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Crypto-Assets and Climate Change – It’s Complicated



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On September 8, the White House published a report (“Climate-Crypto Report”) on [Climate and Energy Implications of Crypto-Assets in the United States](#), which was followed by a detailed [Fact Sheet](#) summarizing the findings in the report. The Climate-Crypto Report was prepared following President Biden’s March 9, 2022 [Executive Order 1407](#) that mandated examination of distributed ledger technologies’ (“DLT”) impact on energy transactions and ultimately on the environment.

The Climate-Crypto Report addressed four questions: (1) *how* digital assets affect energy usage and grid management? (2) *what is the scale* of climate, energy and environmental impacts of digital assets? (3) *what are potential uses* of DLT that could support climate monitoring? and (4) *what critical policy decisions*, innovation and research are needed to mitigate the environmental impact of digital assets?

The Report acknowledges that although President Biden’s Administration has set the policy at responsible development of U.S. digital assets markets, it also recognized the increasing costs on U.S. energy infrastructure and the impact on the environment, considering that mitigation of climate change is also one of President Biden’s key priorities.

First, the Climate-Crypto Report finds that crypto-assets use a significant amount of electricity – globally equal to the amount of electricity used by Argentina or Australia. It also found that not all crypto-assets technologies consume the same amount of power, with Proof of Work (“PoW”) mechanisms far exceeding the power usage the Proof of Stake (“PoS”) processes.

Second, the Climate-Crypto Report found that there is a sizable impact on the environment of anthropogenic greenhouse gas (“GHG”) emissions associated with crypto-assets markets. In addition to the increased demand on the power grid, generation of crypto-assets also generates noise pollution, water impact, and a lot of other environmental waste.

Third, the Report also finds that there are broad and various uses of DLT in environmental markets, better resource coordination and supply chain management.

Finally, the Climate-Crypto Report recommends reduction of associated GHG emissions, reduction of power-intensive technologies (such as PoW) in favor of more low-impact PoS processes, and efforts to avoid negative impacts on the underserved and overburdened communities. In fact, on September 6, Ethereum did just that – it launched [The Merge](#) to switch to the less energy intensive PoS process.

During the recent Senate hearing on September 15 to review the recently proposed Digital Commodities Consumer Protection Act, several panelists [acknowledged](#) the carbon footprint of crypto-assets markets. These findings are further addressed in a September 16 [release](#) from the White House that proposed a comprehensive framework for responsible development of digital assets in the U.S.
