
Battery + Storage Podcast: Building Out Energy Storage Facilities Across the U.S.
With Jason Burwen, GridStor

Host: Bill Derasmo

Guest: Jason Burwen

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Bill Derasmo:

Hello, and welcome back to the Troutman Pepper *Battery + Storage Podcast*. I am your host, Bill Derasmo. With me today is Jason Burwen, the Vice President of Policy and Strategy at GridStor. Welcome to the program, Jason.

Jason Burwen:

Great to be here with you, Bill.

Bill Derasmo:

Well, great to have you on today. Before coming to GridStor in 2023, you had senior positions, including one point acting as interim CEO of the US Energy Storage Association, which of course merged into the American Clean Power Association. You've had several positions before those, but why don't I give you have a chance to introduce yourself and let us know how your career journey led you to GridStor and your current position?

Jason Burwen:

Sure thing, Bill. So, I've been in energy policy spaces really, for close to the last 15 years. I had brief stints at the California Public Utilities Commission, in private consulting to utilities, in sort of the think tank world working at the Bipartisan Policy Center on energy innovation policy. It was really in 2015, that I jumped over into the energy storage industry, became the first policy director, full-time for the Energy Storage Association, which at that point, I was employee number two, but I could see that the energy storage industry in the United States was a very exciting industry with an enormous growth potential, and a very clear path for how to get there from a policy and regulatory standpoint, which is what motivated me to go to the trade association side and support the industry.

I feel like I was right, because look at us today. We are now the second biggest industry in annual megawatts installed or planning to be installed, which if you told me that in 2015, I would have said, "Really? We get there? That's great." But it's true. The Energy Information Administration projects that this year, more megawatts of battery storage will be installed on power grids across the US than wind and natural gas combined. It's really exciting. The reason why I am in GridStor right now is, of course that after working for nearly a decade to advance the industry, and of course, the passage of the Inflation Reduction Act, it seemed like it was just a very exciting time to get into the actual work developing and operating battery energy storage assets. So, I was drawn to GridStor, which I can tell you a little bit more about as a really exciting place to do that work.

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Bill Derasmo:

Where's the center of gravity for GridStor? Where are your projects? Where are you looking to develop in terms of region?

Jason Burwen:

Yes. So, GridStor, first, I should just say that we are a developer and independent power producer of battery energy storage facilities, standalone battery storage, specifically. And we both build our own projects from start to finish as Greenfield and also acquire projects midway through development. We actually have a big acquisition we just announced today of a 450-megawatt position in Texas.

Our mandate is to develop across North America. Right now, we have over two gigawatts of early-stage projects sited primarily across the western United States. Our first operational project, Galena Energy Storage, a 60-megawatt to 160-megawatt hour battery facility in Southern California, went online in December of 2023. So, we are also now operating our first asset.

Bill Derasmo:

Fantastic. Fantastic. So, you're active in California, then?

Jason Burwen:

Yes. We have a number of different projects in various stages of development across primarily Southern California.

Bill Derasmo:

Okay. Primarily, in Southern California, and so that would mean the Cal ISO market. Maybe we could get into that a little bit. What are the hot issues in the Cal ISO market that come to mind that might be affecting GridStor or energy storage developers, operators, et cetera?

Jason Burwen:

Sure thing, I think that probably the most significant thing that we as a company are facing is the interconnection process reforms that are currently being developed at the California ISO. There's of course Order 2023 Compliance, FERC's order that was issued last year, is going to of course, require the California ISO to make certain reforms, such as requiring site control at the time of an interconnection requests, something that California does not require. It allows deposit in lieu which has made that market a little different than some other markets.

But also, the California ISO is presently in the process of finalizing a set of additional reforms beyond Order 2023 to its interconnection process, and they're very significant. I say that for a couple of reasons. The first is that this is obviously an issue facing most or all markets, right? There is an enormous amount of companies that are making interconnection requests across the country. It is an unprecedented amount of supply being offered, and there's just not enough

transmission infrastructure to accommodate it all. That's just a straight mismatch in supply and demand that necessarily creates pressures to figure out how to distribute a scarce resource.

But secondarily, this interconnection dilemma, really, is pushing grid operators to go one of two routes. Either because it's going so slowly to get new things online, because this process is bogging down. There's sort of, by necessity, having to keep older, usually, fossil generation around longer than it might have otherwise been planned to, in order to make room and time for this slow interconnection process to proceed. Or on the flip side, there's a need to cut through things more quickly, to get all the new resources online more expeditiously. To do so, is effectively more of a central planning approach, than has traditionally been the role of independent system operators and regional transmission organizations who are founded on the premise of open access. That's what I think we're seeing in California ISO. We need to just move things through sort of more of a planned process, and that is the other way we're seeing the interconnection dilemma be dealt with.

So, that is a really significant change in the nature of wholesale markets and market entry. The reason why we're paying attention in California, not just because of our own projects that are being, of course, affected here. But one, California is the first and leading place in the world, that's planning to make clean energy transition on a backbone of battery storage. That is the main reliability resource in all of the system planning. Second, because this is something that is going sooner than a lot of other places and could create precedents for the rest of the country.

Bill Derasmo:

A lot of significant statements in there. Earlier, you had said that just nationally, the Energy Information Association said there's going to be more megawatts installed for storage than wind and natural gas combined. But then, jumping specifically to California, you just said that storage is the reliability resource and we're going to try to maintain reliability as we move into this new energy paradigm, where we have less and less dispatchable resources. We're going to rely on a battery energy storage to maintain reliability and balance system, et cetera. So, hugely important as to how this works out in California.

Then specifically, there's multiple layers here. There's the Order 2023 implementation, which as you said, final rule, national coverage, all of the transmission providers need to comply and that means all the different RTOs need to comply and we're involved in that, watching that implementation occur in all these different regions, and there's a lot of issues and different regions will probably ask for independent entity variations, et cetera. But then beyond that, as you say, in California, they've got additional layer of effort that's occurring. So, what specifically, is California looking to do that could either adversely or helpfully change your class or resources. The battery energy storage resources?

Jason Burwen:

Yes. The main approach of the California Independent System Operator taking here, how to ration interconnection requests, and really, frankly, how to winnow out all of the requests it has most recently received in its going forward plans.

To be clear, I'm not unsympathetic to the problem here. I think the ISO reported that it had something like over 500 interconnection requests, totaling something like 370 gigawatts of

resources on a 50-gigawatt taking system. You're not going to study all that, because that doesn't make any sense. The results of such study would be absolutely meaningless.

So, the argument there is, well, we can't clearly take all of this. We need to be discriminating in some way about what we are actually going to study. So, the California ISO is on its interconnection intake reforms, proposing a series of screening and prioritization mechanisms. First, obviously, there's the Order 2023 Compliance. You got to show up with site control. There's the deposits that's settled rule of the land now. In these new reforms, the next screen is the California ISO saying, "Listen, we're only going to study resource requests where we see available or planned transmission capacity." If you're going to propose a project, that's supposed to provide reliability, in a place where there is no known transmission capacity that's available to hook it up, we're not going to study that. Because we don't think that that's a worthwhile use of our resources given that California is trying to be very proactive in transmission planning.

It's, in fact, the first place to release a 20-year proactive transmission plan based around the resource needs and public policy goals of the state of California. I think this is emblematic of where California ISO is going, is they signed an MOU with the California Public Utility Commission and California Energy Commission, effectively saying we need to more closely coordinate the energy transition activities of the State of California in pursuit of its clean energy and greenhouse gas emissions reduction goals. Elliot Mainzer, the head of California ISO, I think, would tell you that like that means invariably looking at the demands of the system needs rather than the supply of offers as the key driving force for what the ISO needs to address, right?

First, you have these priority zones. You're in them, you have a chance to get studied if you're outside of them. There's a second process. We don't need to get into it. But fundamentally, you're not going to be assumed to be trying to get into the regular interconnection cluster study.

After that, then the California ISO is proposing a prioritization scoring approach. It's coming up with a set of criteria that it will score every project on, and then it will rank order all the projects, and the California ISO in its current form of the proposal is saying, "Listen, we'll accept up to a certain amount in each of these priority zones, effectively equal to one and a half times the available transmission capacity for deliverability. And we will use those scores to figure out where the cutoff is. Everyone below that cut-off. Thanks for playing come back in a future queue." Everyone else gets selected.

That scoring is a really novel concept, because it's now saying, we're going to use specific criteria that puts folks in or out of the interconnection study process, which is effectively in or out of market entry. That is, I think, a really thorny place to be because there's obviously a lot of judgments about what is or is not important. Some of that can be policy-driven and certain of the system needs. Part of that's like sort of assessing, like the viability that would be I think, probably everyone's desires to somehow get really indicators of viability and peg to that, but that's very difficult. We can explain why.

In a third instance, not just system needed project viability. But in a third instance, some of the criteria are giving preferences to the load serving entities of California to pick and choose the projects they prefer, that are being offered for internet connection request, and put the thumb on the scale of those resources and say, "We like these. We don't necessarily like those." That, to

me, is a particularly novel, and somewhat challenging proposal, especially because the major load-serving entities of California are transmission owners. PG&E, Southern California Edison, San Diego Gas & Electric. And when you put transmission owners in a position to choose which resources will be studied in addition to their transmission systems, I think we are fundamentally running up against the principle of open access. That FERC is laid out in Orders 888 and 2003. Frankly, it's the foundation for wholesale electricity markets. The idea that you would have at least low barriers to entry is necessary in order to make sure that there's actual competition and electricity markets.

Bill Derasmo:

Well, if you go back to the foundational orders that established ISOs and RTOs, you go back to the independence principle. Back in 888, when they started talking about characteristics of what a regional organization might be, when they talked about ISOs, there was the independence characteristic, I believe, and then, of course, Order 2000, was when FERC said, "Hey, everybody's got to come in with a plan to join either an RTO or ISO." So, there's always been that independence principle. It sounds like what you're saying is the Cal ISO might be bumping up against that a little bit. I don't want to say that they are not acting independently. But what it sounds like you're saying is that in terms of the resource selection, the way they're proposing to do it implicates that principle. Is that the direction you're going?

Jason Burwen:

Yes. I'm not going to tell you that it's absolutely fundamentally wrong and can't ever be countenanced, or that they're 100% right and in the clear. I think we're entering a squishy space. The reason why I think it's not like an open and shut case is, in many respects the practical needs of the system operator. They truly have a challenge here, which is a step change in the number of projects being offered. When you look at queues, historically, they were always kind of you'd get a handful of requests every window that opened, and you could study them all because it was a handful of requests at any given time.

Once you have this Cambrian explosion, that's where developers seeking to offer projects, that fundamentally changes the challenge here. So, I'm not unsympathetic to that. But I do think it's very important that you can't throw the baby out with the bathwater when you start to say we're going to ration, because that is actually really important for a variety of reasons. One is, as I mentioned, that's just the nature of how markets work. If you don't have low barriers to entry, you don't have a market, because then you're effectively creating a shadow rent for incumbency.

But secondarily, we do want to make sure that there is a degree of agnosticism amongst transmission owners for what's being put on their systems, and we want to make sure that the ISO is, if not a "fair arbiter", is very transparent about how decisions are made. I think in both of those instances, the ISO's proposal right now is problematic.

Bill Derasmo:

Sounds like a very command and control approach. Like you say, the market should be somewhat agnostic. I mean, in other words, the way it might translate is, if somebody proposes a project, and they do everything that they're supposed to do in terms of the process to get that

project studied, and it spits out a result that says, “Well, you're going to need a gazillion dollars and upgrade costs”, and the project developer says, “Fine, I'll pay it.” Then that should be the solution. I mean, I hate to say it, but it's a very quick and dirty example. But what it sounds like is Cal ISO is just saying, “We're just not going to study that, because it's not realistic that it's ever going to get developed.” But I'm not sure that that as you say it's a very command and control priority type of a process as compared to a more market-oriented approach. Because sometimes, there are developers that are willing to pay significant upgrade costs, because of the way their project happens to pencil.

Jason Burwen:

Well, to be clear, if you're outside of one these priority zones in the ISO proposal, you can pay the area deliverability network upgrades, and they'll say, “Great. You paid your own way. One hundred percent, it's called merchant deliverability now, and we'll get you connected and you're going to have deliverability, because you paid for it.” That is probably a rather small minority of projects, because these area of deliverability network upgrades are going to be such significant cost drivers for any single project. Right?

Bill Derasmo:

Sure.

Jason Burwen:

But I do think that the principle of just like, is this turning into command and control? I mean, I think this is the challenge, is that if you give preferences to load serving entities, not without reason. Load-serving entities in California have to show that utility commission they are coming with a bunch of clean energy procurements to meet state policy goals. So, they have things that they need or want. But I think then it's sort of the question as well, is the ISO just effectively running an RFP for load-serving entities? That's not the role or goal of the ISO. I think that that's one of the challenges here. Frankly, a lot of commentators have speculated about can a rapid Clean Energy Transition be done using market mechanisms, versus a command and control planning approach? I think that tension is coming right to a head here in California for precisely this reason, right?

Bill Derasmo:

Well, it sounds like it, and I appreciate you clarifying my thoughts on it. Because I guess where I go after your statement then is, once FERC opened the door for this public policy planning aspect in Order 1000, I think that's probably what leads to, or what started the process of now where the Cal ISO is, and responding to the large load serving entities needs, because then you say, “Well, look”, there's a policy directive from the California Commission or the California legislation, whatever it is. That policy directive goes down to the big IOUs within the state. And they say, “Listen, I got a plan to meet this California mandate. So, this is the priority that we have to satisfy.” I think, once you open up that public policy door, it's probably the origin of where this tension comes in, and probably when the commissioners at FERC, put in place Order 1000, they probably didn't realize the unintended consequences of this. Because yes, Cal ISO, it sounds like is really going to a heavy command and control type approach.

Jason Burwen:

It's going to put some novel questions in front of the Federal Energy Regulatory Commission, if the proposal in its current form is what is ultimately submitted, right? I think that we've seen recent work from the Federal Energy Regulatory Commission that clearly has green lighted some amount of preferencing in the interconnection process. I think surplus interconnection service from Order 845, there was an argument that that was queue jumping. But FERC said, "This is not queue jumping, because we're not changing the injection withdrawals at that point of interconnection. We're just allowing a second resource to be at the same point of interconnection and share basically."

Then there's more recent arguments around this expedited capacity replacement at the point of interconnection, where there's a retiring resource, if I'm not mistaken. I can't remember. I think that was PJM's market? I can't remember which market.

Bill Derasmo:

Well, MISO makes those types of changes. And the surplus interconnection, I think is, I mean, I would argue that that's just an efficient use of resources. If you got the extra interconnection sitting there, and somebody comes in with the ability to use them, then they should use them.

Jason Burwen:

I literally advocated on behalf of that at the Energy Storage Association when Order 845's NOPR was being developed. I said, "Hey, we, the battery storage industry should be allowed to join an existing wind or solar site and not have that be a complicated thing." So, I feel like I helped push that forward.

What I think is the big difference here is that we're not talking about already existing interconnection capacity. We're talking about new interconnection capacity and how that is distributed. I think that's a fundamentally more zero-sum amongst market participants than taking already existing interconnection capacity. That's where the California ISO proposals edging into new territory here, right?

Bill Derasmo:

Hundred percent agreement, 100%. It's, yes, totally different scenarios. I mean, those other reforms, it's almost born out of desperation. It's like these queues are so long, if there's existing rights that we can use, let us use them. And storage is particularly well suited, in my opinion, for something like surplus interconnection, because of the physical realities of citing something. Storage is relatively compact, compact footprint. And if you've got the point of interconnection sitting there with extra rights available, it's an interesting solution. But as far as the Cal ISO situation is concerned, I think you've got these issues that are going to bubble up. When is the Cal ISO – give me a sense of the timeline? When is the Cal ISO planning on making this filing? And I know the Order 2023 Compliance filing generic date is in early April when those go in. So, I'm just curious as to what the timing for all of this is.

Jason Burwen:

Yes. The ISO has indicated they want to bring the additional interconnection reforms to their board in May. So, I would expect if that is indeed the timeline they stick to and the board approves, that you'll probably see something go filed at FERC shortly thereafter, late May, June. That's coming up fairly quickly.

But I do want to put a finer point on why this is really important, bringing you back to energy storage, and certainly, obviously, my own company's interest, right? For energy storage, this is really important for a couple of reasons. One, is that we've had a decade of wind and solar deployments across grids. Storage is the new kid on the block, so to speak, and trying to get deployed at massive scale. If we're having a slowdown in our interconnection queues, or various processes, they're going to start rationing interconnections. That's going to have a more significant impact on the path of deployment of storage, just given how early we are in that deployment cycle for the asset class, versus wind and solar. Secondly, because for wind and solar, those projects can be energy only, and still be valuable. But for storage, you need to have deliverability. You need to be showing that you can provide reliability in the markets where there's resource adequacy requirements in order to be valuable, right?

So, it's just again, a fundamentally different bar for adding these resources to the system in a timely fashion that's going to allow us to make the clean energy transition at the speed that we need to. We need to be able to add lots of energy storage and have it be deliverable as quickly as possible if we're to avoid extending our reliance on polluting generation. The other thing I would note is that the importance of making sure that we're not creating unusual outcomes here.

Case in point, this California ISO proposal because it, for example, has another set of criteria that prioritize the expansion of existing facilities over completely new facilities, then, indeed, the addition of batteries to existing sites is going to be a much more viable pathway to getting interconnected, then citing a standalone storage asset, perhaps any place where it's much more useful for reliability and value in the system, right? Which is, frankly, what our company has been focused on.

GridStor is really focused on standalone, not co-located storage. And we've been citing resources in the places like the LA basin, where you have an absolute need for these resources because of transmission constraints for getting energy in and out. But from an interconnection standpoint, now, these are going to be deprioritized. I think that that's unfortunate, because I don't know that system planner in California would tell you that those resources are less valuable or less important, than adding a battery out at the edge of the system co-located with a wind or solar facility.

Bill Derasmo:

That's amazing to me, because that's so counterintuitive and so opposite of what we learned planning was about. Because if you're going to cite something behind a constraint in planning lingo or econ lingo, if it's behind the constraint, it should get prioritized, not deprioritized, right? If you're in a load pocket, or you're relieving a constraint, you would think that those projects would be prioritized.

So yes, I just think it goes opposite from everything that we've been trying to do over the last 20 years or so with LMP-style pricing, and Bill Hogan, and all that. It just kind of goes out the window, which is odd to me. But in any event, it sounds like we've got Order 2023 reforms, we've got these additional reforms in the May to June of 2024 timeframe for California. A lot of important issues for storage developers to keep an eye on. If they want to get involved, Jason, how should they contact you or GridStor?

Jason Burwen:

Well, you can go to our website at www.Gridstor.com. You can, of course, find me on LinkedIn. That's no trouble at all. Ultimately, this is in late innings in California ISO and they've been running a fairly involved stakeholder process to try and get to this point. You can obviously join the California ISO stakeholder calls. But I think that if your audience can take away one thing, it's to start watching when this comes across the transom at FERC, because I do think this is going to raise, again, novel issues around interconnection market entry. The impact of this proposal and its disposition at FERC is going to have pretty significant repercussions on the development pathways of various clean energy resources, at least in California.

Bill Derasmo:

We will admonish our audience to do that and keep an eye on these developments. Get in touch with Jason. Go follow GridStor. A lot of exciting developments coming up.

Jason Burwen:

There's also another thing that I think folks should be aware of, which is we're talking about interconnection reforms at the intake side in California. But there's also the length of time it takes to complete network upgrades for interconnecting resources. A lot of developers are being told to wait six, seven, eight years for their projects to be able to come online. And that's going to be incredibly challenging for California to meet its clean energy transition goals.

We, at GridStor, and a number of other developers in the space, I think are trying to come up with concepts for how we can speed up the back end of this process. Because if you're going to put all these new requirements and screens i

n for the intake, the back end should also get shorter. And I think it's important that we continue to pay attention to that part of the process as well.

Bill Derasmo:

Well, and I think Order 2023 was certainly aimed at that, right? And you've got penalties for study delays, things like that.

Jason Burwen:

Order 2023 only covers everything up to the signing of an interconnection agreement. Everything after that, the post-IAA phase, Order 2023 doesn't touch. That's the phase that's frankly, scaring a lot more developers, because it's one thing to be told, "Yes, wait two or three years." It's another to be told, "Wait eight years."

Bill Derasmo:

Fair enough. Okay. Well, we're going to need more work on that back-end issue. Well, we appreciate you being on today. Unfortunately, I think we got to wrap up. But I really enjoyed the conversation. I learned a lot about what's going on in California and I'll give you the last word.

Jason Burwen:

Thank you, Bill. Great to be here. I think that if you're not following the energy storage sector, you oughta, because it's probably the most exciting place to be in clean energy transition, at least, at the bulk scale system level. It's going to be a bright future. Even regardless of the hiccups along the way, I think, that you're going to see just an enormous amount of enthusiasm from investors and developers to get storage built across the United States.

Bill Derasmo:

Thank you so much, and till next time. We'll leave it there.

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