

Congress of the United States

Washington, DC 20510

June 23, 2022

Office of Science and Technology Policy
Eisenhower Executive Office Building
1650 Pennsylvania Avenue, NW
Washington, DC 20502

Dear Dr. Nelson:

We write in response to the request for information on President Joe Biden's Executive Order regarding the energy and climate implications of digital assets. The federal government must take a robust approach to address the adverse impacts on energy demand, climate change and public health. While we support innovative technologies broadly, we must ensure the United States does not fall behind in meeting its ambitious climate goals and that all the growth of cryptocurrencies - which involve extraordinarily high energy use, often produced from fossil fuels - does not cause dangerous emissions increases.

The rapid expansion of cryptocurrencies across the globe and the number of crypto miners moving their operations to the United States present risks to the climate and to local environments, and we applaud President Biden for taking this issue seriously by recognizing that climate must be a part of the conversation when it comes to digital assets.

We are particularly concerned about the energy-intensive "Proof of Work" (PoW) consensus method used by Bitcoin miners. PoW is unsustainable because of the amount of energy it takes to "mine" new tokens and validate transactions and will remain so unless there is decisive policy and regulatory intervention by the federal government. Alternative consensus methods exist that use up to 99 percent less energy than PoW. Bitcoin mining is estimated to account for roughly two-thirds of the total energy demand of all cryptocurrencies,¹ and use more electricity than entire countries like Sweden.²

The administration must also address another disturbing pattern, efforts by Bitcoin miners to revive formerly decommissioned fossil fuel power plants across the country for the purpose of powering large scale Bitcoin mining operations. Communities have reported air, water, and noise pollution from these mining facilities. Additionally, we have concerns over the amount of electronic waste that is being generated from this industry. If not properly managed, it has the potential to further threaten public health and the environment.

¹ [https://www.cell.com/joule/fulltext/S2542-4351\(22\)00086-1?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2542435122000861%3Fshowall%3Dtrue](https://www.cell.com/joule/fulltext/S2542-4351(22)00086-1?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2542435122000861%3Fshowall%3Dtrue).

² <https://www.nytimes.com/interactive/2021/09/03/climate/bitcoin-carbon-footprint-electricity.html>.

The most recent IPCC report released on April 4, 2022 made clear that it is “now or never” if we want to have a chance at averting catastrophic disaster due to climate change. In order to limit global warming to 1.5 degrees Celsius, greenhouse gas emissions must peak by 2025 and be cut by 43 percent by 2030. The report outlines the need to rapidly phase out fossil fuel supply and demand, more specifically, coal by 95 percent, oil by 60 percent, and gas by 45 percent, by 2050.³ If we are to meet the climate goals of the Paris Climate Agreement, immediate and deep emissions reductions across all sectors, including the financial and digital asset sector, are needed,⁴ and the expansion of energy-intensive cryptocurrencies threatens efforts to meet these goals.

Yet in the United States, Bitcoin mining companies are burning fossil fuels or coal waste at power plants that would otherwise be closed. The IPCC report states “cryptocurrencies may be a major global source of CO₂ if the electricity production is not decarbonized (Mora et al. 2018).” And additionally, these fossil fuel power plants are polluting nearby communities. According to one estimate, the energy used to “mine” Bitcoin in 2020 alone resulted in almost 60 million tons of CO₂ emissions.⁵ Another report estimates that Bitcoin produces annual carbon emissions comparable to Greece.⁶

We request that as you formulate a federal approach on digital assets, you address the environmental justice communities that are currently dealing with the rise of Bitcoin mining, and the continued existential threat of climate change. Cryptocurrency is a new industry and must be transparent with its practices to understand the true scale of the problem. It is essential to understand the amount of electricity used by crypto companies, the projected amount of future electricity used if they were to expand, the sources of their energy, and the location of these facilities across the United States. In doing so, the federal government can shed light on misleading claims regarding the environmental impacts of digital currencies and address the serious risks PoW cryptocurrency poses to supply chains and electricity prices and availability. If the United States wants to meet its goal of net-zero greenhouse gas emissions by 2050, we must curb the rise of fossil powered PoW mining operations.

Thank you for leadership to ensure the climate, energy and pollution concerns surrounding PoW cryptocurrency mining are taken seriously. We look forward to seeing your continued leadership on combating the climate crisis.

Sincerely,



Jared Huffman
Member of Congress

³ https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf.

⁴ <https://www.weforum.org/agenda/2022/04/ipcc-report-mitigation-climate-change/>.

⁵ <https://forexsuggest.com/global-impact-of-crypto-trading/>.

⁶ <https://doi.org/10.1016/j.joule.2022.02.005>.



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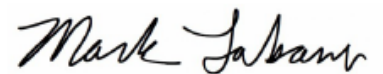
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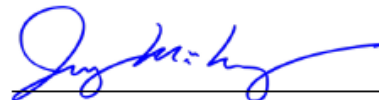
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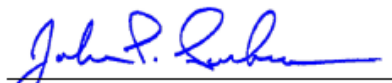
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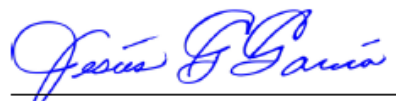
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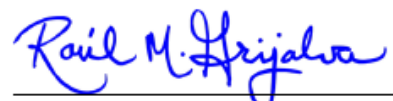



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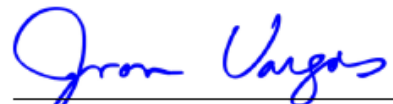

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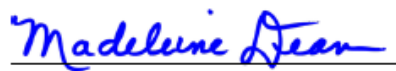

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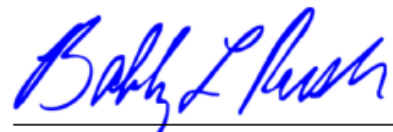

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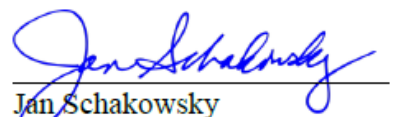

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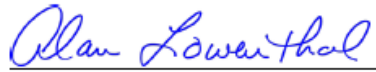

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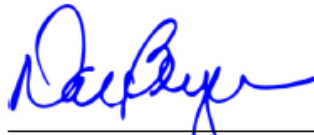
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