesses.

[8] Off. Sci. and Tech. Pol'y, *Climate and Energy Implications of Crypto-Assets in the United States*, White House Office of Science and Technology Policy Report (Sept. 8, 2022) [hereinafter *OSTP Report*], https://www.whitehouse.gov/wp-content/uploads/2022/09/09-2022-Crypto-Assets-and-Climate-Report.pdf.

emphasize the importance of relying on peer-reviewed evidence and impartial research when drafting future reports.

While it is true that specific consensus mechanisms of certain crypto networks require significant energy consumption by design, the research cited in the report contained several flawed assumptions and narrowly-defined data sets. In several instances, the report relies on research paid for by special-interest groups diametrically opposed to crypto adoption. For example, the report states that "over the next decade, Texas may see an additional 25 GW of new electricity demand from crypto-asset mining, equivalent to a third of existing peak electricity demand in Texas."[9] However, this projection is not in line with observed demand within the industry.[10]

The report also compares global crypto network measurements with U.S. domestic energy consumption patterns.[11] This method fails to consider the outsized share of existing green energy infrastructure and later-generation mining rigs in the United States with respect to other nations.

Further, the data used in much of the research cited was from a narrow period of 2019 to 2022.[12] This timeframe represented the most recent wave of massive adoption and peak usage rates. Using projection models based on these samples likely exaggerates future adoption rates and consumption.[13] During previous cycles of rapid digital currency adoption, for example in 2017, energy consumption projections from Bitcoin mining were similarly overestimated and inflated.[14] The publishers of this data also cited additional problems with their methodology as it pertains to the selection of mining equipment in the sample, stating that their approach "may have periodically overstated Bitcoin's total power demand for a variety of reasons."[15]

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[9] *Id.* at 5.
[10] Christopher Bendiksen, *A Closer Look at the Environmental Impact of Bitcoin Mining*, CoinShares (Mar. 30, 2021), https://coinshares.com/research/closer-look-environmental-impact-of-bitcoin-mining.
[11] *Compare OSTP Report*, *supra* note 8, at 15 n.80 (citing Alex De Vries, *Bitcoin Energy Consumption Index*, Digiconomist, https://digiconomist.net/bitcoin-energy-consumption (last visited Feb. 28, 2023)) *with OSTP Report*, *supra* note 8, at 15 n.81 (citing U.S. Energy Info. Admin., *Documentation of the National Energy Modeling System (NEMS) Modules*, U.S. Dep't. Energy, https://www.eia.gov/outlooks/aeo/nems/documentation (last visited Feb. 28, 2023)).
[12] *Id.* at 9 n.28 (citing Cambridge Bitcoin Electricity Consumption Index, *Bitcoin Mining Map Visualization*, https://ccaf.io/cbeci/mining_map (last visited Feb. 28, 2023)).
[13] *Id.* at 17 n.102 (citing Naureen S. Malik, *Crypto Miners' Electricity Use in Texas Would Equal Another Houston*, Bloomberg (Apr. 27, 2022), https://www.bloomberg.com/news/articles/2022-04-27/crypto-miners-in-texas-will-need-more-power-than-houston).
[14] Tom DiChristopher, *No, bitcoin isn't likely to consume all the world's electricity in 2020*, CNBC, (Dec. 21, 2017), https://www.cnbc.com/2017/12/21/no-bitcoin-is-likely-not-going-to-consume-all-the-worlds-energy-in-2020.html
[15] *Cambridge Bitcoin Electricity Consumption - Methodology*, Cambridge Center for Alternative Finance, https://ccaf.io/cbeci/index/methodology (last visited Feb. 28, 2023).

We urge the OSTP to ensure that recommended policies remain neutral with respect to underlying technologies. For example, recommendations to explore executive or legislative action to "eliminate the use of high energy intensity consensus mechanisms for crypto-asset mining" would discriminate against certain types of data centers (i.e., those that perform certain computations) over others that consume similar amounts of energy.[16]

The Association does not question the important work of combating climate change, a critical component of our nation's and the world's environmental, economic, and national security. However, the Association emphasizes the importance of considering peer-reviewed evidence, impartial academic research, and transparent industry data to support future initiatives.

***The Advantages of a CBDC are Unclear.***

As technology allows for the digitization of money, policy decisions carry with them the potential to either positively or negatively impact privacy, security, and the preservation of Americans' constitutional rights. In particular, the question of how best to implement digital cash in our society largely revolves around the choice between using privately-issued stablecoins or CBDCs.

Stablecoins, like other digital assets, run on decentralized public blockchains, meaning anyone can use them without having to rely on a trusted third party. The public nature of these networks means they are more secure, since a successful cyber attack requires hacking thousands of computers running shared code versus one single centralized database; more accessible, since they can be used by anyone with access to the internet; and more resilient, since decentralized networks suffer virtually no outages compared to systems with single points of failure.

For many reasons, a CBDC is the wrong way to maintain U.S. dollar dominance in the digital era.

First, to strengthen the dollar's dominance as the global reserve currency, our main priority should be to spread dollars far and wide—to make them available to anyone and everyone around the world. Privately-issued stablecoins have already made a huge impact in global crypto markets: they have added to the competition in the payments landscape by serving as a faster, cheaper, and more flexible means of sending dollar-denominated payments internationally, in addition to providing a means of accessing the value of fiat currencies without leaving the crypto ecosystem. Stablecoins have already achieved much of what a CBDC would do, particularly because dollar denominated stablecoins are the preferred stablecoin of many users. Rather than reinvent the wheel, the U.S. should support the growth of existing stablecoins.

Second, we should seek to maximize the contribution of our vibrant and experienced private sector, not sideline it in favor of a centrally-planned government project. While other nations like China might give their central governments total control over emerging industries and

[16] *OSTP Report*, *supra* note 8, at 7.

technologies, that is decidedly not the American way. As former Vice Chair for Supervision of the Federal Reserve, Randal Quarles, explained, "A global U.S. dollar stablecoin network could encourage the use of the dollar by making cross-border payments faster and cheaper, and it potentially could be deployed much faster and with fewer downsides than a CBDC." Issuing a CBDC instead of supporting the development of private stablecoins would cause entrepreneurs and other members of the private sector to bring their innovations to countries other than the United States, causing us to miss out on the opportunity to become a leader in this space.

CBDCs also present major concerns for users: CBDCs can easily grant state actors a so-called "God's eye view" of the entire economy, tracking purchases and gleaning intimate personal details of its users. Rather than running on permissionless public blockchains, CBDCs are managed by a single central authority with the power to surveil, censor, and exclude users. A financial system subject to total command and control by the government would jeopardize Americans' fundamental rights to financial freedom and privacy.

These issues have come to the forefront in recent years, as the combination of cybersecurity breaches and surveillance capitalism have revealed a dire need for data privacy protection. This is not just a minor concern, it is an issue of constitutional import. Except in limited cases, the Fourth Amendment requires the government to obtain a warrant before it can search a person's financial records. The fundamental right to privacy is a prized American civil liberty and an essential feature of a functioning free society. This is what separates a nation like ours, which respects its citizens' autonomy and dignity, from one like the People's Republic of China, which has exploited technology to create a dystopian surveillance state. Look no further than China to see what a censored version of the internet, and financial networks, will inevitably become. The U.S. adoption of a CBDC could similarly threaten or bring real harm to everyday Americans.

***If Congress Were to Authorize the Creation of a CBDC, It Must Be Open-Source, Permissionless, and Privacy-Preserving.***

Should Congress ever empower the Federal Reserve to issue a CBDC, it must retain the design properties of cash with three principles on which cash-based commerce functions:

1. Open-Source – The underlying network on which the CBDC is issued should be open-source so anyone can build on it, innovate with it, and incorporate CBDCs into their businesses and personal accounts.

2. Permissionless – Anyone must be able to create an account and use CBDCs without having to seek approval and risk being cut out from the economy due to political, economic, social, or other reasons.

3. Privacy-Preserving – American citizens are legally able to exchange cash for goods and services without needing permission from a centralized authority. This must remain the case in a world where CBDCs exist at a global scale. Peer-to-peer commerce is the

essence of American capitalism and it is what allows our economy and our democracy to function in a free and fair way.

By contrast, consider again what is today playing out in China, where the government has fully embraced the digital yuan, its version of a CBDC.[17] It is obvious why the Chinese Communist Party has moved so quickly to implement a CBDC: it represents a once-in-a-century opportunity to expand its influence abroad by requiring foreign trade and investments to be conducted with the digital yuan through its CBDC network, while also providing a vast financial surveillance tool, giving it full access and control over the finances of Chinese citizens. In other words, CBDCs are a win-win for the Chinese ruling party's ambitions.[18]

The Association finds that the true strength of the American dollar lies in it being backed by the United States itself and the democratic values it upholds abroad. These include freedom of speech and assembly, fundamental rights to privacy and property, and the opportunity to pursue a prosperous future. The dollar's comparative advantage over other currencies backed by authoritarian and manipulative governments would be best exercised through well-regulated, privately-issued U.S. dollar-backed stablecoins.[19] This strategy would serve the national interest by both fully embracing the efficiencies of emerging technology, while removing the risk of eroding core American values.

***Our Recommendations for the Path Forward on Responsible Innovation.***

The Association appreciates the work of OSTP in gathering information on crypto networks and digital assets. Understanding the nuances of decentralized networks and what sets blockchain apart from previous generations of computing technology is prerequisite to successful regulatory steps by Congress and government agencies.[20]

Regulating any new technology should require a broad understanding of the unique characteristics that distinguish it from others: automobiles require different rules than horse-drawn carriages; electric light bulbs require different rules than gas lanterns; email

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[17] Jamie Crawley, *China Targets Blockchain Breakthroughs With Beijing Research Center: Report*, CoinDesk (Feb. 10, 2023), https://www.coindesk.com/policy/2023/02/10/china-targets-blockchain-breakthroughs-with-beijing-research-center-report/.

[18] Jennifer Conrad, *China's Digital Yuan Works Just Like Cash—With Added Surveillance*, Wired (Nov. 8, 2022), https://www.wired.com/story/chinas-digital-yuan-ecny-works-just-like-cash-surveillance/.

[19] *Toomey Outlines Stablecoin Principles to Guide Future Legislation Before the S. Committee on Banking, Housing, and Urban Development*, 117th Cong. (2021), https://www.banking.senate.gov/newsroom/minority/toomey-outlines-stablecoin-principles-to-guide-future-legislation; Josh Gottheimer, *Release: Gottheimer Announces 'Stablecoin Innovation and Protection Act,' Critical New Cryptocurrency Legislation*, Josh Gottheimer: New Jersey's Fifth District (Feb. 15, 2022), https://gottheimer.house.gov/posts/release-gottheimer-announces-stablecoin-innovation-and-protection-act-critical-new-cryptocurrency-legislation.

[20] Jake Chervinsky & Kristin Smith, *How Congress Can Get Crypto Legislation Right*, The Information (Jan. 11, 2023), https://www.theinformation.com/articles/how-congress-can-get-crypto-legislation-right.

protocols require different rules than regular mail through the U.S. Postal Service. The same gap in perspective has hindered attempts to regulate decentralized networks built on public blockchains, which require rules that fit the technology rather than analog financial infrastructure.

There are several specific issues for which fit-for-purpose regulations can allow for blockchain and crypto innovation to flourish in the United States, while mitigating risks to consumers and financial stability.

First, legislators ought to capitalize on the broad industry and bipartisan Congressional support for centralized stablecoin regulation. Although there is broad support, there are a few general principles worth highlighting for this regulation. Regulation of stablecoins should be narrowly tailored and harmonized within the United States and across jurisdictions globally. Any framework for stablecoins should seek to maintain and promote the international competitiveness of the United States and the dollar. Regulation should protect the privacy, security, and confidentiality of individuals utilizing stablecoins, including allowing customers to opt out of sharing any information with third parties, and financial surveillance requirements under the Bank Secrecy Act should be modernized, including for existing financial institutions, in light of emerging technologies like stablecoins.

Second, stablecoin issuers should be subject to operational requirements, including: disclosures regarding assets held in reserves backing the stablecoin; clear policies regarding creation and redemption of stablecoins; and routine audits or attestations by registered public accounting firms. The reserves of stablecoin issuers should be limited to specified, high-quality, liquid assets that do not pose an unreasonable risk to the soundness of said reserves, and stablecoin issuance should not be limited to insured depository institutions. In addition, commercial entities should be eligible to issue stablecoins, provided they choose one of the stated regimes. Finally, non-interest bearing stablecoins should not be regulated like securities.

A second issue ripe for further consideration is tailored regulation of spot markets. Legislation and regulatory actions addressing spot market exchanges should focus on the risks posed by custodial intermediaries. These actions should establish standards around disclosures, audits, and reserves, and ensure that decentralized protocols can continue to operate in a decentralized manner. Lawmakers should not simply restrict access to the nascent and vibrant world of DeFi, particularly because DeFi technology natively solves regulatory problems that previously could only be solved by imposing compliance obligations on trusted third parties—such risks were introduced by intermediaries and are mitigated and/or eliminated by disintermediation. Such measures would greatly benefit both American consumers and entrepreneurs without having an undue chilling effect on innovation.

Third, there are some broad principles that could aid regulators as they approach the space. Regulators should focus initially on business models within the industry that they understand. These tend to be similar to traditional financial institutions in their models and practices.

Authorities, including law enforcement and federal investigators, should continue to pursue any and all bad actors who may be operating in the space, focusing on persons or entities who seek to exploit Americans for nefarious purposes. Lastly, regulators should regularly engage with partners within industry who stand ready to assist authorities in protecting and safeguarding our citizens using cutting-edge products and services.

The Association urges OSTP and other government entities to continue to gather input from industry experts. This process can help strengthen regulatory proposals and sync them with reality. Regulators should not implement reactionary measures to recent market events without understanding the implications. Ungrounded efforts like these are what ultimately led to a provision in the 2021 Bipartisan Infrastructure Bill[21] that imposed tax reporting requirements[22] on a potentially massive number of users in the crypto space, even where compliance would be impossible due to the nature of the technology.[23] It is imperative to balance the desire to mitigate risk with the enormous opportunities stemming from American innovation. The Association implores Federal agencies and Congress to take the required time necessary to get regulations right.

***Conclusion.***

The Association reiterates its broad support for implementing a well-researched regulatory framework that balances all considerations outlined above. Industry leaders appreciate the opportunity to directly contribute to information-gathering activities and fully endorse these important and open processes. The Association offers its members and staff as a resource for any further questions, concerns, or detailed information on the contents of this submission.

Respectfully submitted,

Kristin Smith
Chief Executive Officer

Jake Chervinsky
Chief Policy Officer

[21] H.R. 3684, 117th Congress (2021), https://www.congress.gov/bill/117th-congress/house-bill/3684.
[22] Kelly Makena, *Controversial crypto rules remain in infrastructure bill after House vote*, The Verge (Aug. 25, 2021), https://www.theverge.com/2021/8/25/22641375/cryptocurrency-infrastructure-irs-tax-developers-miners-bitcoin.
[23] Abraham Sutherland, *Research Report on Tax Code 6050I and Digital Assets*, Proof of Stake Alliance (Sept. 17, 2021), https://www.proofofstakealliance.org/wp-content/uploads/2021/09/Research-Report-on-Tax-Code-6050I-and-Digital-Assets.pdf.