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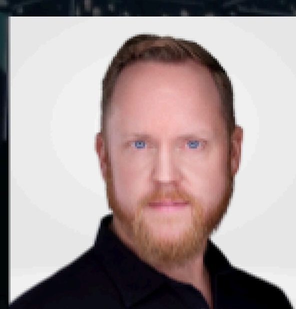
Virtual Event Series

Will Bitcoin & Its Mining Yield Go Up and Up?

Guest Speaker:

Todd Esse
Founder
HashWorks Digital Industries

Hosts:



Kenny Estes
CEO & Founder
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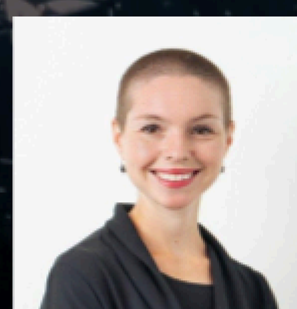

Ayla Kremb
COO & Co-Founder
Diffuse

DiffuseTap: Will Bitcoin and Its Mining Yield Go Up and Up?

Last time on DiffuseTap, Todd Esse, Founder of HashWorks Digital Industries, talked to us about the pressures faced by Bitcoin miners with the upcoming halving, why mining crypto is similar to producing any other commodity, and why the price of Bitcoin is not as correlated to mining yield as one might think.

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DiffuseTap

This networking session is part of our weekly virtual events series. Networking (you'll bump into at least a dozen high caliber fund managers) meets purposeful (you'll tap into brand-new sources of ideas)… straight from your armchair like a boss.

Meet the Speaker

TODD ESSE is the Co-Founder of HashWorks Digital, an investment platform that provides access to stable and renewable sources of electricity. Prior to HashWorks, Todd was involved with several successful midstream energy development startups, all under the umbrella of Southport Energy, and also co-founded the energy trading hedge fund Sasco Energy Partners.

LinkedIn: @todd-esse

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KENNY ESTES: Let's hear from Mr. Todd Esse. Todd, thank you so much for joining us. If you could please unmute yourself and tell the good folks a little bit about your background and what you're up to over at Hash Works.

TODD ESSE: Thank you. My background is in the energy markets, most particularly energy risk management, trading, and building merchant energy platforms. I ran my own hedge fund, a commodity hedge fund pivoted to building business energy infrastructure, which then led me into Bitcoin mining.

Our firm believes that there are and should be opportunities for institutional investors to have access to Bitcoin mining on an institutional scale. That would mean things like endowments, pensions, and high net worth individuals who want a hedge fund product in order to go out, buy, and get long on the yield derived from owning mining capacity.

Given the downturn we experienced over the last 18 months, our belief is that there should be a sector of the mining industry which would be interested in having a colocation client or a hosting client who is willing to share profits in order to bring new capital.

And rather than raising more equity and diluting current shareholders or undergoing further debt in order to buy mining capacity, we come in as a partner and bring capital in, and share a sliver of the yield, which is derived from mining at a site. That's our business. We operate in certain parts of the country right now, and we're looking for more investors and partners. That's the short and brief of what we are doing.

KENNY: Okay, I appreciate that. You mentioned a little bit about the last 18 months. Certainly, the last two years have been interesting for crypto. The "Winter" I think is a term that I've heard thrown around a lot. What has been the impact generally on the Bitcoin mining industry? I imagine that it's hard to make money with Bitcoin at 18,000 instead of 60,000 now. So, what has the shakeout been looking like?

TODD: Well, I think capital is a lot tighter. I think the capital markets have changed. I don't think you have the same lenders out there as you did in the past. Most of them have gone bankrupt. And we think that you've seen the equity markets offer the larger miners opportunities to go out and issue equity in order to buy new equipment. Also, small miners who might not have access to those markets have more growth constraints. So, we think that that's where we can fit in and offer solutions.

KENNY: Okay, so your product then is going to help provide that capital for them to grow, all without being overly invasive in restrooms. That makes sense, because a lot of bitcoin miners have been shutting down…

TODD: Shutting down or transforming. I think the majority of them have come out of bankruptcy now and have reemerged, and are certainly trying to get back to work and fixing their balance sheet. But I do think that after the halving, it could be another round of tightening in this space. I think much of the industry believes there will be a certain amount of consolidation in the next 12 to 18 months as well.

KENNY: Explain that for folks. What exactly is the impact of the halving on Bitcoin miners?

TODD: Bitcoin mining is much more competitive every time a halving occurs, which is when the rewards are cut in half periodically. For years, the mining industry has to maintain a fleet that is on the front end of efficiency. Those miners that have not maintained a balance sheet, which enable them to stay on the front end of efficiency, are at risk of having their their equipment and facilities become outdated if their rewards don't cover the cost of burning their equipment

KENNY: For the lay people who might not know, what actually does the “halving” mean? What is halving when that happens?

TODD: The halving is when Bitcoin rewards are cut in half or will be cut in half. It is expected that on April 20, those rewards, those six-and-a-half blocks rewards, will be cut in half. After April 20, the rewards for completing the blockchain will be cut down to half that amount.

KENNY: Gotcha. So then, you as a miner, obviously your revenue immediately halves, right?

TODD: We will be cut in half. Absolutely.

KENNY: Okay, that's pretty stark. There is a narrative, and it seems to have been borne out historically, that whenever there is a halving, the price of Bitcoin rips pretty aggressively in the 12 to 24 months right after that. I'm assuming you're familiar with this. Do you buy into that narrative? And why would that happen with the decrease in the amount of mining revenue?

TODD: Well, intuitively, the cutting of the rewards will cut the profitability in half for a miner, and the network should shrink. The Bitcoin mining, the total hash rate of the network, should shrink as well in line with that. As more and more miners become less profitable, they drop off the network and are no longer contributing to the overall network computing power.

Price will have to increase in order to bring more miners back, in line with increased profitability, or miners will drop off. So, their prices could increase. I don't know if the price has increased from here or not. It depends on whether the network can be efficient at half the daily rewards we have today.

I think network cash price today is probably around $9.5 cents per terahash, or $95 a day for petahash for your computing power. If that is cut in half to $40, can you still be profitable there? If not, the market should adjust to increase profitability in order to allow miners to make money in order to support the network.

KENNY: Oh, interesting. So the theory is that in order for those miners to work with revenue coming down, the price of Bitcoin has to go up to, in some sense, offset.

TODD: The profitability has to go up to the price. I don't necessarily think the price of Bitcoin has to go up. The probability of mining has to support the network. There is a difficulty adjustment which will increase or decrease probability, accordingly. If the Bitcoin price stays here and profitability is cut in half, then difficulty should decrease, and increase profitability for miners. That can happen with the network shrinking.

KENNY: Gotcha. Interesting. I'm still not super clear on what type of impact that is going to have on the actual price of Bitcoin.

TODD: I'm not in the business of predicting the price of Bitcoin.

KENNY: Fair point. But what's the narrative? What will people say? Because it's a very, very common thing. What are they thinking about on this subject?

TODD: About what is going to drive the Bitcoin price? I've been in commodity markets for 35 years, and I look at Bitcoin as a pure commodity. And I look at it as a factor of your inputs and electricity, and your computing power, which is a refining variable. And so, if you have the most efficient machinery in place, then you should be on margin to produce Bitcoin, and should be profitable at that rate.

If you have older equipment that is not as fit or as efficient as the most recent equipment that has been released, then it would be more challenging to be profitable, regardless of where the price of Bitcoin is. When you saw the price of Bitcoin drop to $15,000, the hash price was around $5 cents. When the price of Bitcoin doubled to $30,000, the hash rate did not double to $10 cents necessarily.

We are three or four times that price today, and hash price has barely doubled since that time. Prices initially drive the hash price profitability, or the profitability of the network. Networks have grown exponentially as well since that low point over the last 18 months.

KENNY: Okay, makes sense. I tend to agree with you. It's not entirely clear why the price should be tied directly to it, like everybody seems to think they are. We have an interesting question from the chat. Being a miner, how do you know if your equipment is advanced enough to be in a position to succeed after the halving? And what attributes should miners look for?

TODD: Right now, the most efficient equipment that is out there runs at around 18 joules per terahash, and that is the energy input result, equivalent to how much terahash you get out of that machine. Energy in, computing power out.

The equipment in much of the industry right now is averaging at around 33 joules per terahash and computing power. The most efficient machines being released today are roughly between 18 to 20 joules per terahash. So, there is a massive increase in efficiency that is coupled with your cost of electricity, which is an upgrade cost.

On top of equipment being a better driver of profitability, your biggest factor is obviously electricity price. You have to make sure that you are plugged into the most efficient electricity resources you can find.

KENNY: That's a good topic. One of the biggest inputs into the profitability of miners is electricity cost. Do a lot of miners hedge that? Should they hedge that, in your opinion? And what are good mechanisms to do so?

TODD: Yes, you should hedge. But the hard thing about hedging electricity is that it is very hard to hedge your hash price, or your profitability. If you think about another commodity language, I have crude oil coming out of the ground, and I'm selling gasoline at the end of the day. I have a refining process in the middle.

You can basically hedge that spread in mining. You can buy electricity at a fixed price. But selling Bitcoin is not a fixed price hedge on the revenue side. Hedging the hash price is your revenue stream, and there is not a market for hash price. It's liquid enough and large enough to extend out long dated.

Now that it’s developed, I think it's very important. Our friends at Luxor Technology have a great platform in which they have their marketing hash price product, which was launched six months ago. We think that is the key to offering risk management tools to the industry, and we think it will be very important for long term survival.

KENNY: Okay, so these products are coming online. But obviously, you don't have a ton of upkeep and not a lot of liquidity. Is that the issue right now at that market?

TODD: There are not a lot of natural buyers in this space. Like the energy industry, many miners think that their investors are now investing just to be long Bitcoin, and to be HODLs or a HODL proxy. Whereas, we look at mining as a yield stream business, like refining. And so, our goal would be to hedge as much of our product as possible, or to provide a repeatable return to investors.

KENNY: Interesting. Okay, that makes sense. We are going to go back to the price of Bitcoin because there are some interesting comments around it. There is the concept of the stock to flow ratio. Is this an idea that you buy into, or something that you're familiar with?

TODD: Yeah, I think that's clearly happening today. But I think the network will respond to that, and add more mining capacity, which will increase difficulty. Profitability won't necessarily increase for the price of Bitcoin, so I stopped the flow completely. I think that is definitely what's happening today. It doesn't necessarily flow to Bitcoin mining profitability for the long term, versus something that can actually be captured by the mining space.

KENNY: Okay. I think that makes sense. We have a question from the chat. With the halving and a drop in hash power, will it be cheaper to mine? I think the answer is clearly out there, right?

TODD: Well, I think the dropping in hash price should decrease difficulty, which will increase profitability for those miners that have the most efficient equipment. Yes, definitely.

KENNY: Makes sense. Obviously, we're talking quite a lot about the Bitcoin price, which is something that is very significant. How do you see the recent spot ETF approvals playing into the elements that are affecting the pricing here?

TODD: I think this fight for ETF approvals is really meaningful not only to the mining industry and Bitcoiners at large, but it's starting to validate the concept that we have a product here that has a long term shelf life to it and has market acceptability. What we've seen in the last couple of years is that markets are holding back from wanting to participate in this new asset class, this new commodity class.

I think the ETFs have really put a stamp of approval on it from an institutional perspective, and we believe more institutions will come in and want direct exposure to Bitcoin through products like what we offer.

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Corporate Director, CME Group

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CEO & Founder, LionShare Media

DiffuseTap: Media Metaverse 2022

Susan described the 2020 digital media landscape; the evolution of media distribution; how converging, emerging technology points to the metaverse; and the prospect of having an open, decentralized, and free Web 3.0 marketplace. Read on

Raj Mukherjee J.D.
VP/Global Head of Tax, Binance.US

DiffuseTap: Crypto Taxes Decoded with Binance.US

Raj explained the complexities of the US crypto tax landscape, how he built a dynamic tax information system for Coinbase and Binance from scratch, and how investors can profit from crypto without getting caught in a taxation mess. Read on

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