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TO: The Honorable Detroit City Council

FROM: David Whitaker, Director  
Legislative Policy Division Staff 

DATE: February 20, 2025

RE: **REPORT REGARDING THE AUTHORITY TO ACCEPT CRYPTOCURRENCY**

City Council Member Anegla Whitfield-Calloway has requested the Legislative Policy Division (LPD) to produce a report on cryptocurrency and respond to various questions regarding the recently announced plan for Detroit to allow individuals to pay their City taxes with cryptocurrency.

Cryptocurrency or “crypto” is “an umbrella term to categorize the vast ecosystem of blockchain protocols that has emerged since the creation of Bitcoin in 2008.”<sup>1</sup> Crypto can be thought of as a digital asset or currency, however it is not operated by a centralized party such as funds held by a bank or reward points issued by a company. Instead, it uses a blockchain, which can be thought of as a ledger or spreadsheet to document crypto transactions. These transactions are added to the blockchain by a decentralized network of computers that are viewable by the public. Although the owner of crypto does not possess anything tangible, the blockchain keeps a record of their ownership.

### **Background**

Although, there were several attempts at creating digital currencies prior to, Bitcoin was the first cryptocurrency to be made publicly available online by someone or a group under the assumed name, Satoshi Nakamoto in 2009. Other decentralized cryptocurrencies, known as alt-coins <sup>2</sup>began to emerge in 2011. Today there is estimated to be more than 18,000 active cryptocurrencies in circulation, with Bitcoin remaining the most popular and valuable coin at the forefront of the market hitting a record high value of

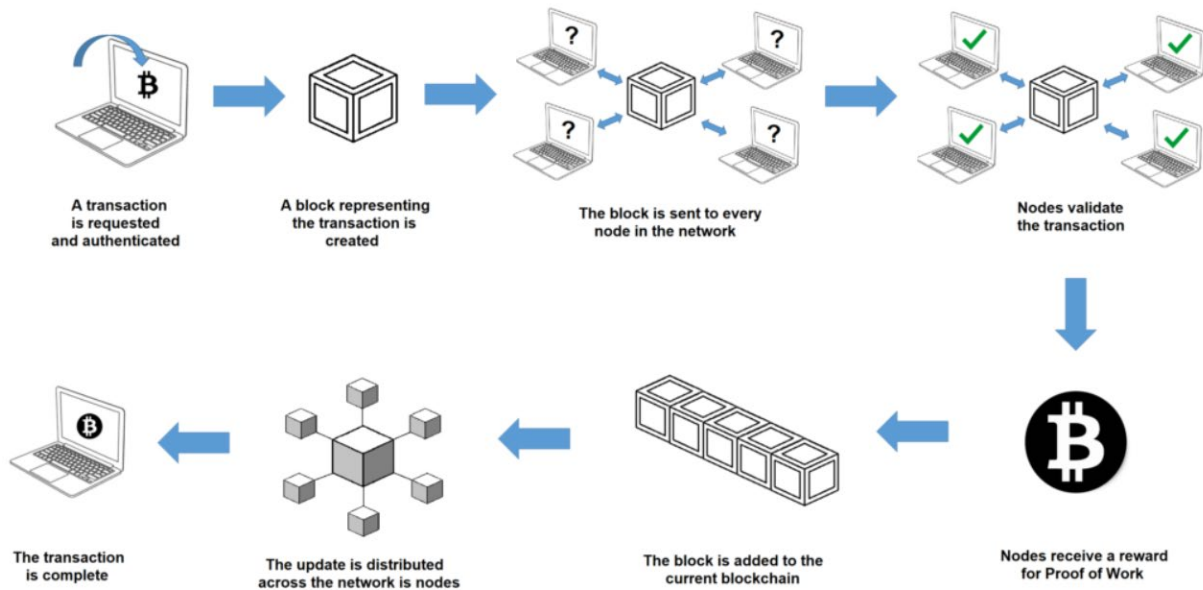
<sup>1</sup> <https://forbes.com/sites/digital-assets/article/what-is-crypto/>

<sup>2</sup> Any alternative coin other than Bitcoin is an altcoin.

\$100,000 per coin in 2024. Fractions of a Bitcoin can be purchased and used for transactions. A fraction of a Bitcoin is called a Satoshi (Sat). Fractions as small as one hundred-millionth of a Bitcoin can be used for transactions.

The advantages of cryptocurrencies include cheaper and faster money transfers and many other technological advancements. Each cryptocurrency has a white paper<sup>3</sup> that describes its technology. Since it is decentralized, it also keeps its systems from total collapse if there is a single point of failure for any reason.<sup>4</sup>The disadvantages of cryptocurrencies include the volatility of the coins, as the values of each coin can fluctuate significantly.

The creation of crypto coins initiates through crypto mining which consumes a great deal of energy as discussed later in this report. The image below shows a graphic representation of how crypto coins are produced and how the blockchain operates. The blockchain ledger operates by creating records also known as blocks that are linked together. Each block contains a cryptographic timestamp and transaction data. Each block will contain some information from the previous block which forms the chain and protects each transaction. The blocks are resistant to alteration or fraudulent transactions because any change to a block triggers a ripple effect to the entire blockchain which is public. All of this is managed through a peer-to-peer computer network with a collective consensus algorithm protocol that validates new block transactions.



Source: Freeman Law

- **Can the Mayor make the unilateral decision allowing for the Treasury to accept cryptocurrencies as a form of payment? Without Council approval?**

Pursuant to the 2012 Detroit City Charter, the City Treasurer falls under the Finance Department as part of the executive branch of City government. The Treasurer is given the authority under the Charter to

<sup>3</sup> A cryptocurrency whitepaper is a comprehensive document outlining the technical and economic aspects of a specific cryptocurrency. It is typically written by the cryptocurrency's development team or core members and serves as a guide for potential investors, miners and users.

<sup>4</sup> <https://www.forbes.com/sites/bernardmarr/2017/12/06/a-short-history-of-bitcoin-and-crypto-currency-everyone-should-read/>

“[c]ollect all moneys of the city and receive from other officers and employees all moneys of the city collected by them.”<sup>5</sup>

It is important to note that the various outlets reporting on the Mayor’s announcement that the City will allow tax payments to be made with cryptocurrency are somewhat misleading. The City does not intend to accept cryptocurrency as payment, which could pose a variety of potential problems given the volatile nature of cryptocurrencies. Instead, the intention is to utilize a PayPal function that converts cryptocurrency into U.S. dollars as one of several options for residents to pay their City taxes. Therefore, utilizing such a service would not create any material change because the City would ultimately receive the payments in U.S. dollars. As Treasurer Nikhil Patel recently stated, “[i]t will settle all in cash. The city is not taking on any volatility with the crypto market.”<sup>6</sup>

There does not appear to be any limitation in the City Charter or Code preventing the Treasurer from providing a new method for tax payments without City Council approval. However, if the City were to procure this new payment service under a contract that requires City Council approval, the Council would then be in a position to either approve or deny the contract.

- **What is the environmental risk associated with accepting cryptocurrency? Does the administration have plans to offset the environmental cost associated with cryptocurrency? Do we have assurance that the designated third-party will not pass on the transactional cost to the City of Detroit?**

Cryptocurrencies, particularly Bitcoin, consume massive amounts of electricity for both production and transactions. “It’s estimated that Bitcoin consumes electricity at an annualized rate of 127 terawatt-hours(TWh). That usage exceeds the entire annual electricity consumption of Norway.”<sup>7</sup> Bitcoin is not unique in this respect, as the decentralized nature of crypto networks require multiple computers to continually solve highly complex math problems. This is inherently wasteful because “miners” of crypto are essentially racing one another to solve these problems, and this energy use provides no benefit except to the one who solves it the fastest.

There have been efforts within the crypto industry to increase efficiency, although this is likely driven by market competition as opposed to environmental concerns. In some areas, particularly China, there have been efforts to utilize renewable energy for crypto. However, it is unlikely that the U.S. will embrace such measures at a federal level in the near future given the recent Executive Orders and department memos to promote the crypto industry<sup>8</sup> while also suspending all renewable energy development on federal land,<sup>9</sup> declaring a national energy emergency to circumvent environmental regulations for fossil fuel production,<sup>10</sup> and attempting to remove energy efficiency standards for vehicles and appliances.<sup>11</sup>

It is unclear whether Detroit’s initiative to allow for tax payments with crypto will generate a large increase in transactions. However, the Mayor is apparently attempting to position Detroit as a city that embraces crypto and blockchain technology as a way to create “a technology-friendly environment that empowers residents and entrepreneurs.”<sup>12</sup> He has also indicated that the administration is exploring other

<sup>5</sup> 2012 Detroit City Charter, Sec. 6-305.

<sup>6</sup> <https://www.fox2detroit.com/news/detroit-accepting-crypto-taxes-may-open-doors-other-avenues>

<sup>7</sup> <https://www.forbes.com/advisor/investing/cryptocurrency/bitcoins-energy-usage-explained/>

<sup>8</sup> <https://www.federalregister.gov/documents/2025/01/31/2025-02123/strengthening-american-leadership-in-digital-financial-technology>

<sup>9</sup> <https://www.theguardian.com/us-news/2025/feb/03/trump-war-on-clean-energy-big-oil>

<sup>10</sup> <https://www.federalregister.gov/documents/2025/01/29/2025-02003/declaring-a-national-energy-emergency>

<sup>11</sup> <https://www.federalregister.gov/documents/2025/01/29/2025-01956/unleashing-american-energy>

<sup>12</sup> <https://www.wxyz.com/news/detroit-set-to-become-largest-u-s-city-to-accept-cryptocurrency-for-taxes>

methods to improve City services with blockchain technology and that they are seeking proposals from “blockchain entrepreneurs and innovators.”<sup>13</sup>

If Detroit is able to position itself as a hub for crypto and related technologies, it will have to explore methods to mitigate potential increases in energy usage given the commitments that the City has made in the adoption of the Detroit Climate Action Plan.

Assuming that the City will implement this payment option through the PayPal platform as previously indicated, the fees associated with converting the cryptocurrency into U.S. dollars is borne by the individual converting the currency.<sup>14</sup>

- **Aside from payment transactions, how do we plan on leveraging blockchain technology to improve city services?**

As stated above, the Mayor first announced this initiative in November of 2024. He has made general statements about the desire to attract crypto and the related emerging technologies to Detroit, and has solicited proposals from individuals who have ideas about improving city services using blockchain technology. The administration has not yet announced any further plans regarding the utilization of blockchain technology. Our office reached out to the Department of Innovation and Technology to inquire about any plans to utilize blockchain technology, but we have not received a response as of the date of this report.

Please let us know if we can be of further assistance.

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<sup>13</sup> <https://www.bridgedetroit.com/detroit-will-accept-cryptocurrency-in-2025-for-taxes-and-fees/>

<sup>14</sup> <https://www.paypal.com/us/digital-wallet/paypal-consumer-fees>