

THE ENVIRONMENTAL

IMPACT OF BITCOIN

Is Bitcoin a sustainable coin? And exactly how resource-intensive is Bitcoin mining? Let's find out!

01 PUZZLE SOLVING

Because Bitcoin is a digital currency, mining computers must constantly solve highly complex computational puzzles to verify the safety and inviolability of Bitcoin transactions. This is called **Proof-of-Work**.

02 REWARDS

As a reward, mining computers may occasionally discover new Bitcoin in a first-past-the-post system that requires a certain amount of luck.

03 ESCALATING COSTS

Because there is a fixed amount of Bitcoin, competition is fierce, which comes with an underlying problem: an escalating energy cost. The more miners join the race, the more complex the puzzles become, requiring more energy-intensive computers.

THE ENERGY COSTS OF BITCOIN

The energy required to power Bitcoin amounts to

0.52% OF THE WORLD'S ELECTRICITY CONSUMPTION

According to a study by the Cambridge University, the energy required to power Bitcoin mining could power:

- All the tea kettles in the UK for **25 YEARS**
- The Netherlands for **OVER A YEAR**
- The University of Cambridge for **644 YEARS**

30th

If it were a country, Bitcoin would be in the **top-30 energy users worldwide!**

IS BITCOIN MINING ENVIRONMENTALLY FRIENDLY?

DISCOVERING THE TRUE IMPACT OF BITCOIN MINING IS TRICKIER THAN IT LOOKS!

Since Bitcoin is a decentralized currency, nobody can accurately know where Bitcoin is mined and, consequently, what type of energy is used to mine it.

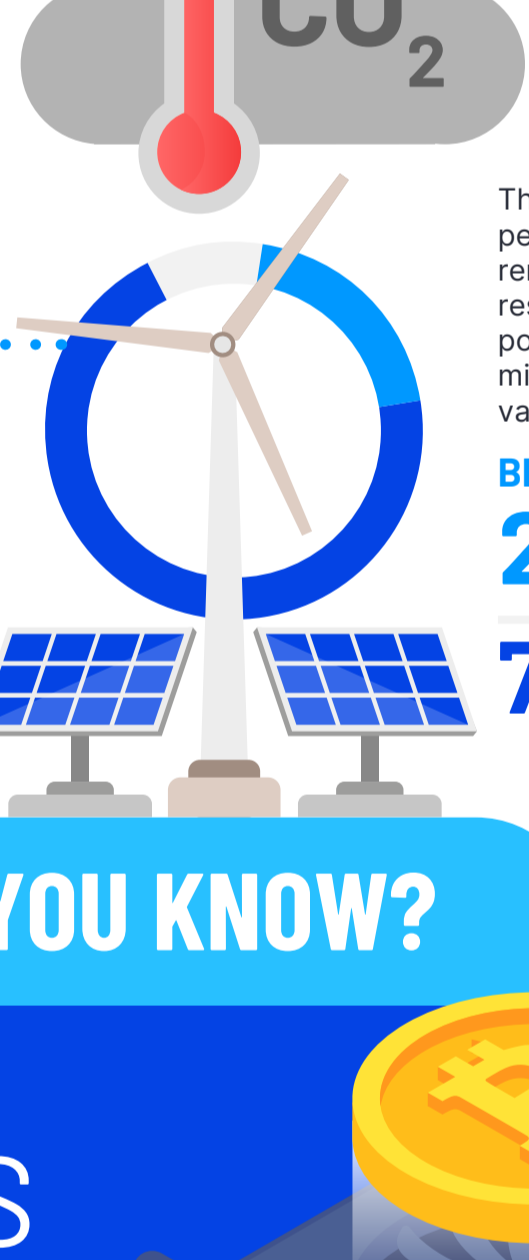
ESTIMATES CALCULATE THAT MOST BITCOIN MINERS OPERATE FROM CHINA.

Unfortunately for the coin's sustainability, more than two-thirds of China's power comes from coal plants.

0.17% OF THE WORLD'S TOTAL CO2 EMISSIONS MAY BE ATTRIBUTED TO BITCOIN

According to the Cambridge Centre for Alternative Finance, however, assuming the worst possible coal-powered only scenario, **the global warming impact of Bitcoin is still minimal.**

But it's undeniable that the environmental cost of Bitcoin mining could be offset by **choosing more energy-friendly sources like solar or wind.**



DID YOU KNOW?

1.9 YEARS

is how long the energy used by inactive but plugged-in devices in the US alone could power Bitcoin.

TECH AND INDUSTRY MOGUL ELON MUSK

an early adopter of cryptocurrencies, has recently talked about his concerns regarding Bitcoin's sustainability.

Until Bitcoin cleans up its act, Tesla has halted purchases of vehicles with BTC.

But Musk also indicated he would resume Bitcoin transactions as soon as the coin "transitions to more sustainable energy."



TRADITIONAL CURRENCIES ALSO HAVE AN ENVIRONMENTAL IMPACT

Hard cash, such as coins and bills, needs non-renewable resources

like copper, nickel, and other raw materials.

The Euro banknotes are entirely made of cotton, which is a water-intensive crop. **A single kilogram of cotton uses 20,000 litres (5,283 gallons) of water!**

1Kg = 20,000Lt

Centralized currencies also require banks and other institutions to function, which also have a significant environmental footprint.

According to a study by the Bank of England, about 50% of the £5 bill's energy requirements can be attributed to ATM power needs.

ARE THERE ANY ALTERNATIVES?

ETHEREUM

has pledged to become greener and plans to cut its energy consumption by

99%

They plan on doing so by changing Ether's Proof-of-Work mining system to a less energy-costly Proof-of-Stake (PoS).

CARDANO

already uses the more **environmentally-friendly PoS system!** The coin may currently only require about

2,000x

LESS the cost of running the ETH blockchain.

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