BATTERY & STORAGE S05E11: ANZA
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Bill Derasmo: Hello, and welcome back to the Troutman Pepper Battery + Storage Podcast. I am your host, Bill Derasmo, partner at Troutman Pepper. Today, I am pleased to have with me, Mr. Mike Hall, the CEO of Anza Renewables. Welcome to the program, Mike.

Mike Hall: Thanks. Yes. It's great to be here, Bill.

Bill Derasmo: Well, great to have you on today. You are the CEO of Anza Renewables, where you have served as such since September of 2022. Before coming to Anza, you spent 21 years at Borrego. Why don't you tell us about your journey with Borrego, and now, more recently with Anza, and then we can get into telling Anza's story a little bit more.

Mike Hall: Yes. So, I'll give you the cliff notes because it's a long story. So, my brother, Aaron and I founded a company called, like you said, Borrego all the way back at the very beginning of the solar industry, so 2002. We were early in the industry. Back, industry was one megawatt per year annual installs, so quite small, like one commercial rooftop with all that was going on in the entire country. We were really excited and we got to ride the solar coaster for 20 years, and we really did everything there was to do in downstream solar and storage.

We actually launched a storage business pretty early on in 2016, and we built, in the end, multiple businesses under the Borrego umbrella. We did engineering, construction, we did an EPC business, we did operation and maintenance, third-party O&M. Probably the most successful thing we did was green field development. We got very early into the community solar market, and then ultimately into solar plus storage, and small-scale utility scale. We completed 55 storage projects all prior to 2022, so back when we were pretty early in the storage space.

We ultimately ended up selling that green field development business to a private equity firm in a spinout. But Aaron and I didn't travel with the business, and we were thinking about what our next entrepreneurial journey was going to be. What we realized was that, we had uncovered these pretty big problems in the area of equipment procurement, in particular, batteries and solar modules. We had developed some IP internally at Borrego that we're using for our own development business, around how to make better decisions with regards to what the buy-in, how to incorporate those products into your projects.

Somehow, none of our IPP and developer customers were utilizing anything like it. So, we had the idea of starting Anza. The idea of Anza is, we're bringing data and technology to bear to help people save a massive amount of time as they're trying to navigate all their different equipment options. Then, also, trying to make more profitable decisions, really move people beyond buying based on low price and actually buying based on total lifetime value. So, that's the idea of Anza. We have a technology platform, which you can subscribe to. Then, we also have a suite of services to help people navigate what's a really complex landscape of suppliers.

Bill Derasmo: Given the focus of this podcast, let's start with a focus on what your technology platform can do for storage developers or even storage off-takers in particular.

Mike Hall: Yes, sure. So, there's couple of different primary value props for our platform. So, if you were to log into our platform, one thing that would strike you right away is that you'd enter some basic information about your project, like where is it? You know, what capacity and duration do you want? How are you going to cycle the batteries? What you would get inside of 10 to 15 seconds is a table of product options. You'd see options from over 20 different vendors. We have a data pipeline and a partnership with all those vendors, where we are gathering all their technical data but also getting pricing and availability.

So, it is transformative experience. Instead of trying to call one vendor at a time and saying, "Hey, What product do you have available in this month for this particular megawatt need with this duration?" You can see all that in seconds on the platform, and you can compare, and contrast pricing. So, just having data available on what products might meet your needs and

getting it all in seconds instead of weeks and months, which is what it takes conventionally without Anza, I think is a transformative experience.

Then, the other thing that we do is we built some technology to allow you to make really important financial comparisons between the product. So, storage is quite complicated and there's a lot of different things that a buyer needs to consider when they're trying to make an apples-to-apples financial comparison. There's different architectures. So, you have the fully integrated AC block solutions, Tesla maybe being, you know, the most well-packaged. Then, you have options where you can take a DC block, a PCS, and an EMS, and combine them all together. So, when you're trying to compare, "Hey, do I want to maybe have a lower CapEx, save some money, and go with a self-integrated DC block solution? How do I compare that to a fully integrated solution?"

That's what our technology does. It'll bring in the cost of the PCS, the cost of the DC block, the cost of the EMS, and it'll give you a way to apples-to-apples, compare that across all your different product options, including different architectures.

Then, the other thing we've built is because with energy storage, OpEx is a huge issue, right? So, what is it cost to actually operate these plants? What are the LTSA's costs? Do I need to buy extended warranties? What scoping is and isn't covered in an LTSA, and what might I have to take to a third-party O&M? Our platform gives you an apples-to-apples comparison on the OpEx as well, so that you can compare things from a lifetime value perspective.

We do one other really cool thing that we haven't seen anyone else do, is we built some technology that will go through all the different combinations and permutations of things you can do for capacity maintenance. So, we run different scenarios with regards to overbuild versus augmentation. We give you that data so that you can make decisions about, "Hey, should I plan for an overbuild or might it make sense to actually plan for an augmentation in the future?"

Bill Derasmo: You cover a lot of ground there. I think that for a developer, say, answering, I don't know, an RFP for procurement. California has RFP type of program, New York has various programs, but utilities around the country will go out either at the prompting of their state

commission or whatever the process is. They'll go out with an RFP that say, "Hey, we want to obtain, I don't know, say, 100 megawatts of four-hour storage." But then, whatever the bidding parameters might be for responding to the RFP, they might say, "You could build in a certain amount of that that's long duration." However they construct the RFP, I think that's the way that a lot of storage developers might enter the bulk system market.

It sounds like Anza could come in and say, "Okay, well, here's the most cost-effective way to respond to this RFP." Is that accurate?

Mike Hall: Yes. The two primary use cases or customer profiles, we have, one, you nailed it, which is a developer. They might be a pure play developer. They might be a developer hold shop, but they're trying to understand, okay, early in the process, what are my technology options? What are they going to cost? What's approximately lifetime cost to operate be? Maybe a little further along, okay, what should I put into an interconnection app that's going to give me the lowest probability of needing to change it later? Although, changes do happen.

So, that's one use case, that early-stage developer who wants to get better data and also doesn't have time to call 10 vendors and wait weeks and weeks for information. We're calling those vendors for them. We got coverage on over 20 vendors. So, that's one.

The other use case is, later in the project cycle when they're actually getting near procurement and they want help. They want to be able to compare more options. They want to be able to compare more holistically. They want help with contracting. That's a big thing that we do for customers. I mean, there's 80 exhibits in these contracts, and a lot of them are highly technical. Unless you've got a really big technical bench, it's pretty – and even if you do, it's pretty hard to deal with it. It's what we do every day. So, we help customers with that. Then, we do some work on the execution side. We're not an EPC or an independent engineer. But in particular, for companies who are buying a DC block, we will help with commissioning, and contract supervision over the multiple providers.

Bill Derasmo: It sounds like incredibly valuable potential services. That was interesting for me to hear you break down that way, sort of early stage on the front end, and then they got into it.

Now, it's like, "All right, rubber hits the road. We've got to procure this stuff." It's interesting that you have that database or that you have those relationships, you said with 20 vendors. Without getting into the particulars who they are, but just – how did you develop those relationships and sort of the value proposition maybe for them, for that group of entities?

Mike Hall: Yes. I mean, it took time. We had the advantage of having come from Borrego, and having bought 50 projects, that we done 55 purchase contracts. So, we had decent relationships, credibility, and some volume. Then, the value prop to the vendors now is twofold. We're buying it. We're representing customers at scale. So, we're in the multiple gigawatt hours per year, if you were to think about the demand signal that we represent to the vendors.

The other thing is, is true for solar and storage, we're providing vendors with a lot of market intelligence. We don't tell any particular vendor what some other specific vendor is doing, but we do give them aggregated data around trends, trends in technology, trends in pricing that are not based on surveys, but are based on real transactions, and real bids, and quotes in the market.

The market is opaque to both sides. It's opaque to the buyers and it's opaque to the sellers. So, if we can help the sellers design products, better price products, better figure out how to market their products, that's valuable to them, and we give them that for free. Our vendor partners get a lot of data for free, and we say, the exchange of value is – you give us information that we can serve up to the buy side of the market, and we'll give you information about what the market looks like.

Bill Derasmo: Yes. It seems incredibly valuable. If I'm one of those storage developers, I mean, how do I work with you? How do I initiate that process?

Mike Hall: You can call us or find us on anzarenewables.com, There's two ways, general categories of ways we work with customers. One is, we have an alpha SaaS product for storage. We've fully released and gone to market with a commercial product for solar, but we're taking alpha customers. We've got a handful of customers for the storage software and data subscription. Again, that's a really good offering for those early-stage developers.

Then, we have a solutions group where we do some engagements where we're working from – I just need to do needs analysis all the way to PO and even after PO. Then, we also will do ala carte. So, if you're just like, "Hey, I just want to come up with a short list of vendors who can meet my technical and risk needs." We'll do that. You're late stage and you're just trying to evaluate offers. We'll do that. "Hey, I just need help with contracting." We do some ala carte solutions for customers.

Bill Derasmo: I assume it's the same on the solar side.

Mike Hall: Yes. The solar side is similar. We have a SaaS product. We have two different product level offerings. There's one that's really just focused on, you want the data around who has what product and it allows you some basic comparisons of product. And we have some technology there that, again, is doing full lifetime value so we can look at differences in energy production and install costs for the different storage products, which is really valuable. Then, we have more advanced product where you can actually force a rank based on project NPV and IRR over 130 different solar modules.

Bill Derasmo: Wow. Okay.

Mike Hall: Yes. The database on the solar side is admittedly even larger than database on the storage side, because there's just so many vendors and so many different skews. But then, we also do solutions to do different forms of some early stage of O&M, mostly on the procurement assistance.

Bill Derasmo: I don't know if you get into this, but has the domestic content pressure created by the IRA, how does that feed into your analysis, for instance, with solar panels?

Mike Hall: It's massive. It's massive. A significant portion of our customers are working with us because they're trying to navigate that. So, if with just a SaaS subscription, what you can be confident you're getting is that you're seeing every domestic content option as it comes online. We have filters in the software to be able to filter for domestically made cells or domestically

made modules. You can look 10 quarters out at who is actually ready to issue POs. We've got a big team who's talking to every vendor every month to make sure we're staying ahead.

The other thing that we do a lot in the solutions is help people navigate those. Because domestic content is more expensive, like everyone knows. There's a price premium. Right now, because it's a supply constraint. In solar and storage, there's some storage domestic content starting to shake loose. But the vendors, because it's supply constraint, are trying to capture as much of that value as they can right up to the end when they can still sell it.

Bill Derasmo: Sure.

Mike Hall: That value is different based on the project. We are helping customers kind of navigate two things. One is, does it make sense to take that price delta, and pay that extra for your particular project? The other is, how do you mix domestic and non-domestic content in the most cost-effective way to hit? It sounds like you've just leaned in your face. It seems like something you've looked at before and it's been a challenge. But people are doing it and so, how do you navigate that? What's the most cost-effective way to hit the domestic content, hurdles, but not run your project, actually, not reduce your total project returns?

Bill Derasmo: Yes. A lot of factors to consider, obviously, and balances as I think you're hitting at. Because you want those domestic content, tax benefits, obviously, but the practicality is building your project and the timing that's associated with that, and supply chain issues, and everything else. What trends do you see in terms of both solar and storage? Before I let you answer, I guess what I mean on the storage side is, one of the things I'm always interested in – lithium ion is such a dominant technology. But I'm always excited by some of the alternative chemistries that are out there, some of the long-duration. We've had some of those folks on our program.

I'm just curious as to what you're seeing. I mean, iron oxide, vanadium, some of these different battery chemistries. So, is there a lot of activity there, or do you feel like it's still caught up in its nation stages? I mean, I have heard of some projects getting deployed.

Mike Hall: Yes, it's a great question. I think the simple answer is, we're hearing more talk than we are seeing deals, and we're not seeing a lot of pull from the buyers, and the developers, and the IPPs yet. I think that's actually gotten worse for the chemistry alternatives, because the price of lithium ion driven by supply demand, and also lithium carbonate, body price is dropping. The price has just dropped. It's dropped a lot and it's dropped precipitously.

Bill Derasmo: Yes.

Mike Hall: It's harder as a developer to make the leap of, "Hey, I'm going to look at an alternative technology that's less mature and is different than everybody else is doing, when the more proven higher market share technologies is already hitting my budget." So, it's just gotten tougher. But yeah, I mean, long-duration, and depending on how long the duration you go, it is hard to imagine – if you're talking about days or half a day, it is hard to imagine that lithium ion is the right solution for that, but you never know.

I go back to my early days in solar. It might be hard to imagine, but this is definitely true. People said that PV panels were not the solution for utility scare. That was common knowledge. That was the prevailing logic. It has to be concentrating. It has to be thermal. It has to be something else. Because PV, the cost curve couldn't get down there or any number of other obstacles. It turned out that, well, we just took 90% out of the cost and improved the efficiency a bunch. Now, it's the dominant solution. So, like right now, I'm like, "Oh, it's probably not lithium ion, but who knows?"

Bill Derasmo: Yes. The long duration question, I think, is going to become more and more prominent. Like I said, California, they have specific procurement targets for it. So, as – you have conventional resources continue to roll off in retirements, I just think that that pressure is going to continue. Two-hour batteries work great, four-hour batteries work great, to be sure. I don't want to talk negative about them. This is my sense. I think that the long-duration market pressure is going to continue to be there. Then, it's just a question of how you satisfy that.

By the way, on solar, I remember all those different technologies, and I know they're still around. The other one that I used to hear a lot about was thin film solar. What's going on with the thin film market right now?

Mike Hall: Right. Yes. It is a new thing, because there's a lot of parallels between a rush on alternative chemistries in storage, because there was circa 2006, 2008, 2009, a rush on alternative chemistries and alternative architectures for solar. Then, basically, this is probably an oversimplification, but everybody has left the space except for First Solar. First Solar has been very successful. Some of it driven by technology and their cost to produce, but some of it, frankly, driven by trade, and protectionist trade measures. I'm not saying they're bad, but they have benefited First Solar as a non-crystalline partially domestic supplier. Almost all of the trade duties have been placed on crystalline, solar modules, which don't apply to First Solar, So, they are the only thin film company that's been meaningfully successful.

Bil Derasmo: That's interesting, very interesting. What are the questions on where you see maybe the storage market going? What about in terms of pressure on rare earth, minerals. There's been a lot of controversy over cobalt mining, artisanal cobalt mining, supply chain concerns, that kind of thing. Where do you see that going? I mean, I know that companies are trying to certify sort of a clean supply chain. Do you see that pressure intensifying or is that issue kind of quieted down? I just don't have a feel for it anymore.

Mike Hall: I think it is intensifying. It is not coming up as a primary issue in every procurement we're running, but it is coming up as an issue in some. I would put it under the general category of ESG concerns. Five years ago in renewables, no one talked about talked about it, because like, "We're renewable, we're already good." That is changing. We do have customers who are making decisions based on ESG concerns broadly, and we do part of the data we show, what traceability the different vendors are willing to sign up for, and if there are codes and commitments they're willing to sign up for with regards to the supply chain and ESG.

So, I would say, ESG broadly is becoming a bigger issue. Whereas, five years ago, we didn't really talk about it. There was this renewable halo, "We're all good," and people are like, "Well, that's not true now." So, yes, it's coming up.

Bill Derasmo: Well, no, it's really interesting to get your perspective as somebody who's in the trenches, because that issue is kind of looming in the background. I mean, we had Mathy Stanislaus, who is very concerned about that issue on the first season of the podcast and you read other books about it. The cobalt mining issue in particular has, I think, gotten a fair amount of attention. There's no easy answer to it, I think. But it's one of these things, I think, that the downstream part of the supply chain being more aware of the issue and making efforts to certify their supply chain. I mean, it's one way to perhaps improve the situation, but I think it's an issue.

My sense is, just talking to other people in the market and working with clients, et cetera. My sense is that the issue is not going away. So, under the general issue of ESG, but in particular with artisanal cobalt mining, I don't think that issue is going away. I think it's only becoming, people are more aware of it. So, I think it's another ESG concerns just broadly, another thing to kind of factor into all these calculations about which vendors you go with and how you build your product.

Mike Hall: Yes, certainly. I think traceability of supply chains is, I think, only going to become a bigger and bigger deal, and more and more important. Technology is going to play a really important role there. I think we have a long way to go, and I think we're learning a lot. On the solar side, we had traceability concerns around force – we still have, around forced labor and whether or not you're tainted by anything in the region of China, where the weirs are, and that has been an issue. I think we've learned a lot from that, actually, about how to trace back through those supply chains.

Bill Derasmo: Well, that's good. I mean, these are real issues. I mean, I think one of the things that's interesting is one of the effects of the IRA. We've talked a lot about the IRA over the last couple years, and I understand that we saw the impact of it is huge. But now, you've got lithium mining in Nevada. I probably will be seeing it in other parts of the United States. I saw an article in the trades about how there's a huge cobalt deposit that was found in Arkansas. It kind of stretches through Arkansas and some neighboring states. Who knows what'll happen with that?

Because mining in the United States has its own challenges, and permitting, and all that. But if the desire is to clean up some of these issues, obviously, I think producing in the United States is perhaps a better way to go. Like I said, it has its own challenges, but just thought I'd put that on the table. Where do you see storage – this is another one of these big issues, I think, in the industry and clients navigating is, the data center boom, and the idea of collocating data centers with resources.

I think where storage comes in is that it has a nice small footprint. So, where do you see the impact of this data centers boom, because it's really affected the electric utility industry in an enormous way. So, I'd just let you speak to that issue if you could.

Mike Hall: It's maybe the biggest issue facing the grid right now. We saw a study that we used in our strategic planning, where I think it was one terawatt hour of demand increase over 28 years in the U.S. Now, we're going to do another eight years. Sure, some of its driven by electrification, and transportation, and resurgence in domestic manufacturing, but the biggest contributor is data centers. So, it does feel like we're on the precipice of a power crisis, really. We need more generation, and we need to find a way to reduce the cycle time to go from an application to a project that's permitted and interconnected. There's a lot we need to do there.

I think we're starting to see collocated systems, some combination of renewal generation and storage at data centers, which makes a lot of sense. You can imagine, that could be faster than trying to locate resources somewhere else that has to navigate more and more transmission line. If most of this stuff can be used locally and you can reduce how much you're exporting, then the infrastructure requirements can be less. So, I think it's an exciting development and it could help solve that problem of how do we get more generation and ultimately, generation is a little more firm with the storage onto the grid.

So yes, I think it's exciting. But I haven't actually seen a lot happen yet, more people talking about it. So hopefully, more of it happens. I think it's a great solution to the challenges on both the permitting and interconnection side of locating these systems.

Bill Derasmo: Well, we could do a whole program on permitting reform, FERC's order 2023, and interconnection reform, FERC's order 1920, and transmission plant. I mean, there's a whole host of efforts out there on it. Totally agree. It's like the number one story in the industry. I think your company could be well positioned, though, to help analyze the issues with those collocation issues. They certainly present unique challenges for the operators of the grid, I think, and just project developers. There's been some activity with conventional resources, I think. You've seen in the PJM region, nuclear, trying to collocate with large loads, and we'll see how that sorts itself out.

But to me, I always thought of, "Well, gee, grid scale storage should be well position to meet some of this need." Again, sort of footprint considerations, certainly a smaller footprint. But in any event, I think it's going to be a big area going forward. Again, I think a company like yourself that provides the kind of analysis. and data that you do could certainly help customers navigate meeting a bespoke solution for some of these things.

Mike Hall: Yes, absolutely. I really do hope that between the tech companies, their own renewable low-carbon mandates, and the policy makers that we get to those solutions rather than keeping more coal on mine longer in order to feed these data centers. It's just really important for climate.

Bill Derasmo: Yes. No, it is. I think we've hit on a lot of good societal issues here. Obviously, we wanted to talk about the specifics of Anza, and all the things that your company offers, and your career journey. But I think hitting some of these larger societal issues is always interesting. Like you said, the decarbonization, how that comes into play, I think I raised some ESG issues, and it was a good interesting discussion.

So, I really appreciate you being on the program. I think we're coming to the end of our time. I'll just give you a last chance. Anything else you want to say before we wrap up?

Mike Hall: Yes. Just for listeners, if you're struggling with anything related to the hardware where there'd be early in a project development, or you're getting near having to actually make

a decision on a battery, battery architecture, you've got concerns around safety, contracting, execution, commissioning, or on the solar side. You're trying to navigate what's a pretty messy landscape with multiple technologies, vendors, trade, domestic content. We're here to help. We've got a pretty novel solution. We've got the largest bench, most experienced bench of people who are dealing with these issues in unparalleled data set and technology platform. So, we're solving problems for a lot of different companies in a really new and different way. We're excited about the next few years and helping drive growth in the industry.

Bill Derasmo: Well, thanks so much, Mike. Really appreciate you being on the program.

Mike Hall: Yes, thank you. It's great being here.