

The 'halving' sounds like a horror story and may well turn out to be one for Bitcoin

April 4 2016, by David Glance, University Of Western Australia



Broken Bitcoin.

Bitcoin relies on the participation of people and organisations to act as the "bankers" of the system. Called [Bitcoin miners](#), they effectively record each transaction on a ledger called the [Blockchain](#) and in return,

they are awarded with bitcoins. The process of mining is to do a series of calculations to discover a specific number, and the first one to do so gets the reward of 25 bitcoins (valued at approximately US \$10,500). In order to increase their chances, Bitcoin miners have large numbers of computers with specialised hardware that consume significant amounts of electricity. The entire Bitcoin system has been [estimated](#) to use about 350 Megawatts of electricity which is the same demand as 280,000 US homes.

For miners, electricity usage is the majority of the cost of producing bitcoins and this is why China, with its relatively low energy costs, has become the country of choice for this type of operation.

The economics of Bitcoin mining only make sense if the price of Bitcoin is maintained. Around [July 18th](#) however, Bitcoin will go through a process whereby the reward allocated to Bitcoin miners is halved. This happens every 4 years and was added into the design of Bitcoin as a way of slowly reaching the limit of the total number of Bitcoins to 21 million. The design also assumes that as the production of new Bitcoins from the mining process slows down, the incentives for mining will be made up by adding transaction costs to the process.

Of course, unless the price of Bitcoin goes up, more pressure will be put on Bitcoin miners to continue operating after their profits have been slashed. Although anything could happen, Bitcoin miners could potentially decide that mining an alternative cryptocurrency like Ethereum might be easier than continuing with Bitcoin.

The uncertainty of what will happen after Bitcoin goes through this "halving" process has already had one significant casualty. Bitcoin Group, an Australian Bitcoin mining company was hoping to list on the Australian Stock Exchange this year but last month [abandoned](#) its plans for an IPO. The Australian Securities and Investment Commission

(ASIC) didn't believe that Bitcoin Group could assure its capital adequacy after the Bitcoin halving process and so clearly ASIC at least didn't think that the price of Bitcoin was going to go up as a result.

The truth of the matter is that nobody really knows what will happen. On the one hand, there will be fewer bitcoins being generated each day and some people have [argued](#) that this will create a shortage of supply that will drive prices up. This of course assumes that supply of bitcoins is constrained in any way which it is not clear that it is. On the other hand, Bitcoin miners will be making fewer bitcoins and may have to sell more bitcoins to pay their expenses which could drive the price of bitcoins down. Ultimately, if the process of mining [bitcoins](#) becomes too unprofitable, they will stop altogether and switch to another cryptocurrency and this would largely spell the end of Bitcoin.

Unfortunately, predicting anything about Bitcoin is made more difficult because of a number of factors involved in how the mining process works and ultimately what is actually driving the Bitcoin market. Given that Bitcoin is largely an experiment in creating a novel form of currency, the uncertainty is unsurprising. The designers of Bitcoin possibly expected that the community would be able to respond to knowledge gained as the experiment ran, but that hasn't turned out to be the case. Instead, the Bitcoin community has been [fractured](#) with an ongoing argument of how to modify one aspect of the Blockchain, what size the blocks that make it up should be.

Given that achieving any sort of compromise on this question proved so difficult, the interest in cryptocurrencies is rapidly shifting away from Bitcoin to the Blockchain and to other currencies like Ethereum. Ethereum is like the version 2 that Bitcoin should have had. It has a range of new features that make the Ethereum Blockchain capable of supporting so-called "smart contracts" but more importantly, it is moving away from the extremely wasteful mining process of Bitcoin to another

system that promises to be much more efficient. Given that by 2020, Bitcoin is predicted to be globally using [more electricity](#) than the entire country of Denmark currently does, a more efficient system can not come too soon.

The halving is another bump in the technological and social experiment that has been the evolution of Bitcoin. Whether it derails the project entirely will only become apparent in the months that follow.

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