



energy web

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Department of Financial Protection and Innovation  
State of California

Dear all,

Thank you for the opportunity to respond to the DFPI's Invitation for Comments on Crypto Asset-Related Financial Products and Services. We are pleased to provide the following input from Energy Web.

[Energy Web](#) is a global non-profit accelerating the energy transition by developing and deploying open source technologies that help companies unlock business value from the energy transition. Incubated within global energy transition nonprofit RMI, Energy Web was spun out and established as an independent Swiss-based nonprofit entity in 2017. Our focus is solving problems in complex, multi-stakeholder energy markets and supply chains where a lack of coordination creates barriers to innovation. Based on over five years of research and development with our community of over 100 customers, Energy Web packages open-source, decentralized technologies – including blockchain and self-sovereign identities – into enterprise grade solutions. Energy Web's primary business activity is customizing and deploying these solutions, which are used today by over 50 companies in 25 countries to unlock business value in the context of a rapidly changing energy sector.

We would like to provide input on two specific questions set out in the DFPI's Invitation for Comments, as follows.

**6. What steps should the DFPI take to address climate risks posed in the offering and provision of crypto asset-related financial products and services?**

Energy Web believes that blockchain can play a key role decarbonizing any industry that uses electricity or carbon-intensive commodities. Since 2017, we have worked with energy market participants in California and around the world to build solutions that use blockchain,

self-sovereign identity, and other Web3 technologies to integrate renewable energy and demand flexibility into electrical grids and to enhance emerging “green commodity” markets with the transparency and trust they need to scale.

On May 9, 2022, Energy Web and RMI announced [Green Proofs for BTC](#), an initiative to help investors, regulators, and crypto market participants better assess the climate impact of specific bitcoin mining operations. The initiative’s goal is to enable any bitcoin market participant—a mining company, an investor, a regulator, or a member of the general public—to fully understand the emissions impact of any crypto mining operation relevant to them. In doing so, Green Proofs for BTC will establish a new market paradigm where investment decisions can be made on the basis of reliable ESG performance data, unlocking business value for verified low-emissions bitcoin mining operations and raising the bar for the bitcoin mining industry.

The initiative’s immediate objectives are as follows:

1. **Develop a common framework for assessing the carbon impact of bitcoin mining operations.** The bitcoin mining industry has yet to reach consensus on what mining practices qualify as “sustainable.” Mining companies pursuing ESG strategies do so in a variety of ways. Some site their operations in areas where the grid is rich in renewables; others purchase large quantities of carbon offsets. Energy Web’s work launching the [Crypto Climate Accord](#) (CCA) has demonstrated that the crypto community is deeply interested in decarbonization tools and initiatives. With Green Proofs for BTC, Energy Web will build on the CCA’s work to help bitcoin miners set a “north star” for excellence in renewable procurement.

Energy Web is currently evaluating a novel methodology, co-developed with RMI, that will help miners maximize the emissions reduction impact of their renewable energy purchases. When companies purchase renewables, their goals are typically to (1) mitigate the emissions impacts of their own activities and (2) drive the addition of more renewable generation to the grid. However, procurement practices vary widely in their ability to support this second objective. For example, buying unbundled energy attribute certificates from a grid powered by a high percentage of renewables may signal greater consumer demand for renewables overall, but fail to translate directly to an increase in renewable capacity. Conversely, funding a new on-site renewable generation facility—even in an area with a relatively dirty grid—has a clear, direct, “material impact” on that grid mix.

Energy Web’s proposed assessment approach helps ensure that miners invest in the highest-impact renewables available to them. It will score companies based on four parameters relative to the electricity that they purchase or acquire and the renewables they procure:

- The amount of renewable energy that a company purchases relative to the total amount it consumes;
- The “material impact” of the specific renewable energy procurement mechanisms—in other words, how likely the chosen methods of procuring renewables are to directly enable the addition of new renewables to the grid;

- The impact of the company’s energy demand on the grid where its operations are sited—based on the marginal emissions rates of the geographies where mining actually happens; and
- The emission impact of new load on the grid in the regions from which renewables are procured—based on the marginal emissions rates of the geographies where RECs originate.

**2. Certifying renewably-powered bitcoin mining and hosting facilities.** Investors and other crypto market participants are keenly interested in solutions that create greater transparency around the ESG practices of miners, exchanges, and other actors. Implementing a transparent certification program for renewably-powered mining and hosting facilities can create value for participants in the form of new sales channels, investment opportunities, and brand building. Energy Web will begin working with select bitcoin miners and hosting facilities in Q3, 2022, to certify their operations using the [Green Proofs](#) solution described above.

We recommend that the DFPI evaluate the potential of market-led approaches such as Green Proofs for BTC to mitigate the emissions risks associated with Proof-of-Work mining. We also encourage the DFPI to be mindful in its work of the distinction between the Proof-of-Work blockchains—which represent a material and fast-growing segment of new electricity demand—and blockchains using less electricity-intensive consensus mechanisms, such as Proof-of Stake. Failing this distinction, the DFPI risks painting the nascent blockchain industry with too broad a brush, so to speak, and missing opportunities to leverage beneficial applications that are unrelated to the emissions implications of Proof-of-Work.

**9. How can the DFPI make California the most desirable home state for responsible companies when developing guidance and, as appropriate, regulatory clarity and supervision of persons involved in the offering and provision of crypto asset-related financial products and services in California?**

Energy Web’s primary business activity is developing and deploying open-source Web3 technologies that help energy companies unlock business value from clean and distributed energy resources. Since our founding in 2017 we have worked with a large community of member companies, including several in California, to not just experiment with decentralized technology but also identify, test, and validate specific business processes where it provides material and superior benefits relative to existing IT solutions.

One prominent example is [our work with the California Independent System Operator \(CAISO\) to enhance Flex Alerts](#), their emergency energy conservation program. In that initiative, we leveraged self-sovereign identity technology to improve response visibility while protecting consumer privacy. More broadly, Energy Web is working to bring to market packaged software-as-a-service solutions built with Web3 components - including public blockchains, self-sovereign identities, and crypto tokens. While companies continue to demonstrate strong interest in these solutions, achieving widespread adoption can be challenging as many companies perceive any blockchain-based solutions to inherently involve legal and/or financial risks due to a lack of regulatory guidance and accounting standards.

Based on our experience, we believe that it's imperative from both a nomenclature and regulatory perspective to separate purely speculative, financially-motivated "crypto" assets and services from the broader category of blockchain-based technology solutions. While there may be overlap between the two (e.g. the latter may involve the use of crypto assets such as stablecoins or utility tokens) we encourage DFPI to consider to provide as much clarity in the form of specific definitions and rules as possible, such that companies acting in good faith are encouraged to innovate with blockchain-based solutions. We believe in stronger regulatory guidance and accounting standards that mitigate risk (real and perceived) and appropriately segregate speculative assets and services from those that can solve real-world problems and create value for consumers.

Thank you again for the opportunity to provide input on this important topic. We welcome further questions and discussion on these topics as may be useful to the DFPI.

Sincerely,

Amy Westervelt