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**Austin:** [00:00:00] Uh, Marty, any, yeah. Well, we're excited, man. Let's jump in. Well, we're

**Marty:** in Logan, just ninja launched on us. Cool. Thank you. Lucas free. What's up? I'm joined with the Sonta team from left to right on your screen. Alan, Austin and Lisa, we're here to talk about the intersection of, how would you guys describe it?

Bitcoin mining and Lightning Network energy mining payments

**Austin:** networks. Yeah, I, I mean, we, we are, we're really talking about the integration of value, Marty. We're talking about value in terms of molecules and electrons being integrated with value in terms of, of, you know, the actual payment for them. Um, and so there's other sort of ways to think about the value stream, but that's really what it is.

So, you know, we have that first application being focused on Bitcoin mining, being focused on leveraging the lightning network to, to help Bitcoin miners, you know, pay, pay for their expenses over the network. [00:01:00] But the broader vision is really just that, that value integration for the entire energy economy.

Yeah,

**Marty:** and it's an important one. I've said this on one of the shows I did yesterday, is I think in this bear market, the most bullish thing has been the tighter integration of mining with the energy sector. Cause I would make the argument that energy is the most important sector, is the base layer of everything we do in our modern economy.

And even though we're in the depths of a bear market, some people are getting a bit weary of the relative lack of volatility and price movement, the lull in price movement. Uh, there's a lot of very important building. It's a bit cliche, but it's true, uh, that has been going on over the last 12 months, particularly in the mining, in energy sector.

And I think what you guys are doing just adds fuel to that fire by integrating the payments layer of bitcoin. On top of that. So I [00:02:00] think to contextualize this conversation and to start, I think it's worthwhile to get your backgrounds, how you came to found son NoDa and, and why you honed in on the particular problems that you guys are looking to solve.

**Austin:** Yeah, perfect. You know, talk about, you know, at a high level, Marty, all of us come from the energy industry. Um, you know, we've spent our careers, um, you know, in the front office, the back office working in operations and really throughout the value chain. Um, and, and so I think it's that, you know, broad experience that helps us sort of talk, talk about what, what I said earlier, which is how do we think about how value is being moved physically versus financially, and where those disconnects lie.

Um, but I'll, I'll turn it to Alan to kind of talk a bit about his specific history and we'll, we'll go around the horn. Yeah. So

**Alan:** I'm a 16 year energy vet, primarily, uh, oil and gas midstream. Um, you know, I really started with, with big, uh, corporations and worked my way, my [00:03:00] way to a private equity back group more recently.

But really the, the strength that, you know, my background is bringing is that ability to, uh, tie out the business strategy to all the pieces of the business that we're building. So I've done that on the, you know, in the physical space, uh, during the early days of the Marcellus boom. You know, there's lack of internal processes, lack of external processes from an environmental standpoint, being able to put some more concrete processes in place, tie those out to how you develop business, uh, over time, along with doing that with a private equity back group, right, where you're kind of starting from zero and trying to build a business.

Um, so bringing that in-house to snow. Um, as we think about how we do that in the tech stack within the energy space.

**Austin:** Yeah. And, and Alan and I, we met when I was in grad school, so he was, he was my, the industry representative who came in and, and was helping, you know, educate the next generation on, on everything marcells and oil and gas.

That was pretty cool. You get that Gucci

**Marty:** gas up in the marcells?

**Austin:** [00:04:00] The, uh,

**Marty:** no. I mean, from my experience of great American mining, that's, it's funny what Bitcoin does. Like I never, if you would've told me 10 years ago, I would have nowhere near an expert's level of knowledge on the, the oil and gas supply chain from upstream to midstream to downstream. Uh, nowhere near an expert level, but like a good grasp on it.

That was one thing we learned. Mining upstream, it was like the importance of midstream in how upstream and midstream sort of act, uh, and react to each other, depending on the flows of the gas at any given point in time. That really is dependent on the price of the molecules as it goes through its boom and bus cycles.

Yeah.

**Alan:** And I, I think you see that in the ecosystem a lot, right? With, um, folks who have, you know, gotten into Bitcoin mining, either personally or through, you know, the companies that they join and they've come from spaces outside of the ener energy space, right? They're really getting educated on how the energy space works and, you know, to, you know, what [00:05:00] we've all expressed that, you know, energy is the backbone of the economy, so having knowledge around how

**Austin:** energy works is, is great for everyone.

**Marty:** Mm-hmm. Yeah, I mean, and that was one of our big thesis at Great American Mining is that bitcoin mining, whether it be upstream or at the midstream, could create significant efficiencies for that supply chain. Like we had, we had two theories. One was you go upstream and do the flare mitigation and essentially make the producers more, uh, efficient.

But then another idea we had was actually mining. At the midstream with the concept of like sucking the flare in from midstream where you just create enough capacity at the midstream level, they could just flow all the gas without ever having the flare. Yep.

**Alan:** Yeah, I think there's a, a handful of plays there in, in the midstream space that we could probably, you know, uh, rift on for, for a while.

So, yeah.

**Austin:** Mario, I'll turn it to, uh, to Lisa next. [00:06:00] So one, one cool thing is Lisa's actually my, my older sister. Um, and she's the, uh, smartest person I know, so couldn't be happier that she's, she's part of the team.

**Lisa:** He, he's good at flattering you and he know I feeling a little nervous too, but, um, yeah, so I spent most of my career actually doing indirect tax, um, and uh, at a utility infrastructure construction company, I spent a lot of time reading contracts to make sure that they were counting for those indirect taxes.

It's a very. Small margin industry and, uh, missing a sales tax can like wipe out your whole profit. Um, and so I educated a lot of operations folks on taxes, which um, I think has just made me good overall at, uh, probably talking to people about things that they're not that interested in, but are probably a necessary evil, which is a lot of what I'm doing at Sonata too.

So, um, you know, compliance and accounting and, um, so all of those, those things that are really important [00:07:00] as we grow in enterprise grade software. But, um, probably less exciting than just talking about the energy and the Bitcoins.

**Austin:** Well,

**Marty:** sometimes the most quote unquote boring stuff is the most exciting cause I think that's the one thing with standard Bitcoin, it's something we deal with a lot interacting directly with utilities is, is trying to solve like the settlement of the payments for the electricity, which is.

What you guys are attempting to solve at Sonata. And I think that's a good jumping off point to jump in. Like what problem do the utilities have around settling payments for their, particularly their large swaths of electricity that they're selling to individual customers. And and how does Bitcoin particularly flowing over the Lightning Network fix this?

**Austin:** Yeah, so what, what you'll see in the energy industry, Marty, is that, you know, there is this disconnect that I, you know, talked about it, it, we are, a [00:08:00] product is being delivered whether it's molecules, electrons, um, but then it's not being paid for often for 30, 60, sometimes even longer, you know, period of time after that.

And in one of the examples we give is imagine, you know, you drink, you drink Starbucks every day for the month of April, and you go in, they take your name down, you get your cup of coffee, and then in the middle of June, Starbucks sends you a bill for all the coffee you drink, drank in April. You know, that is fundamentally kind of how energy works.

We use the product, but then we don't pay for it. And, and that is, you know, one thing when we're talking about retail, you, me, uh, Lisa and Allen in terms of, you know, we're a small size, but when you start to think about the bigger customers, the ones who consume a live energy, now the fact that, you know, you're waiting on payment for those, those services provided becomes a big issue, becomes where credit and counterparty risks start to come into play.

And, and so what's really interesting is that when you look across the energy landscape, it used to be that there was not a better way to do it because everything [00:09:00] was analog. But in the last 10, 15 years, all of the, or not all, but most of the physical infrastructure that that's out there has become digital, um, and digital from, you know, point of production all the way down to point of consumption.

And so now we don't need to wait on, on knowing what the, the value of energy that's been provided is. But we're still waiting on that money to be provided. And, and so that's where Bitcoin Lightning Network enables us to now, you know, implement a solution where the, the flow of the flow of value is now integrated into one process.

So as energy moves, money can move. Um, and in, you know, Bitcoin miners are uniquely positioned to help, you know, bring this innovation forward because they make revenue daily in Bitcoin. And so, you know, this, the, the challenge of on-ramping isn't a challenge. The, you know, ability to now match their revenue with their costs is something that's desirable.

So it sort of provides the perfect [00:10:00] playground to get going.

**Marty:** Yeah. Yeah. When you consider, especially if you're a minor of material scale and you're connected to a pool and you're getting payouts daily, you really do have that ability to settle somewhat instantly or much quicker than, and 30 and 60 and 45, whatever it may be.

Mm-hmm. Uh, And so like, let's jump into like the solution. So how do you guys integrate with the utilities companies and the miners? What is the conversation like BizDev for you guys on both sides of the market, whether it be with the miners or the utilities companies? Yeah, for sure. So

**Alan:** first I wanna kind of go back to what, what Austin said on, on the wrist.

So, With the mining customers that are out there, you're seeing this almost like tug of war, right? In, in the risk space between the minor and their energy provider, right? You know, a lot of these contracts out there started as postpay contracts, which puts the AR risk on that energy provider, right? Then you saw the bear market come with [00:11:00] Bitcoin, you saw more of these energy providers or service providers start asking for prepayment, which shifted that risk away from the Bitcoin miner or, um, away from the energy provider to the Bitcoin miner, right?

But then it added this consistent reconciliation, you know, process that has to happen to continuously true up that prepayment. Um, and that's all because everyone's trying to settle this 30 day black box, right? There's no transparency involved, right? You just, after 30 days, you read the energy data, you make the calculation, and now you know what, what your bill is, right?

And so what. The platform is offering is the opportunity one, to create more transparency, right? By calculating that energy bill or service provider bill on a daily basis. So it creates that transparency and two, to settle that bill on a daily basis, which creates a, you know, a neutral risk profile for both parties, right?

And so now that you have this neutral risk [00:12:00] profile for both parties, you know what commercial onerous terms can now be stripped away in those contracts between the Bitcoin miner and the energy provider. And so it's those stripped down terms. It's the reduction and administrative burden on settling these contracts.

You know, managing that data, actually managing the payments on a daily basis, right? Is what's garnishing all attraction that Sonata is seeing in the market today.

**Austin:** And Marty from a a technical side, you know, I think the, the way to kind of visualize or to, to think about the solution to do everything that Ellen just said is you have, um, you know, both parties to a contract are going to get a Sonno node and that son NoDa node really embeds within it a couple key things.

It embeds the ability to make payments on the Lightning Network. It embeds integrations to the data sources as well as to on-ramps and off-ramps from BTC to U S D. [00:13:00] It embeds, you know, database structures and it also embeds all of the contract logic between you and your counterparties. So you have all of that, you know, sitting securely in.

To, to the customer really, and their, their own AWS Docker that they have the, the exclusive access to as the customer. So we provide, you know, a non-custodial solution, a decentralized solution. Suno does not custody customer information, does not custody customer, you know, money, anything like that. It is purely decentralized in the construction.

So what's embedded in your son Snow to note as a customer is really just all the information to gather the data for settlement. Your what, your preferred payment terms decided on between you and your counterparty, and then the logic to apply that contract on, on whatever those payment terms are. So it's really just automating all of that in, in a very decentralized way where we as a company can be hands off.

We're just providing software that really acts as agents on behalf of the, the respective [00:14:00] party's behalfs. Mm-hmm. But it

**Lisa:** sounds complicated, honestly, like when we're explaining it, cuz it sounds like so many pieces and so many different processes, but also the customers can also be hands off, not just us, right?

So it's a, it's a one time setup, a really easy onboarding, just like setting up for bill pay. And then the invoices and the payments are all automated and really all you have to do is just at the end of the month, download your report that shows like all of your payments and you're ready to just finalize your month.

Like there's no manual touches throughout the whole process. So it, it's very user friendly, it's very simple. You can access the data whenever you want, or you can really minimize how much you even think about the whole

**Austin:** process.

**Marty:** Mm-hmm. Mm-hmm. And so a couple things here to dive into on the data side. I imagine what you're taking in right is the amount of electricity delivered, the price of the fuel source that is producing that electricity.

So you can actually get the cost, uh, Yeah, that's, is that it on the data [00:15:00] side? Like for from the utility to the minor? It's just those two things. Yeah.

**Alan:** Yeah. I mean that, that's typically the guts of, of the inputs that we see, but it's, it's really, you know, however that contract is structured, you know, what are those settlement inputs that, that are needed, which is typically a meter reading, which is, you know, for the energy, the, the pricing, the fee structure.

Um, but there could be some other, you know, variables in there that, that play into the full settlement structure as far as like profit sharing or other, other pieces that we do

**Austin:** automate as, as well. One thing I'll add too, Marty, is to think about what's been interesting is some of the older contracts that we've seen are very simple in nature, like nameplate capacity and then, you know, manually updated for like, uh, you know, the best estimate of uptime.

And, and so what, why that is is because, you know, a lot of, a lot of sort of the se you know, clearing and settlement processes today are still happening in Excel. Um, and or, you know, are heavily manual. So it makes it challenging to [00:16:00] take that and scale it up to multiple customers or to scale it up in terms of contract complexity.

Um, and so I think part of what we're offering is, you know, tho those should not be the roadblocks to you offering a sophisticated contract to your customer. So yeah, sure. Go ahead. Use 15 minute pricing plus 15 minute energy data. You know, the software's gonna take care of that in the background. And so part of the journey has been, you know, getting people comfortable with Yeah, I don't need to, to sort of, you know, use, use sort of a simple thing that I know is wrong, but it's the best that we can do in a quick, you know, in a quick way.

Yeah.

**Marty:** No, and that was the second part of what I wanted to ask too, is like, how much time does it save time and money, uh, both end users to not have to do all that manual Excel amending at the end of the month, end of the quarter, whatever it may be.

**Lisa:** Yeah. Worth thinking that saves like 10, I mean, We've run calculations and com and you know, talked it over with customers and it's about 10 to 20% of your cost, like whether that be administrative or bank fees.

But there's a lot of costs in the whole ar [00:17:00] AP system. There's, especially if there's reconciliations months later, there's a lot of cost savings when you have your cash flow expedited as a supplier. So there, there's a lot of cost benefits there.

**Marty:** Well, that's another thing too. Like what? Like in terms of financing from the utilities perspective, being able to get paid instantly on a set cadence, instead of having to do the month long, two month long settlement process, what does, what does this open it up from like a financing perspective for this company?

Man,

**Austin:** every, yeah, every cfo you know, it, it's really funny. So I'll give two quick anecdotes from my previous two jobs. So, When I worked in retail energy, you know, we had a revolving line of credit, uh, five banks syndicate that we would draw upon, you know, six months out of the year when cash, because cash flows were misaligned during winter and summer.

And so you're drawing upon that revolving line paying anywhere from two to 4%. That's a real cost that just gets passed down to the consumer, baked into your energy price. Then same thing at a utility, but in this case, my [00:18:00] utility, we, we relied on the commercial paper markets. So you're borrowing from commercial paper markets three months out of, you know, six months outta the year, potentially, you know, anywhere from three to 5%, and then the other is six months.

You're able to lend into those markets, but you're making one and a half percent on a good day. You know, so that cost of capital is, is very real just in terms of that, that cashflow perspective. But then there's also the aspect of just the, the, the cost of capital of, of when it's getting tied up in collateral.

Um, you know, you think if you're a Bitcoin minor and you're having to post two, three months of collateral, you know, Alan's, Alan's been working on the RMO I models there, but it's really astonishing of if you could have some of that collateral back reinvest in your operations, how much better off financially you can be.

Yeah,

**Marty:** yeah. It's pretty, that's, I mean, that's the one thing we, I mean, we see this at standard too. Sometimes customers, uh, if you wanna get a lower rate, you put in a bigger deposit that locks up more funds. And that's the big thing in the mining game particularly, [00:19:00] is, uh, the opportunity cost of capital deployment.

And if you're forced to lock up capital for three to six months, that can really prevent you from expanding. In ways you otherwise could if you had this instant settlement and this agreement with the utilities where it's like, all right, we're gonna set this up and just pay you instantly. Yeah. I mean,

**Alan:** no one likes stagnant capital, right?

Stagnant capital can't get a return. And, and that is, you know, people wanna deploy that capital. Um, and so that is just one of the o onerous terms that as we're talking with folks, leveraging our software, how do we unlock that value, um, you know, especially to the miners, right? Mm-hmm. To, to allow this industry to continue to mature and grow.

Um, so that's some of the things we're, I mean, we've been super excited about as we're having these

**Marty:** conversations. Yeah. And another theory we have is that at the end of the day, a mining in the long term is going to be won by those who can vertically integrate the best, the most efficiently. And at standard, we [00:20:00] believe, like honestly, the.

People that should be mining are the utilities at the end of the day. But obviously they're focused on energy. Not all these utilities companies get Bitcoin yet. Groc Bitcoin. They love the revenue that Bitcoin miners provide, but there's still a bit of a learning curve in terms of getting 'em comfortable with Bitcoin, the asset, and then mining what it can do to their stack.

So from your perspective, what are the conversations with these utilities been like? Or are you finding any that are becoming easier and easier to Orange pill or what's, what's the learning curve look like from your perspective?

**Austin:** I think, I think

**Lisa:** son is a good adoption path. You know, I mean, if we can onboard them to use our software, they're getting closer and closer to, to the miners.

They're get, they're understanding the actual risks of Bitcoin transactions. So we definitely view. Utilizing our software within the energy market as an adoption path for utilities. And we've had a lot of favorable discussions. I mean, we're definitely solving a real problem for them. [00:21:00] Um, they love the idea of the cash flow improvements.

**Austin:** Yeah. I would say at least is exactly right. It, it's these, there is no, um, you know, no qualm, or, what am I trying to say? Basically the recognition of the problem, this being a huge problem, you know, that that's across the board. Mm-hmm. And, and to kind of build on that adoption point, one of the things that we think is really interesting is that, you know, when we talk to utilities today, energy suppliers, et cetera, they wanna receive U S D.

Um, and, and we've yet to, to, you know, talk with anybody of who's not small, who, who is, is inclined whatsoever to really even have the conversation around Bitcoin because they're really just focused on, Hey, I like the value proposition of, of lower credit risk, better cash flow. Um, but what's really cool is in our platform is that, you know, so we enable a company such as a utility to get u s d today, but they have the opportunity in the platform to to, to change that so they can say, Hey, maybe during the next poll [00:22:00] run, maybe an innovative energy supplier says, I'd like to get 5% of my revenue in Bitcoin.

Um, so it's just slide that bar over 5% and now 95% u s d, 5% Bitcoin. So being able to provide that and, and make it so it's easy to, to dip your toes in, um, during the next bull run or, or whenever the risk tolerance of the company changes. It's there, it's available, and we can make that really easy for the customers.

Plus because it's, you know, so directly connected or because it is their core revenue, this is how companies make money, it then becomes an interesting opportunity to talk about over treasury management strategy via the software that we're providing. So what are the what if scenarios that you can, you can put in front of an energy supplier to consider?

What if 5%, you know, it doesn't just have to be a decision in isolation, but you can actually roll the clock forward or look backward and say, this is what that would mean to you, or would've meant to you. Yeah.

**Marty:** And,

**Alan:** and, sorry, I just wanna add add one more nugget in there that I think [00:23:00] is interesting in helping utilities to, to look at Bitcoin a little bit differently is the fact that when we are are talking to these companies, we don't talk about Bitcoin, we don't talk about the price of Bitcoin, right?

We talk about improving their cash flows, right? Receiving U S D daily from their customers. But we do show them, hey, we are using Bitcoin technology to do that. Right? So he here, you know, is us talking about this utility of Bitcoin technology that they haven't really heard about yet. Right. So it's helping to, you know, reframe their mind a little bit about what

**Marty:** all Bitcoin can do.

Yeah, no, that's the thing too, when, when you talk about sliding the bar to 5%, that little toe dip can turn into a little crack addiction if the Bitcoin price runs and bitcoins like to talk about speculative attacking the dollar. But I think that concept works in fractals all the way down to this particular use case where [00:24:00] if a forward thinking utility company makes that decision to put five, 10%.

Of their cash flows into Bitcoin automatically via Sonata, and they hold that on their treasury. They could speculative attack their future financing costs. And once they see that work successfully, once you have to imagine it's gonna be addicting. And they're gonna get really creative with their treasury management and their Bitcoin accumulation strategy in the long run of Bitcoin continues to do what we believe it will do, which is, which is monetize.

Great. Completely agree. Yeah. And so what, uh, what do you think the best strategy has been for you guys to actually get utilities engaged? Just pure cash flow?

**Austin:** Pure cash flow, I think, yeah, I mean cash flow and credit risk. So I mean, you know, that those are responsibilities that I had working at the utility.

Mm-hmm. You know, we're managing those things [00:25:00] and, and so I think the. You know, without sort of saying, Hey, there's one particular strategy. I think what we, what we provide is we, we understand the energy industry. Um, you know, uh, uh, that's been to our advantage is that we've, we've, we've been in it, we know the language.

We, we have a really strong network. So, um, the, you know, getting in and having the conversation is not the hard part. Um, I think it's, it's really being able to show up with the right technological solution. You know, hitting, being able to, to check. I think a lot of the boxes that are, are things that we understand.

So like, you know, Lisa talking about from a compliance and SOC two perspective, you know, these are the things that move the needle in the conversation because if you can't, if you can't satisfy, you know, what are you, what are you large companies looking for in terms of who they're willing to do business with?

The conversation won't make much progress. Um, the, you know, what we're finding is energy companies are, are apt to, as you know, Alan said, you know, we, we talk about the technology, but they're, they're, they, they'll [00:26:00] be happy to not, you know, talk about Bitcoin when they bring the solution to their senior management because they, they don't need to.

But certainly the senior management's gonna say, well, do they have insurance? You know, what's the, what's their compliance record? You know, and all those things become very relevant. Mm-hmm. And so that's where I think we've been able to move the ball quite a bit.

**Lisa:** Yeah. I think there's also like external factors that are pushing them to look into mining, which is just encouraging to look into working with us because, you know, there's renewables initiatives or other pilot programs going on with a lot of utility companies across the country and, and for them to take on maybe some of those projects were a really good solution.

So yeah, we, we've had them reach out to us before we reached out to them just, just to sort of feel out if we can help them take on different projects.

**Austin:** Yeah.

**Marty:** No, again, It's the boring things that are actually the most exciting. Yeah. Like being able to check the soc two box is that people don't really think about it.

But that's, that's something that opens a massive amount of doors if you can do that. It does.

**Lisa:** [00:27:00] Yeah. And our software too, they, they can use it without integrating it into their, what, their network and the softwares that they're already using. So it, it essentially bypasses like the billing module on their, on their E R P, which, um, at first glance you might be like, well, why wouldn't they want it all integrated?

But the truth is, is that could take years. So the fact that they can just kind of plug and play with our software without having to get it infiltrated throughout their whole organization is, is actually a big, um, value that we can offer.

**Austin:** Mm-hmm. Yeah.

**Marty:** And so we're looking out 10 years from now, 15 years from now at scale, how do you guys think, I mean, we've talked about like the direct immediate impact this can have on utilities and miners.

At scale. Let's, let's run through the hypothetical where this catches on, becomes a no-brainer to everybody. How does this change the dynamics of the energy sector, particularly on grid with utilities, [00:28:00] uh, at scale?

**Austin:** Okay, so this is, yeah, this is, this is one I really, really enjoy because I think it's, what's really interesting, Marty, is, is, you know, we've, we've talked about Smart Grid for over 20 years.

You know, we've talked about, you know, being very, you know, a lot more intelligence in terms of load control generation, you know, management, things of that nature. Um, and what we haven't really seen is a solution come, come to be that can, can ultimately deliver on a vision that ha was started, you know, over 20 years ago.

And so what we've been been talking with folks about lately is, is really being the product that fulfills, uh, the Department of Energy's vision for a transactive energy system. Them. So this is really taking everything that you know, is, is encompassed in a smart grid, but then alongside of it having the integration of a decentralized energy markets.

So that is really where we see things going. It's where you now are getting out of sort of a top down centralized model where now you have a [00:29:00] system that is, is welcoming to distributed energy resources, whether of of all stripes. Because what you have is you have local real-time price signals, you have the peer-to-peer payments, you have everything you need to have an energy system that is very flexible, very dynamic, um, and where you have much more efficient markets pricing in the true cost of energy, both in terms of the molecules and electrons, but also the environmental externalities related to those.

So, you know, where we're not having to sort of. Try to plan from the, the very centralized way, but now where we can have a very, um, decentralized approach that ultimately will be efficient and drive more innovation and drive more energy abundance, you know, in the world. So that is really where we see it.

We see the whole system being on the Lightning Network, every physical node having its own en lightning network node and there being this synchronous flow of value to all the parties on the system. Yeah,

**Marty:** and just, I mean, because that's [00:30:00] been an underlying theme last few years is the, the grid system in the United States relatively centralized.

And so what does empowering individual utilities companies do? I mean, you mentioned like a, a more decentralized grid system, but like what could empowering individual utilities mean for the strength of the grid overall? Do you think this solves, um, a massive problem that we have or is that. Sort of unrelated in a way.

**Austin:** I, I think that, you know, what, what you'll find is that there's, there's quite a bit, like, for example, you know, if you were to, to spend time, you know, digging into any utilities, you know, what do they know about their operations, they see where there's grid congestion, they know where the weak spots are in terms of what's creating, you know, instability, what's creating a reli reliability challenges.

The challenges is being able to price that into the cost of, of providing the service. And so that way they can provide that economic si or there is an [00:31:00] economic signal to then drive investment there in an efficient way. And so what I think is, is fair to say is that, you know, we're, we're sort of pushing towards a much more free market approach to the energy system where, you know, we all know free markets are not, are not perfect, right?

There's going to be, you know, there's going to be issues where, you know, capital slow to, to respond to, uh, you know, opportunities, et cetera. But I think over the long term, and for the greatest number of people, it will be a system that is more, you know, provides more power at a lower cost to the most amount of people.

Yeah. Or, or energy generally, I should say. Yes. How do,

**Marty:** how do we get the politicians to realize this?

**Austin:** You know, I think, well, my one thing is, you know, it's great that like the Department of Energy is already on board. They're, they're begging for somebody to del deliver this solution. People realize that. I think it's, um, but I think it's showing that Marty, you know, well the good thing is, is energy companies are, are a very important, [00:32:00] um, you know, a very important group within the political sphere, right?

Um, everybody, every politician has got, you know, an energy company in their district. You know, it's very, you know, everybody gets a bill from their energy company. So when energy companies start to see that this is actually better for them, um, you know, we think they'll be our biggest advocates. And, and being that it's on the Lightning network.

It's not that you're asking, you're, what you're seeing is you're able to create a natural network effect where the full, everybody that's in the value chain is going to be incentivized to, to adopt this type of payment structure. Um, and, and so I think in that way, as it grows naturally, you know, people will say, Hey, this, this is ultimately going to be better.

It's going to a lot of energy companies that adopt early to really grow and expand.

**Marty:** Yeah, no, this, uh, is an affirmation of my thesis. Like everybody talks about hyper ization. I think hyper ization goes through the energy sector. Cuz once you get them locked in, [00:33:00] again, it's the base layer of our society.

And that's why I think there's an order of operations to the success of Bitcoin in the long run. And the first order is mining in energy. And I, I think, and it's, it is weird because it's, uh, it's become more appreciated, but it's been very underappreciated the first 15 years, 14 odd years of bitcoin. Yeah, I, I, I fully agree.

**Alan:** I, I think you're just starting to see some of those corners turn a bit on, you know, the impact that Bitcoin mining is having within the, the positive impact that Bitcoin mining is having in the energy industry. Um, and then, you know, as you layer on the technology and, and the payment flow that, you know, son snow's doing, um, you know, you can really help exacerbate, you know, those positive effects, right?

And, and to get them to kind of open their eyes on, on what this decentralized market can really do, um, as, as opposed to like, you know, trying to send energy across the country, right. Trying to pull demand more localized.

**Austin:** [00:34:00] Yeah. Yeah. Mario, I'll give you one example of, of some, you know, I, I used this a lot in conversation with folks to help them, you know, really understand one of the, the problems today.

So there's a study, I think it was, you know, five, seven years ago done, done in CommEd in Chicago. So, You know, there was a, a broad incentive offered for people to put solar panels on, on the roof of their homes. And it ended up being, you know, the idea was, hey, we'll, we'll offer this incentive, you know, we'll be able to lower the cost of electricity for everybody because now we have more power coming onto the grid.

Um, but what ended up happening is that all those solar panels were, were concentrated in a few affluent neighborhoods. And, and so what ended up happening is that CommEd then had to invest more into infrastructure to resolve the grid imbalances that they had that had been created. And so at the end of the day, and the study proved this, the cost of electricity went up for everybody, even the people the least able to pay for it.

So that is just, that's exactly what's wrong. Where we're, we're, we're putting [00:35:00] solar panels on roofs without knowing where they're actually needed and not providing that, that that pure signal. And so Bitcoin mining is naturally seeking that signal out because they know what it means to their overall economics.

So they're driving everybody in the industry to say, yeah, we've got a, we've got a big customer that knows about, you know, that knows about energy. Both, you know, over time and space and how much, you know, we should be thinking about, you know, arbitrage opportunities. And so it's going to spread out. Um, you talk to people in the battery industry, battery technology's incredible, ai, you know, AI pulling power off and putting back on, but how are they getting paid for that?

Well, they're not getting paid for all the services they can provide because there's no means of actually putting that, representing the true value they're creating in a way that can then actually compensate them. So it's gonna hold back technology across the, the landscape if we can't sort of think like Bitcoin miners and truly drive that economic value down in a very granular [00:36:00] way.

**Marty:** Yeah. The, uh, the energy pirates of the world, the Bitcoin miners are, it's funny, it's, it's crazy how maligned we are as miners. But it, I mean, it's not surprising. People are very reactive to things they don't understand, and people really don't understand Bitcoin, let alone bitcoin mining. They just see energy usage and, and freak out.

**Austin:** That's right. As Alan said though, I we're noticing it's the conversation is turning. Um, you know, people are willing to listen. Um, they're willing to kind of hear this out. They may not fully appreciate the value of, of, of Bitcoin per se, but they are starting to not just dismiss the topic. Yeah. There's a lot

**Lisa:** of energy folks coming into the meetup a lot.

Mm-hmm. They're open to the education at the very least. Yeah.

**Marty:** Well, that's great to see. I mean, you had to imagine too, particularly for the utilities. So our strategy at standard is to, we operate mainly in the TV A and so we, we look for rural areas [00:37:00] with falling. Populations that had manufacturing capacity leave the area at some point in the last couple decades.

And there's just these massive substations with a ton of underutilized capacity. And what we've seen is that utilities companies love us because we come in and buy a big swath of power, which helps them stay true to their mandate, which is like, Hey, let's keep prices low for residential consumers. Um, and so that's the thing, the energy pirates going out to these rural areas and finding this arbitrage opportunity, I, I, we've seen it as well.

And we do definitely think people are beginning to turn a corner.

**Austin:** Mm-hmm. Yeah. I think it's great to see And, and I think that the innovations are going. They're just, they're going to spread, you know, through us and through what o other people are doing. You know, in this space they're gonna spread to other aspects of the industry.

Yeah. Um, cuz Bitcoin miners aren't stopping. It's just good. You know, it is a relentless, you know, relentless crew. Um, and they have all the reasons to keep pushing this technology forward.

**Marty:** Yeah. So what are, uh, some of the biggest [00:38:00] surprises you have encountered building this out on the software side, on the BizDev side, that, that you really didn't expect would've stuck out to you guys?

I,

**Alan:** I, yeah. I'll, I'll say one is, you know, we are building the software out in a decentralized way, um, right. So that it's true to, you know, Bitcoin ethos, which is very exciting. Um, but it just also changes your mindset, right on you as the technology company on how you manage a decentralized platform versus a centralized platform.

Mm-hmm. Um, so, so that's been, uh, you know, a fun and exciting learning curve, you know, at, at Sonata. Um, and, and one, you know, definitely a flag. We, we want to continue to bear forward because we think decentralized software is the way to go. Mm-hmm.

**Marty:** Oh yeah. And, uh, how did you guys get into Bitcoin? What, uh, what, what was the switch that went off for all of you?

**Austin:** Um, so, so for me personally, uh, I, [00:39:00] uh, I'm a, I'm a skin in the game kind of person. So it was early 2018 is when I, you know, bought Bitcoin for the first time. And I had told people this, I need to have some skin in the game to really understand, you know, understand and dig into this technology. I was, you know, working closely with, uh, our energy traders and so when, you know this, the 2017 run up and ICO boom and all that stuff, that was my first exposure.

Uh, and then, and then of course, you know, the rest is history in terms of okay, started the DCA in 18. Um, and then it was for me personally, learning about Bitcoin mining in, in early 2021. Um, you know, being in energy, I somehow missed it all along the way. But then, um, when I started to see it, that it was that realization that, hey, Bitcoin mining is, is doing all the things that everybody else in the energy industry is only talking about.

They're just doing it. And, and so that was what just said, I've gotta learn about this. And, um, uh, you know, was orange pilled. Fortunately I went down to Bitcoin Miami 2021, you know, I was still working for the utility. I was wearing a suit and a tie [00:40:00] and, you know, it was just eye-opening. But the best thing was, is like the.

Uh, you know, Greg Foss, Jimmy Song, um, you know, the EBS team, like everybody that I encountered and, and got to spend time with, you know, just sort of opened my world up to, to the, the community of Bitcoin, but also just sort of what, what really attracted me with the economic incentives. So from that point forward, I was Orange Build and, and knew that the path involved Bitcoin, you know, one way or another.

Um, but I'll let these guys say their stories too. Go for

**Lisa:** it, Lisa. All right. Well, I, I would say, uh, Austin has been talking about Bitcoin forever, so I diversified my investments, but, um, definitely more struck by lightning, you could say. I, I think when we started talking, you know, when we started formulating this company and just seeing, seeing what Lightning Network offered, like how it brought utility to Bitcoin and what it would enable, you know, cross-border and just how it would change payments, I think was just really exciting.

If [00:41:00] for a while I. Thought Bitcoin was interesting and you can see the utility, but you don't really see how it translate translates very well to your day-to-day life. Um, until I really started to understand the Lightning Network, and I will, I will say now, working with three amazing developers in, in that space and just being educated literally every single day about the technology and the ethos and, and just all the great benefits.

I can't count how many times I've complained about something in like the compliance or regulatory or banking world, and they've been like, that's why Bitcoin and, and now I'm saying it to people all the time. So, um, yeah, it's been a more of a process for me, but, um, it's, yeah, I mean the utility just continues to exponentially grow, I think.

So it's very exciting.

**Alan:** Yeah, and I, I'd say mine was a gradual process too. It, it started about six years ago when a friend of mine asked me to buy into, uh, You know, [00:42:00] 20% worth of a minor. And I was like, I have no clue what that is, but I'll do it. Um, so I, you know, I was one fifth owner of a minor and he, you know, he installed it in his basement and then he, he quickly called me and said his wife was complaining about the noise.

Um, so, you know, I googled, you know, you know, how do you, how do you manage, you know, noise abatement and quickly went out and bought a cooler and some flexible exhaust, you know, cut holes on each side and, you know, built out a, a nice system for him in his, in his basement. And then just kind of washed that over time.

And then just started noticing, you know, all the, you know, true Bitcoin mining companies out there and how they were attacking, you know, this, um, abandoned energy issue. And then also just kind of seeing it, you know, in my oil, oil and gas side of the business, you know, how it could play in. So that really started to get me excited about how Bitcoin can really positively impact energy.

And then, as you know, talking with Austin and Lisa over time of like, Well, let's go beyond that. Let, let, let's, let's jump into what the technology can [00:43:00] do on the payment side as well for, for the energy space. And I, and I think that's where things, you know,

**Austin:** really started snowballing.

**Marty:** Yeah. And as it pertains to mining, I think over the last three years, particularly after the China ban and the migration, like mining for the first 10, 12 years of Bitcoin was very wild west.

Not a lot of professionals, I mean, a lot of wildcatters, if you will, taking advantage of an incredible opportunity. But there's been, and I'm trying to be careful of my words here, cause I don't want it to be taken the wrong way, but there has been somewhat of like a professionalization of. The industry from the, the hardware, the ASIC manufacturers, the farm management system, the firmware, uh, products like Suno coming to market.

Like, it does seem like we're hitting an inflection point where the mining industry is maturing and becoming more palatable to the incumbent industries, whether it be energy, utilities, payments, and, [00:44:00] uh, I think the mining industry's garnering more respect than it had in the past because for the longest time it was just like, oh, there's just a bunch of people over in China in, in their basements, mining this weird digital currency.

**Alan:** Yeah. And I, I, you know, just to kind of iterate what you said and what we were saying earlier, I mean, we, we say that all the time we think this industry is, is really maturing. Um, son Snow is here to help mature the industry and that is what's turning the corner on some of these conversations with these large energy companies.

Right? Um, Bitcoin mining is not just a hobby. Bitcoin mining is a true industry with positive impacts. Um, and the technology, you know, is just scratching the surface on what

**Marty:** you can do with it. Mm-hmm. Yeah, that actually just stoked a, a thought, particularly what you guys are doing at Sonata, and that's one thing miners had to deal with his risk management.

We talked about the way you guys can help prevent the capital lockup that happens with prepayments, but then it comes to like hedging strategies too. Like what does [00:45:00] being able to integrate a product like Sonata into a mining operation do for a minor's ability to properly hedge risk within the Mark Weatherby, the price of Bitcoin, the price of energy hash rate at any

**Austin:** given point in time?

Yeah, it is a great question and we'll say that, you know, overall that the, the, the view that we take is we are, we are one, one piece of that, that risk management strategy. Um, and, and so specifically, you know, one of the reasons why you as a minor would, would want to hedge, um, certainly over the short term, if you are, if you're in a position where you're having to liquidate, you know, or exchange some of your BTC revenue into the local fiat to cover, you know, local fiat expenses, um, you know, you're, you're, you're exposed to FX risk, right?

So if you, you could do that conversion every day, you could, or you could wait till end 30 days. But either way, there's, there's some FX there. So part of the way that [00:46:00] our solution works is, you know, as the, as you know, revenue is, is, you know, being paid off from the pool, you know, we can, you know, automate then the payment of, of those expenses as soon as possible.

And so the amount of afax exposure is, is greatly minimized. So that's, you know, one way in which you're sort of reducing the need to sort of manage, um, manage the risk on that front. Um, certainly as we think about hedging and, you know, hash, hash contracts, you know what, what we see as an opportunity is to be, again, part of that equation because it still is, is requiring there, you know, there's margining, there's settlement of the, you know, of those contracts.

These are all things that can be tied together into one solution. You know, why are we going to have one, one way to pay for physical energy, another way to pay for, you know, derivative, you know, hash derivatives, et cetera. The more, the more that we, of the, of the value exchange that can happen on the lightning network, the better the network's going to become, [00:47:00] the more that's the network's going to grow.

And so, you know, that in informs how we're building our solution because we talk a lot about physical energy settlement, but when we actually sort of take, take that piece away, what we've essentially built is a decentralized settlement platform. You know, it's, it's smart contracts on lightning, but better than smart contracts, as in the, you know, the popular way in which they're known because on Lightning, they're fully decentralized, they're cheaper, faster, and more secure.

So you can take any type of contract, whether it's for hash price or it's, you know, paying an employee or it's, you know, the rent on your building and you can use our software to do it. So we do, we do, we're having those conversations. We wanna be, you know, in, in that mix of how do we start to sell everything.

And then you can create more of that, you know, flows in multiple directions where then you're, you're able to balance out channels more naturally, um, and make the, the network overall more [00:48:00] efficient.

**Marty:** Yeah. Yeah. It's fascinating. Now my mind's running too, because that's another trend. Smaller trend, but something that's developing something we did at Cathedral this cycle, particularly with older models.

Of miners that we have in our fleet is, is under clocking. And so that's another aspect of the relationship between a Bitcoin miner and the utility company. It's like working into the contract, the ability to take on less energy when you can increase your margins by under clocking. And I think that's gonna be a very important ongoing discussion between miners.

Utility companies is like saying, Hey, I wanna be a long-term customer, but I need to be able to work in the ability to to consume less energy at particular times when hash rate is in one place, prices another, and I need to increase my profit margins. It's not really a question, it's just a comment that, uh, yeah.

**Alan:** How, oh, go ahead. I was gonna say that, I mean, that, that's what we're, we're after here at C is to help to be a facilitator with the software. [00:49:00] Right. You know, that's another maturation of this industry, just what you said. And, and we, as, you know, synoda want to help support that with our software, um, by effectuating those, those types of transactions or mm-hmm.

You know, producing the data that helps people make those decisions, you know, better, more real time. Um, so that, you know, that's another, you know, exciting thing

**Austin:** about it. Yeah. Cause you know, you know, bringing that to you, the first thing they're gonna say is, well, you gotta talk to the, the people in settlements.

How are they gonna, how are they gonna, you know, integrate this into what they're doing? You know, once you clear the operational hurdle, which, you know, that's probably the easier one. It's the back office. How are they gonna settle this? That's where you usually get tripped up. So when you can have a solution that says, listen, any granularity, any, any way, you know, we can bill this, we can get the payment done, and we can settle this out.

Cash in the door. Okay. You know, you just sort of, accountants, accountants are our best friend right now, Marty, that that is, that is absolutely the case. We, they're usually our second conversation when, when talking to a company, but when [00:50:00] you are able to communicate that, hey, there's no more liability on your balance sheet, you simply get receipts.

Just like, you know, back to the Starbucks example at the beginning, if you are paying, every time you go into a merchant, you just get a receipt. You don't first get an invoice. They don't record that as a liability on their balance sheet, and then you finally pay, then they change, they update their balance sheet.

It's just, I pay it, I got a receipt. If we can make energy that way, then everything that is occurring in the back office becomes orders of magnitude simpler. Mm-hmm.

**Marty:** Again, the most boring things open up the most exciting

**Austin:** opportunities. It's true, it's absolutely true.

**Lisa:** And daily, you know, I mean that's what, that's what's crazy too, like faster settlement but less work.

And so like seeing all of those, like seeing the benefits of like the margin benefits on a daily basis is, I think opens up a lot of, a lot of interesting discussions. Yeah.

**Alan:** And, and I'm just gonna overemphasize what you two said there, is that when we say daily payments to folks, they go, whoa, you know?

Right. Sounds like a lot, but it is less work. [00:51:00] Right. So I mean, cuz there is no invoicing process. It is truly a receipt process where you just download that data at the end of the month and you, you know exactly what you got paid and how much you invoiced. Um, so it is truly less work. It just, when you first say it,

**Marty:** it sounds like a lot.

Yeah. It sounds almost too good to be true. But it, yeah, and I know we mentioned it earlier, but I think it's really important to stress like the capital efficiencies that are gained through this process. Should not be understated. Like think about the types of innovation that can begin to happen because all this capital is freed up to be allocated in areas that desperately need it.

**Lisa:** Yeah. On, on both sides. You know, that's how much friction since the system that our software isn't like, oh, one person ends up better than another are both sides. They're freeing up capital and they're seeing the benefit.

**Austin:** Yeah. And I'll, I'll take us on a a, a related tangent. The, the thing that, one of the things that we have as a team spent time on, we're passionate [00:52:00] about is, is the unrealized economic value in emerging markets.

You know, capital from, you know, private capital from developed markets is largely not, not making its way to increasing energy access in emerging markets. Um, you know, raising up, you know, the standard of living in, in helping economic prosperity. When you look who's making those investments today, it's nonprofits.

It's governments, it's local utilities. And, and the reason, one of the reasons is that it's difficult to, you know, take capital into those locations, but also then to, to bring it out. So if you are investing, how are you going to get a return when you, when you lack the assurance on, on payment, you know, that's something that, you know, Bitcoin Light Network completely op, open up is, well now it's very simple for somebody in, uh, in Africa or in South America or wherever they may be, to be able to pay their energy bill or pay, you know, pay for the infrastructure they're using directly to [00:53:00] somebody in the US or in Europe or wherever the investment came from.

So you're sort of unlocking capital flow, not only in, in sort of the US or in in, in sort of in these, you know, contractual relationships that we're contemplating here, but it's truly at a global scale. We can start to think about the energy economy now being completely free and open so that way we can realize economic value or maximize the economic value.

Uh, for the investments we're making. Yeah.

**Marty:** Just remind me of Ross Stevens, uh, shareholder letter when he, when he first announced NI dig and, and Nick Carter's explanation of like the global energy markets being this, this flat service with holes in it and Bitcoin minors just like fill in those holes and level it out.

Like, do you guys think we could truly have an extremely, almost optimally efficient energy system globally via Bitcoin mining?

**Austin:** It's always government. Yeah. [00:54:00]

**Marty:** Yeah. It's only the government would get another

**Alan:** question, you know, you know, like Austin said earlier, you know, markets aren't always, you know, the truly a hundred percent efficient, but definitely. We can make them more efficient. Right. And not just within their own borders, you know, outside their borders as well.

Mm-hmm. Right. To truly interact borderless more often than they do today. Um, so though there's definitely a pathway to improvement where that ends, we don't know, but we're, we're, we are, you know, definitely one of the folks that want to, you know, take that on. Yeah. Mm-hmm.

**Austin:** Yeah.

**Marty:** Kind of throw out another Marty idea that I've had.

I'm looking to bounce this idea off people cause I need to know if it's crazy or if it makes sense. But I've had this idea for the longest time that, um, there should be Bitcoin mining, permanent funds, like bringing the government into the conversation. I think the more we can strengthen, uh, local communities, local [00:55:00] municipalities, state at the state level, I think the better off we'll we will all be at in the long run.

I've always had this idea that, Um, there should be bitcoin mining, permanent funds with either state or, uh, a city government. Either issues a municipal bond or raises cash in some way to invest in a mining operation. Partners with a private mining operator. Um, they get the cash, they get the machines, the operator operates, builds the infrastructure, plugs it all in, uh, and they get to participate in the profit share.

But then you pay off the muni bond plus the interest to those bond holders. And then after that, the, the mining revenues just roll into this, this mining fund that, that you can use as a local municipality or a state to fund your operations, whether that be roads, schools, whatever it may be. Mm-hmm.

**Austin:** Am I crazy?

I do. Yeah, well, listen, I don't think there's any crazy ideas. I, I think, you know, everything sort of meets the testimony you [00:56:00] try to, when you go to implement. But, um, I would say that, you know, what's interesting about this is that, you know, government has, uh, you know, at all levels has always made investments into infrastructure and particularly into energy infrastructure.

So as we're talking here today, you know, Bitcoin mining is increasingly a fundamental part of the future of the energy system. And so it's not, not crazy to me to think that a government would want to do that, but then as well to think about how are we going to, um, how are we going to, you know, serve people who are underbanked?

How are we going to, you know, provide recurring, recurring, sort of, as you say, like things that are, are long-term investments in communities. So I, I think we've always been intrigued by, by that concept, um, to think about how Bitcoin can be an enabler, um, you know, for communities can be, you know, the, the basis for community banks and things of that nature.

Mm-hmm. Um, so, uh, it's in [00:57:00] the future. What's the ultimate way to get there? I'm, I'm not a hundred percent sure, but I, I would agree with you that when you think about this becoming a long-term asset and a benefit to communities, uh, I would certainly wanna live in a community that, that sees it that way.

Yeah.

**Marty:** No, we're seeing it, it's not like we're streaming stats to individuals in the, the towns that we go into in Tennessee and Kentucky, but if we're able to help them get a lower monthly bill for the electricity that opens up capital for them to do other things, would that be start their own business or simply to assist, um, without having to fight?

Inflation. If we can solve the energy inflation problem for them by, by helping to keep their rates lower, like I think that's extremely beneficial. Mm-hmm.

**Austin:** Absolutely. Absolutely. And,

**Alan:** and you know, like Lisa said in the beginning, you know, 10 to 20% of, you know, a lot of folks bills that they get at home is just due to financial friction, right.

[00:58:00] Within the current fiat system and, and the way the funds flow right through the daisy chain and, you know, here's an opportunity to leverage the technology to go to more of a peer-to-peer style leverage Le Lightning network, which is, you know, cheaper, faster, more secure, you know, to make energy payments, to drive those bills down 10 to 20% over time.

And thus, like you said, releases capital back to everyone's wallet. Mm-hmm. Right? And, and that's what

**Marty:** we're after. Yeah. Yeah. And so, Building a lightning, obviously it's a very powerful technology, but what are some of the hiccups, if any, that you've run into? What, what, what do you, as a team that's really closely integrated with the Lightning Network, what are some things that you'd either like to see or have seen?

**Austin:** Um, well, Marty, we will, we will not, you know, do this, this answer nearly the justice, the, you know, the engineers and our team were, uh, cuz they're the [00:59:00] ones, you know, on the front lines, you know, facing these challenges. Um, so it gives, first it gives me just an opportunity to highlight the incredible, uh, engineers, you know, Alan Max and Colin.

Um, they, they are so smart and in what's just to a little bit of praise. Like they're so smart. Not just in the engineering side, but on the economic side, like they are students of Bitcoin. Mm-hmm. That they're constantly educating us. And I, you asked the question earlier, just like, what surprised you? I think that's been.

The, the depth of which the Bitcoin ethos can go in, how they can then influence every decision you make and lower your time preferences as a company. Our engineers from the get-go, were thinking longer term than what we, than what we had been trained in the corporate world. And so they've, they've pushed us longer term, lower, lower time preference thinking and we love it.

Um, now to answer your question specifically, um, you know, lighting is, is, is absolutely a challenge. I mean, every, I would say most of what [01:00:00] we're doing are things that, you know, either haven't been done before or just the solutions for them haven't matured yet. And so, yeah, there's a lot of, a lot of research, a lot of exploration.

But I think the cool thing is there's also a lot of excitement about when you're doing something that, you know, whether it's something small or big that somebody has not talked about or done yet, or built a company doing. Um, so. I would say, you know, that's a very high level answer. Of course. You know, we, we have the same challenges with, you know, liquidity.

Um, you know, that's going to always be a thing. Of course, we have to think about, uh, you know, how, how we're, you know, staging, you know, or how, you know, the software is interacting, you know, with the broader Lightning Network. You know, when, when you and I first met back in November, you know, said, Hey, right now we're building in a, in an intranet way.

So like we were had a closed solution because, you know, our, we were still uncertain about how we would interact with sort of the Lightning Network. Um, you know, since that time, you know, [01:01:00] we, we've, we've gotten to the place where now we are, we are in the network and we're loving it. Um, but it, it took a while before we were able to feel comfortable that that was going to be the optimal way forward for us as a business.

Mm-hmm. Um, and, and so. Yeah, just some, some things that, you know, we're learning along the way. Lisa could talk a whole lot about, you know, how do you actually build, you know, an accounting system from what, what's happening on Lightning. Yeah. There's a

**Lisa:** long way to go to make it, you know, B2B friendly probably.

Um, we have, I, we've done a great job of pulling off the data necessary, but it's been hard to track like the fees and they're low, but they're variable and just some other, you know, there's just some other aspects to it that just, yeah, they're just not built out yet that it's very much like a consumer maybe point of sale network at this point.

And we're trying to, to build up at least, you know, as part of our solution to make it more B2B friendly. And, and that's taking, adding on like a lot of solutions, but it's also taking a lot of [01:02:00] collaboration, which has been really cool. Like working with a lot of the other people that are, you know, very involved in the Lightning network to build out, you know, full solutions.

**Austin:** Yeah.

**Marty:** No, I know this problem. Very well due to podcasting 2.0 where I get, uh, anywhere from one to like 300 Satoshi streamed to me every minute of every day. And just accounting headache that comes from that. It's like, oh my God, it's overwhelming. Yeah.

**Lisa:** Yeah. And like, right. And then like when you're sending and receiving at the same time and you, and we are mixing a little bit of on chain and lightning, so there's just a whole variety of transactions happening at once and you, it's easy to pull some of them off accounting wise and then other ones you have to dig a little deeper and so, yeah.

Yeah, we're

**Austin:** learning. I think, you know, maybe Mario, one of the things to highlight is, is the biggest opportunity that's in front of us as well. So if you think about it, you know, a Bitcoin miner today is, you know, if they're, either they have U S D that they're paying their [01:03:00] expenses with, or they're converting some of their Bitcoin into U S D, and then, you know, on an exchange, Coinbase, Kraken, you name it, and then wiring or ACH and the funds over to their counterpart.

So what our software is doing is it's, it's getting a minor off of zero. So now they're doing one transaction on, on, on the network. So it's building, growing and scaling network. We're bringing liquidity on. Um, but by and large, because the energy suppliers, uh, and the hosting companies that we're working with today, they want to receive u s D well, so it's, it gets on the network and then it gets off the network.

So one of the, a, a challenge, but really I'll frame it as an opportunity is how do we now get transaction two, three, and four to occur on the network? Um, you know, that's really where this gets really interesting cuz we are, we are getting minors off of zero. They're now on one. Um, and so I think that's where we're really excited to, to hear ideas, to talk to people in other industries or tangential industries that can, can sort of have reason or cause to push the funds back in a different [01:04:00] direction.

Um, and so now how do you start, start to build that circular economy, start to build that network effect? Yeah.

**Marty:** Not very exciting problems to be tackling. It's, uh, mm-hmm. There's never a boring day in this industry, that's for sure.

**Austin:** No, that is financial. No,

**Lisa:** that's been the best part about, about starting this company.

Yeah. Every, every

**Austin:** day is exciting. Every day is exciting. No day's the same. No.

**Marty:** Well, thank you guys for building what you build. I think it's very important, again, going back to the maturation, the continued maturation of the industry. This is always something that I think many people believe is necessary.

If we're gonna take that next step towards fully integrating Bitcoin and bringing that circular economy you just mentioned forward. Um, and again, I, I've said this before and I do truly believe it. I believe we have a moral imperative to get these tools to market. When you juxtapose what we're building with.[01:05:00]

The incumbent financial, monetary system in the precarious situation that it finds itself in. And so, yeah, I, I think the work that we're all doing collectively is, is virtuous and what you guys are doing particularly is pushing thing the edges out further, which is extremely important.

**Austin:** Yeah, we appreciate that.

We, we agree. Um, you know, it, it definitely is, is the most exciting thing is to really think about how do you, you cross that chasm to bring, bring enterprises onto lightning. Uh, and we're excited by the work that other folks are doing in this space because it's reinforcing to the direction that we're going.

When we see, when we see, you know, big companies taking interest in this space, you know, it, it, it helps us then to kind of point to what's happening out, out in the landscape. Um, so. I would say, you know, we're, it's small, but, but really big impact already being had. And, uh, we're just excited to be, to do our, to do our part.

Um, and, uh, so thank you very much for, for this [01:06:00] opportunity to come on and talk about what we're doing because, uh, we, we feel very fortunate and blessed to be, uh, to be in this industry. Having come from, from where we were to where we are now, I don't, I don't know if we could be any happier than we are today.

Yeah, it's amazing.

**Marty:** No, and you guys are emblematic of a trend that many Bitcoiners have predicted, uh, which is smart minds from industries coming to Bitcoin, being drawn to the light of Bitcoin and then incorporating it. That's, I think another thing that this bear market has really highlighted is the trend of people ditching big tech, big finance, banking, energy, um, to come into Bitcoin and then bridge the worlds of Bitcoin with those industries, which is mm-hmm.

Again, really important.

**Austin:** Yeah, we, we couldn't agree more. And, and it, and it's helpful to know how to, how to make those bridges because Very helpful, you know, to, to Lisa's point on, on fees as an example, you know, you, it, you still need to figure out, you have to, you have to track them [01:07:00] all. Like companies, even though they're small, like it's, it's required that they know where they're, what they're paying, you know, their expenses towards.

And so we can't just write off a few satoshi. No. They, they've gotta be tracked. They've gotta be accounted for. Yeah. Um, and so, yeah, we agree with you.

**Marty:** And so before we wrap up here, let's get some final thoughts for the freaks. What are some things on top of your mind maybe we haven't touched on yet that you think anybody listening to this should be aware of or paying attention to?

**Austin:** I dunno, I'll start. I think, you know, recently you went down to, to my door strategy and, and presented down there and I think, you know, first observation being, you know, what a great event because you know, here you had. Industry leaders from, uh, you know, who weren't sort of there for Bitcoin, but, but showed up to the Bitcoin presentations and, and were extremely engaged the entire time there.

Um, but really the key message is one that sort of has been a theme through this conversation has been that an [01:08:00] abundant future begins with energy. And so we really, I think what what unites us and we hope that people see is, is that the real future that we can build is an abundant one. And with the technology that Bitcoin brings from, from mining up through what, you know, Sonata is building, it really is about saying energy is abundant in, in, in the full scope of things.

It's just a matter of fixing the underlying issues, the economic incentives, et cetera, to really make it affordable and available to everybody on the planet. Uh, we absolutely think is a company that, that is possible. And we absolutely think that what the technology we're building is keys to enabling that future.

So we just really want people to be extremely excited for the future, to not be afraid of, to not be afraid of, of thing. You know, energy scarcity is the boogeyman. It's not true. We can solve these problems if we continue to push innovation forward. Um, so that would be my, my closing thought is just extreme passion around energy abundance.[01:09:00]

**Lisa:** Yeah. I don't know if I can top that one. We, we all, we all share that passion for sure. Um, yeah.

**Austin:** I'll also say, hey, local meetups are, are unbelievable. Um, that is, it was, you know, us being at our local meetup as just passionate Bitcoiners that led to us being passionate Bitcoiners with, with engineering friends.

Um, and, and so that's really key. Yeah. The

**Marty:** bitcoin third places are important. It's much more productive discourse in person. Mm-hmm.

**Austin:** Yeah. That is true.

**Marty:** Wow. Alan, unless you have anything to add, have anything?

**Alan:** Yeah, I, I really think it's, it's back to that ecosystem that, you know, you mentioned Austin kind of hinted on, you're really seeing this ecosystem grow.

And I, and when I say ecosystem, I mean all of the technology, the mining industry, the maturation of it, but also the other technology that's coming to bear the new companies that are entering the [01:10:00] space. And as you, you know, put it, well, pushing the boundaries out a little more, right? You, you take a look at, you know, the price of Bitcoin over time, right?

Up until the right, you know, a hash rate up until the right. But if you go and look at the ecosystem, the amount of money, fiat money coming in to invest in, in this technology into the space, the number of companies that are being built. I think that's also going up and to the right. And so that's gotta be exciting for everyone.

Um, and, and as we are pushing our boundary, like Austin said, we are very supportive to see other folks find their piece of the puzzle to go out and, you know, push their boundary wherever that is. Um, and, and let's watch this ecosystem grow

**Marty:** together. Yeah, there's a lot to do. That's the other thing. I don't, it's never boring.

I don't think, it's not gonna be boring. I don't think, it's not, not gonna be boring for, for at least a decade, potentially more.

**Austin:** Yeah. I would say not. [01:11:00] And, and so Marty, we are an open book. You know, we want people to reach out to us if they have ideas. We are, we are grow the pie type people, so. Mm-hmm. Um, you know, hopefully anybody listening, you know, feels comfortable.

If they have questions, they wanna work with us, you know, reach out.

**Marty:** Let's do it. Utilities companies, let's go, let's go,

**Lisa:** let's go. You know, the first one, the first one that I, that jumps on and they're receiving their cash. Two months before they have to send it out. They, everyone else is gonna be quick followers afterwards because they're gonna be in such a great cash position.

So,

**Marty:** yeah. Yeah. We just need that first utility company going to the industry cocktail party like, oh, you're waiting two months. Yeah, exactly.

**Austin:** Cash flow saying is good, life is good. Hopefully they de de me as well.

**Marty:** Well, Alan, Austin, Lisa, thank you so much for your time today, Friday afternoon. This is a great way to end the week for me.

Yeah, we really appreciate it. Likewise.

**Austin:** Yeah, we [01:12:00] were really excited to talk with you Marty, so thanks for the time.

**Marty:** Oh, thank you guys. Keep crushing it. I'm sure this will be the first of many conversations as the industry matures, as you guys mature as a company and, uh, as Bitcoin continues to take over the world.

So, uh, this is not a goodbye, it's a see you later and, uh, uh, thank you for your time this afternoon. All right.

**Austin:** I'll see you soon, Marty. See you later. Have everyone take care. What's all we got today? Freaks.

**Marty:** Peace of love Key.