

Crypto Mining – Plugging In and Powering Up

Podcast | Bracewell Crypto Bits

July 13, 2022 | 3 minute read

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In this episode from our special series on crypto mining, New York partner Danielle Garbien joins Anne Termine and [Jared Berg](#) to discuss strategies to purchase power for crypto mining facilities, including the various ways to structure a power purchase agreement into one that turns the lights on in a crypto mining shop. Danielle has experience negotiating and drafting EPC contracts, REC purchase agreements, turbine supply agreements, operating and management agreements and other procurement agreements for energy and infrastructure projects.

How do you buy energy in mass for a large crypto mining facility?

Crypto data mining facilities require a lot of electricity to function, and there have been products out there for generations where entities need a lot of energy to keep the lights on in their facilities. One common product is the power purchase agreement. We've heard of this — the PPA, the VPPA. It's used in multiple sectors and multiple industries in terms of whether a utility would be selling the power, or you could have corporate buying the power, or developer selling the power. In short, the PPA often refers to a long-term electricity supply agreement between two parties. Usually the party that's producing the electricity and the customer that is consuming or buying the electricity.

Who are some of the purchase providers and some of the deals that we've done here at Bracewell or that you're familiar with?

We represent both the off takers and the developers, and as well as the utilities. For instance, we have a number of developers that are in the renewable market and they build wind and solar farms. A component of construction financing often is entering into a power purchase agreement to make the lenders more comfortable with the packaging to ensure that once the wind farm or the solar

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farm is constructed, that there's a long-term stream of revenues that will be available for when the project is developed. That way, the lenders know that they will be paid back.

How does the lender get comfortable with the buyer of that energy?

A big part of the negotiation with PPAs, aside from pricing and delivery points and basis risk, is credit and credit worthiness of the buyer of the energy, and also to ensure that the developer is going to move forward with the project and achieve the commercial operation date, or COD of when the facility becomes operational and can sell and generate the power in a timely manner.

It seems like there's so many people that are unclear as to what crypto is and then to add the word mining to it. Has that been difficult in creating agreements between crypto mining facilities and power providers?

Definitely. I think from a utility standpoint, their typical customers don't require as much energy consumption as a crypto mining facility. So, the exposure that the utility or the developer has to the customer, given the large volume of consumption, is a lot higher and riskier from that perspective when you're dealing with a crypto miner. This has been highly negotiated area within the PPA context.

Can you walk us through when somebody says that they're signing a PPA with a wind farm and they're buying that renewable energy. Are they actually getting the power directly generated by that facility? How does that work?

It would depend on where the facility was located and if the power was being "sold" behind the meter. Behind the meter is basically saying that you don't actually run the energy on wires that are communal with everything else, with all the other energy that's produced in the grid. You have a wire that runs directly from the generation source over to the load source. In this case, you'd have the wind farm, you'd set up a power line that goes from the wind farm directly to the crypto mining facility. Sometimes renewable facilities or any generation facility will also want to interconnect with the full grid so that if the mining facility stops taking energy for some reason, they can sell that power to the grid.

In terms of someone who wants to set up a crypto mining facility and enter into a PPA, what are some considerations or some advice you would give them in thinking about these kinds of agreements?

I think the most negotiated terms under a PPA is the pricing, the tenure, how long of a term of a contract, the credit support posting obligations, the basis risk, which is the difference between the price where the energy actually is being delivered and the price point where you're taking pricing from the market. Another really important piece of the puzzle is the real estate, the land, where the crypto mining facility is going to be located and the tenure of that lease or

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ownership or whatnot. But all of those contracts go together to make it fit and work for purposes of getting the facility up and running.

Have questions about crypto mining or power purchase agreements? Email [Jared Berg](#).

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