Technology V9/S6: Crypto Currency & the Environment

Cryptocurrency is digital currency stored by a decentralized system. Not one country, government, or company owns it. Its records are secure and made available for anyone to see. This makes cryptocurrency the preferred payment method for some. However, cryptocurrency is bad for the environment and can cause lasting damage.

The negative environmental effects of cryptocurrency come from how cryptocurrency is created. Cryptocurrency is generated in cyberspace using a process called mining. Mining occurs when the computer's programs find solutions to complicated problems. These answers validate cryptocurrency transactions that are then stored on a decentralized blockchain. This "proof of work" model translates into funds for the top solvers. To effectively mine, one needs many specialized and powerful computers that use a lot of electricity.

Because cryptocurrency is decentralized, it can be mined from almost anywhere. Ideal locations for cryptocurrency have cheap land, cheap electricity, and colder climates (computers generate heat). This means that most crypto mining farms occur in rural areas with colder weather. Crypto Colonialism is a term used to describe the way cryptocurrency millionaires are moving into developing countries to take advantage of cheap land and electricity. Some wait until environmental disasters cheapen the cost of land in a particular area. These businesses rarely supply jobs to the people living in those areas and instead suck up a lot of the area's energy. The ability to mine anywhere in the world, depending on the conditions, also makes it harder to obtain exact numbers on the harmful effects of mining.

It has been found that Bitcoin uses more electricity than some entire countries. 1 bitcoin transaction can use the same amount of electricity as the average home over the course of a month. However, Bitcoin is only one of the many cryptocurrencies that exist. Imagine how much energy other cryptocurrencies will use. If cryptocurrency mining increases, it can become responsible for the carbon footprint of mining to reach 90.2 million metric tonnes of CO_2. Some scientists say that mining alone can worsen global warming.

Cryptocurrency proponents argue that the benefits of cryptocurrency outweigh its negative effects. Some think that the demand for cheaper energy (usually renewable energy) can drive support for renewable energy projects. However, coal is still fueling most cryptocurrency production. Proponents also state that current economic systems are most likely using just as much energy. Opponents would argue that because cryptocurrency is not replacing current economic systems, it is adding an environmental burden at a rapid rate.

Electricity Consumption (Total TWH)