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Bitcoin and Economic Incentives for Renewable Energy

Bitcoin just might be the greatest financial development of the current century. Within the past year alone, Bitcoin has achieved several significant milestones: its value surpassed $100,000 for a single Bitcoin (Wiles), it became part of the world's largest asset manager BlackRock's portfolio through the iShares Bitcoin Trust (IBIT) ETF[1] ("iShares Bitcoin Trust ETF | IBIT"), and it was designated as a U.S. government strategic reserve asset (The White House). From this, it's clear that large governments and corporations are taking a serious interest in Bitcoin; however, the true significance of these events is that of a stepping stone to a much greater stage. This argument will be highlighted in much greater detail in the following sections about Bitcoin economics. Whether the world likes it or not, Bitcoin is now perceived as a key asset powerful players have their eyes on rather than some internet novelty or a PayPal for drugs and dirty deeds. As such, it also becomes even more paramount to discuss the impact on the environment that Bitcoin has as global demand for Bitcoin rises. There are two camps on the issue of Bitcoin and Climate Change. Popular opinion is that Bitcoin, more specifically Bitcoin mining, is a complete waste of power so as a result, greenhouse emissions become needlessly higher. Rather than "...a program to wipe out the gains of several long, hard generations of green energy

[1] Exchange Traded Fund. Usually used to "own" multiple stocks while buying one. Think S&P 500 (SPY)

innovation," (Wells 34), Bitcoin might be one of the key incentives for pursuing carbon neutrality.

This paper will largely focus on Bitcoin but not other entities within the CryptoSphere[2]. To be more specific about this point, there will be no mention of Non-fungible Tokens (NFTS) or other cryptocurrencies, especially those that fall under the casino-token[3] category with the exception of Ethereum which as a cryptocurrency occupies the most comparable niche. Many of these are understood as being no better than scams, even by those in the crypto community. The reason for not including these in the discussion of Bitcoin mining and the environment is that they are completely unrelated to the issue. Bitcoin, while having similar origins, has evolved into something that competes with gold rather than other crypto currencies and as such, has different pressures. It is now fundamentally different from these other Web3[4] technologies. Notwithstanding, that is not to say other Web3 technologies have no merit such as stablecoins and other decentralized finance (DeFi). More specific discussions about this issue will be outlined in the following section about the economics of Bitcoin.

Section 1: Economics of Bitcoin: Why Bitcoin is important.

The purpose of this section is to attempt to give a novice reader an understanding of why Bitcoin is important (digital capital, apolitical, secure, trusted, backed by energy) especially in a modern context's lens rather than a purely and largely dated "owning your own money" and "peer to peer transactional" lens.

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[2] Broad category: cryptocurrencies, blockchain technology as well as supporting infrastructure such as wallets and exchanges
[3] Also called "*meme-coins*"; coins used with the sole purpose of making money with no utility
[4] Internet that is based on decentralized protocols as opposed to Web2 which is based on centralized processes

Section 2: Current environmental impacts.

Paragraph 2: What are the emissions Bitcoin produces

This paragraph will quantify the emissions the bitcoin produces along with clearing any misconceptions with how bitcoin produces the emissions that it does produce. It will also show more applicable comparisons to its scale

Paragraph 3: Why Bitcoin produces the emissions it does.

This paragraph will be about the *what* of bitcoin mining. What is the process? Distinct from what is Bitcoin. Explains calculations, POW, ASIC's, energy sourcing and electricity price and mining. Debunks argument of lots of E-waste. More of the physical aspect as the theoretical "why is it important" is covered in section 1.

Section 3: Problems in Current Renewable energy

Talks about profitability, margins, stranded energy, energy storage, iceland aluminum energy storage

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