


MIAMI BEACH

City of Miami Beach, 1700 Convention Center Drive, Miami Beach, Florida 33139, www.miamibeachfl.gov

COMMITTEE MEMORANDUM

TO: Honorable Chair and Members of the Finance and Economic Resiliency Committee

FROM: Alina T. Hudak, City Manager 

DATE: February 25, 2022

SUBJECT: Discuss Discussion Regarding Cryptocurrency In Miami Beach

BACKGROUND

Cryptocurrency is a decentralized monetary asset you can buy, sell, and exchange directly peer-to-peer without an intermediary like a bank. Blockchain is the underlying technology that secures the transaction history. Bitcoin is the oldest and largest cryptocurrency. Bitcoin has been running globally uninterrupted for twelve (12) years. Bitcoin and other cryptocurrencies can be acquired through several online platforms and apps (Coinbase, Gemini, Robinhood, PayPal, Square's Cash app, etc.). Bitcoin and its blockchain code were technological innovations which allow for digital scarcity and security without a trusted custodian.

Blockchain

Blockchain is a method of quickly validating transactions and of record keeping for large quantities of data. Blockchain technology is an innovative way for transactions taking place on a network of computers to be recorded on a shared, distributed public ledger containing information about all transactions that have ever occurred with a particular cryptocurrency. Blockchains are made up of a series (or chain) of chunks of data (blocks) that have been created and validated by computers on a blockchain network. Blockchain technology has many applications, ranging from executing contracts to supporting cryptocurrencies.

The Bitcoin and Ethereum blockchains were created as decentralized systems to track and validate financial transactions of the cryptocurrencies BTC and ETH, respectively. A key feature of these systems is that they do not require the involvement of a financial institution or another entity acting as a central authority. Rather, in these systems, the users themselves record and validate the cryptocurrency transactions through the process of cryptocurrency mining.

Mining

Mining is a computational process critical to the security of Bitcoin and many cryptocurrencies and uses a significant amount power to generate. Once the transactions are validated through the crypto mining process, the transactions are recorded on the corresponding blockchain.

There are two primary ways to acquire Proof of Work (PoW) cryptocurrencies: (1) purchasing cryptocurrency already in circulation through a cryptocurrency exchange or, (2) mining to acquire new coins not yet in circulation as a reward for validation activities. To mine for PoW cryptocurrencies, specialized computers make trillions of guesses per

second to solve a complex puzzle. The first computer to guess the correct answer is awarded new cryptocurrency coins. When the correct guess has been made, other computers on the network quickly verify the answer. Once verified, a new block containing additional, recent transaction information is then added to the blockchain. After a block is added, the validation and mining process starts over again with a new complex puzzle, and new cryptocurrency to be awarded.

Unlike other settings, however, increasing the computing capacity does not translate to faster mining and awarding of cryptocurrency. Rather, PoW cryptocurrencies, such as BTC and ETH, use protocols that adjust the difficulty of the puzzles to ensure one miner finds a solution at a fixed, aggregate time interval. For example, in the Bitcoin network, the protocol is designed to allow a block of transactions to be validated and new BTC awarded every 10 minutes. Therefore, as additional computing power comes online to solve the puzzle, the protocol automatically adjusts the puzzle to make it more difficult to solve, ensuring it will still take approximately 10 minutes to validate any BTC transaction. In the early days of PoW mining, virtually anyone with a computer and an internet connection could earn cryptocurrency through the mining process. Today, PoW miners need thousands of application-specific integrated circuits (ASICs) to have any chance of reliably earning cryptocurrency rewards on the major cryptocurrency networks.

Energy Consumption

A cryptocurrency miner increases their likelihood of identifying the correct answer by increasing their number of guesses, a process which increases computational power. The competition inherent to PoW mining therefore incentivizes miners to continuously increase the computing power of their facilities to gain a competitive edge at winning mining rewards, creating immense energy consumption. Blockchains utilizing a the PoW mechanism require enormous amounts of energy to operate. Ethereum (ETH) and Bitcoin (BTC), for example, are two blockchains that currently employ PoW to support their cryptocurrencies. One analysis indicates that the energy required to validate just one ETH transaction today could power a U.S. home for more than a week, while the energy required for a BTC transaction could power a home for more than 70 days.

Even though the number of coins awarded per validation is structured to periodically decline over time to maintain scarcity, miners are making more money now than ever before given the increase in the value of the cryptocurrencies. The profitability of mining and the increase of the value of PoW cryptocurrencies over time supports massive investments in mining facilities, which require ever-increasing amounts of energy to power and cool machines. More PoW cryptocurrency mining operations may come online as the dollar value of cryptocurrencies grow, forcing miners to expand their operations to maintain profitability. Thus, there are concerns that if the dollar value of PoW cryptocurrency mining rewards exceed the costs of deploying, powering, and cooling mining facilities, their required energy consumption and environmental impact may grow further. Due to their broad adoption, cryptocurrencies are predicted to remain in use for the foreseeable future, raising questions about their rising energy consumption.

ANALYSIS

The rise of cryptocurrencies, declining use of cash, and emergence of stablecoins has led governments worldwide to consider issuing their own forms of electronic money, e.g., CityCoins. These efforts have picked up momentum lately with India recently announcing that it will issue a digital rupee by early 2023 and China testing its digital yuan at the 2022 Beijing Winter Olympics.

Cash has survived for thousands of years because it is convenient as a means of payment, relatively safe and also preserves people's privacy. Crypto advocates aim to elevate that anonymity to the digital realm while releasing control from central banks (though transactions are often traceable back to individuals). But not even Bitcoin is widely accepted enough to be useful for payments. Stablecoins, which are typically pegged to a hard currency like the dollar, seek to address those issues but create inefficiencies and risks elsewhere in the financial system.

Wall Street Journal, Bloomberg and other national publications continue to drive interest in Florida. Miami's Mayor Suarez has been actively communicating on social media the City of Miami's interest in cryptocurrency and that Miami can mine Bitcoin with clean nuclear energy provided by FPL. Moreover, Mayor Suarez has been promoting that Miami wants to be the crypto mining capital of the world and knows it can be done sustainability and incorporate solar. Likewise, Mayor Adams (New York City) has made headlines declaring his support for a New York City cryptocurrency, emulating the MiamiCoin that Mayor Suarez has been promoting since August 2021. These endorsements are a new development in the evolution of cryptocurrencies, and an apparent milestone in government acceptance of them.

CityCoins

MiamiCoin and NYCCoin are two active projects by CityCoins, an initiative organizers have promoted as a way to raise funds for municipal projects by generating demand for city-specific digital tokens. Miami is the only city to receive a cash gift as a result of MiamiCoin activity. MiamiCoin cannot be used to purchase goods or services, so it functions as a way to store value. Currently, MiamiCoin can be bought and sold on only one cryptocurrency exchange, Okcoin. Miami recently accepted a cash gift of \$5.25 million derived from a percentage of the value generated by the process that yields MiamiCoin. However, the value of MiamiCoin has recently plunged by 93% to its lowest point since it launched in August.

Cryptocurrency Task Force

The Miami-Dade County Board of County Commissioners created a Cryptocurrency Task Force for the purpose of studying the feasibility of accepting cryptocurrency and other digital monetary forms as an acceptable method of payment for county taxes, fees and services, and to offer recommendations for other policy initiatives relating to cryptocurrencies. The task force was created in April 2021, held its first meeting on September 15, 2021, and plans to issue recommendations in 180 days.

The main goals of the Cryptocurrency Task Force will be to:

- review what other municipalities have done
- survey county residents
- look for vendors that could provide transaction and custodian services
- recommendations of best practices

The Administration recommends reviewing the recommendations of the County's Task Force before moving forward with potential initiatives such as accepting cryptocurrency and other digital monetary forms as an approved method of payment.

Economic Development Incentives

From an Economic Development perspective, the City should aim to foster and cultivate

growth in the cryptocurrency space. The Mayor and City Commission have already identified finance and technology industries as targeted industries and directed the Administration to promote these industries within Miami Beach. With cryptocurrency reflecting FinTech, a blend of these two targeted industries, it behooves the City to embrace businesses in the crypto space. Crypto-based businesses are evolving and innovating rapidly. Crypto exchanges, payment gateways, asset management services, crowdfunding services, lending banks, and wallets are just a few types of crypto-related businesses.

The City is already incentivizing technology and financial services firms through the Job Creation Incentive Program (JCIP), a financial performance-based incentive rewarding the creation or relocation of at least ten (10) high wage jobs. The Administration has identified a need for a modified level of incentives and requirements to support startups and smaller companies and is developing a JCIP category to provide such support. Start-up crypto-based businesses typically have a lower employee threshold which could make them ideal participants should the Finance and Economic Resiliency and City Commission recommend an enhancement for this purpose. As of February 16, 2022, the average annual pay for cryptocurrency-related jobs in the United States is \$108,371 a year and \$104,727 for Miami Beach (ZipRecruiter). It may be prudent, while the Administration gathers more information, data, insight, and best practices, that we consider a small pilot incentive program.

For example, the JCIP could be modified, as a twelve (12) month pilot program, to incentivize startups and crypto entrepreneurs to develop and produce high-tech innovations that have the potential for commercialization including, but not limited to tourism, green and blue construction, resiliency and climate solutions. The purpose would be to support technology excellence and innovation. The JCIP eligibility criteria could be modified to accommodate startup/entrepreneurial technology businesses that are:

- for-profit businesses operating for fewer than three (3) years;
- have 2-5 employees; and
- the majority of ownership is held by one or a combination of either another for-profit business or a venture capital-operating company, hedge fund, or private equity firm.

Bitcoin 2022 and eMerge Americas Presence

The Administration plans to leverage partnerships and resources to cultivate relationships with and grow the technology and financial services industries by attending the upcoming Bitcoin 2022 and eMerge Americas events. These Miami Beach Convention Center events offer opportunities for the Miami Beach team to showcase current programs and incentives; engage with business owners, entrepreneurs, investors and thought leaders; research and participate in identifying trends; and marketing Miami Beach. The Administration will have active booth space in the exhibition areas that will be built out to ensure that the City of Miami Beach stands out from the crowd, by relying on our internationally renowned brand touch points. These sponsored / owned spaces will serve to welcome key business leaders with a private or semi-private experience to host next generation technology competitions and/or social environments. These spaces will allow our Economic Development team to capture contact information of key decision makers, providing them with an elevated experience and educating them as to why Miami Beach is the perfect City for their business needs.

SUPPORTING SURVEY DATA

Based on the 2019 Community Satisfaction Survey, 59.9% of businesses indicated they would definitely/probably recommend the City of Miami Beach as a place to run a business.

FISCAL IMPACT STATEMENT

There is no fiscal impact anticipated in FY 2022 as the incentives of the JCIP are paid out after firm's demonstrate the creation or relocation of the required number of jobs. The potential fiscal impact of any approved firms under the program would be estimated and addressed as part of the FY 2023 budget process.

CONCLUSION

The Administration recommends modifying the Job Creation Incentive Program eligibility criteria for a 12-month pilot to incentivize startups and crypto entrepreneurs to develop and produce high-tech innovations that have the potential for commercialization including, but not limited to tourism, green and blue construction, resiliency and climate solutions. In addition, the Administration plans to leverage partnerships and resources to cultivate relationships with and grow the technology and financial services industries by attending the upcoming Bitcoin 2022 and eMerge Americas events. Finally, the Administration recommends reviewing the recommendations of the County's Cryptocurrency Task Force before moving forward with potential initiatives such as accepting cryptocurrency and other digital monetary forms as an approved method of payment.