

Cryptocurrency Donations

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Background

- Mozilla Foundation has been accepting cryptocurrency donations since 2014.
- **Annually, we average around \$1,000 in cryptocurrency donations.**
- In Dec 2021, Mozilla Foundation released [a tweet](#) requesting cryptocurrencies donations as part of the regular **end-year-donation drive**.
- Responding to internal and external discussion, Mozilla committed to **review** if and how its current policy on accepting donations in cryptocurrency fits with our all-Mozilla **climate commitment** and to do so **transparently while pausing accepting cryptocurrency donations**.

Conducting a Review

- The Mozilla Foundation began to immediately review the Foundation's cryptocurrency donations policy and aims to **complete it by the end of Q1 2022**.
- The cryptocurrency donation review is an internal process within Mozilla. In addition to this call and the #environment channel, you can weigh in during our **office hours on March 24 at 16:00 UTC**.
- We also are making the documentation of the **process open and transparent to the public**:

wiki.mozilla.org/Foundation/Cryptocurrency_Donations

Scope of the Review

In scope:

- Inform a decision made by MoFo's Executive Director about Mozilla's cryptocurrency donations policy in light of our climate commitments.
- If significant deliberation is needed, then it will be discussed with the Board.

→ **#environment** to discuss

Out of scope:

- This review won't influence what MoCo might explore in the future with regards to product development, decentralized web, blockchain, etc.
- Imo Udom will lead a broader set of conversations on these topics, and you can expect to hear more over the coming months.

→ **#cryptocurrency** to discuss

Facts & Figures: The Big Picture

Internet's Carbon Emissions

The digital sector **emits about 2-3% of the world's carbon** each year—more than the aviation industry.

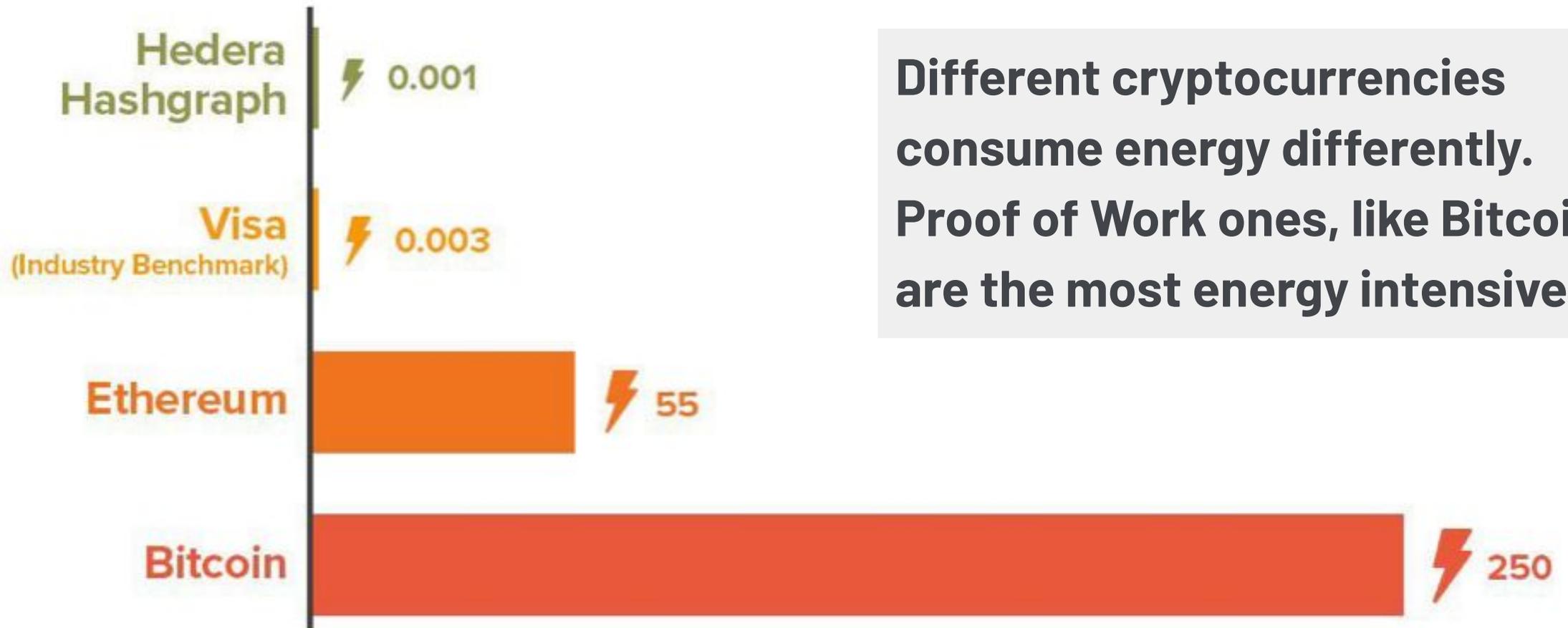
Global data centre electricity use in 2020 was **200-250 TWh**, or around 1% of global electricity demand.

This excludes energy used for **cryptocurrency mining**, which was approximately **100 TWh** in 2020.

Electricity used by Bitcoin miners likely consumed **60-70 TWh** in 2020 (~0.3% of global electricity usage).

Sources: "Recommendation ITU-T L.1470: Greenhouse gas emissions trajectories for the information and communication technology sector compatible with the UNFCCC Paris Agreement," ITU (2020) and [IEA](#) (2021).

Energy consumption (per transaction in kWh)



Different cryptocurrencies consume energy differently. Proof of Work ones, like Bitcoin, are the most energy intensive.

Comparisons of more cryptocurrencies' energy consumption, see: Gallersdörfer, Ulrich et al. "[Energy Consumption of Cryptocurrencies Beyond Bitcoin.](#)" (2020)

Growth in Cryptodonations to Non-Profits

Top Cryptocurrencies Donated in 2021

Cryptocurrencies With the Highest Annual Donation Volume

| | | |
|---|----------------------|-----------------|
|  | Ethereum (ETH) | \$30,794,056.69 |
|  | Bitcoin (BTC) | \$25,885,974.03 |
|  | USD Coin (USDC) | \$4,739,117.28 |
|  | Dai (DAI) | \$2,247,258.63 |
|  | Flow (FLOW) * | \$1,407,000.00 |
|  | Solana (SOL)* | \$1,235,197.54 |
|  | Gemini Dollar (GUSD) | \$484,560.25 |
|  | Cardano (ADA) * | \$408,125.16 |
|  | Litecoin (LTC) | \$339,447.41 |

85% OF OVERALL 2021 CRYPTO DONATION VOLUME WAS DONATED IN BITCOIN, ETHEREUM AND USD COIN.

*PROCESSED VIA THE GIVING BLOCK'S PRIVATE CLIENT SERVICES

There is evidence of cryptocurrency donations **growing in the non-profit sector**, although exact size is hard to verify.

The ones with the highest donation volume are: **Ethereum, Bitcoin and USD Coin.**

Sources: [Dorothy A. Johnson Center for Philanthropy](#) (2022) and Cryptocurrency donation platform, [The Giving Block](#) (2021)

Facts & Figures: Mozilla

Historic Cryptocurrency Donations

Mozilla received the following amounts in cryptocurrency donations:

| | |
|-------------|----------------|
| 2021 | \$1,524 |
| 2020 | \$2,391 |
| 2019 | \$562 |

We began accepting cryptocurrency in 2014 with the expectation these donations could grow more significant over time with promotion & uptake among donors.

Donation by Cryptocurrency & Transactions

In 2021, Mozilla received **41 transactions** totaling in value of \$1,524.

| | |
|---------------------|-----------|
| Bitcoin | 28 |
| Bitcoin Cash | 12 |
| Litecoin | 1 |

Comparing Individual Donations to Mozilla

- ACH/Wire (US bank transfers)
- BACS (UK bank transfers)
- Bitcoin (0.04%)**
- Braintree (Online donations)
- Paypal (Online donations)
- SEPA (EU bank transfers)
- Stock donations (Donated securities)
- Stripe (Online donations)
- Corporation Contribution
- Checks (Paper mailed)



Total Individual Donations (2021): \$3,473,949

Carbon Emitted from Cryptocurrency Donations

The historic donations are responsible for the following carbon emissions:

| | |
|-------------|----------------------|
| 2021 | 177 kg of CO2 |
| 2020 | 240 kg of CO2 |
| 2019 | 80 kg of CO2 |

Informed estimates. Exact numbers being verified.

Annual emissions roughly the emissions from a short-haul flight per passenger (150kg of CO2).

3 Scenarios: Projected Donations & Emissions

| | |
|---|---|
| 1. Stable (\$1,500 / year) | 177 kg of CO2 |
| 2. Incremental increase (x3 / Year) | 1,593 kg of CO2 (ca. 10 short-haul flights) |
| 3. Big Donation (\$1.5m in Bitcoin) | 17,700 kg of CO2 (ca. 118 short-haul flights) |

Informed estimates. Exact numbers being verified.

Decision Options

Decision Considerations

Cryptocurrency donations is an emerging field, with best practices for greenhouse gas accounting still being developed in a rapidly changing landscape.

- Determine whether the **reputational risk and accounting effort is worth it.**
- Default to **rational skepticism** about the climate-related claims of different cryptocurrencies. Seek **verifiable evidence** where possible.
- **Not burning fossil fuels** is better than offsetting them.
- Demand **openness and transparency** from providers.
- **Be token-neutral.**
- A good policy should not describe what's possible, but **what is responsible.**
- See beyond **carbon tunnel vision** to determine our climate responsibility.

Decision Options

Option 1

No crypto now

Option 2

**No PoW + Energy Threshold
+ Easy Accounting**

Option 3

No PoW + Energy Threshold

Option 4

No Proof of Work (PoW)

Option 4: No Proof-of-Work

- Proof-of-Work is clearly the most harmful form.
- Not accepting PoW would be very pragmatic—this is the main kind of cryptocurrency we receive.
- The carbon accounting is very difficult and the effort is probably not worth the revenue.
- PoW cryptocurrencies include: Bitcoin, Ethereum, Bitcoin Cash, Dogecoin, Litecoin, and hundreds more.



Option 3: No PoW + Energy Threshold



- For any non-Proof-of-Work cryptocurrency, we accept ones that are under a certain energy consumption threshold, for example the banking industry's benchmark of energy per transaction: Visa (0.003 kWh).
- Determine the energy threshold Mozilla accepts, which may further require further deliberation since some forms of accounting (i.e. per transaction) omit some emissions.
- Survey the current available energy measurements and create an "allow list" of non-PoW cryptocurrencies Mozilla will accept.

Option 2: No PoW + Energy Threshold + Easy Accounting

- Determine an acceptable energy threshold as per Option 3.
- Find a trusted source that measures energy claims and ensures these claims can be publicly audited. Based on our research, there isn't an entity that provides this service at this time.
- Once it is simple and cost-effective to account for the emissions in our fundraising & operational workflows, then we accept non-PoW cryptocurrencies that meet our criteria.



Option 1: No cryptocurrencies now

- Discontinue accepting all the cryptocurrencies for the foreseeable future.
- Cite the complexity and costliness of the greenhouse gas accounting, the lack of open and publicly verifiable reporting on the environmental impact from cryptocurrency projects, and the lack of trusted services and third parties auditing these reports that can be easily integrated into our workflows.
- Evaluate this policy each year as projects and services evolve.



Further Actions

Alongside our donation decision, the Mozilla Foundation will:

1. **Address our historic climate responsibility** from the last three years of cryptocurrency donations.
2. **Review our policy at a minimum each year** and continue to publish what we learn.
3. **Explore grantmaking and movement-building opportunities** that increase openness and transparency in assessing the environmental impact of digital products and services.

Next Steps

Weigh in on the options:

- MoFo Office Hours on March 24 at 16:00 UTC.
- Discussion in #environment Slack channel

Timeline:

- Decision by Mark with Juan and Michelle next week.
- Post decision and rationale publicly by March 31.
- wiki.mozilla.org/Foundation/Cryptocurrency_Donations