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Clean Energy Spotlight

How to get energy storage deals with utilities: A primer

COMMENTARY

BY BETH A. FOX

The energy storage market is growing exponentially. Electric utilities are buying energy storage for a variety of reasons, including load shifting, peak shaving, transmission upgrade deferral, and the alleviation of transmission congestion. Many utilities are required to buy storage as a result of state legislation or at the direction of their public utilities commission. If your company is interested in selling energy storage to utilities, here are some points to keep in mind.

Explore All Avenues:

The most important step in negotiating energy storage contracts with utilities is the first one—deciding the best forum for negotiations. Developers of energy storage projects should acquaint themselves with all possible solicitations and programs that may be appropriate for their projects. California utilities, for example, are required to procure more than 1,300 megawatts of energy storage and run specialized energy storage solicitations every two years. But energy storage developers should not limit themselves to scheduled specialized solicitations.

Many all-source solicitations will accept energy storage projects, particularly (but not only) if they are combined with a generation source. If your energy storage project can be combined with a solar or wind project that will deliver renewable energy credits, the combined project can be bid into solicitations for renewable power, and the storage feature of the project may help it rank attractively. Similarly, if your energy storage

project is a behind-the-meter project that reduces load, you should consider available solicitations and programs for demand response projects.

Since energy storage often qualifies for experimental programs, explore which programs are available for your project, or can be available if appropriately sized. Keep your eye out for unplanned solicitations: Just this year the California Public Utilities Commission ordered a utility to run a solicitation to procure energy storage in response to an emergency situation. Finally, do not rule out bilateral opportunities, particularly where a utility has been unable to meet its storage target through solicitations.

Educate Utility Personnel:

It goes without saying that any energy storage developer should know the parameters of his or her project inside and out including, but not limited to, the project's capacity, the maximum and minimum depth of the discharge it can provide (and the depth parameters for optimal performance), the duration of the discharge, the response time, the efficiency of the unit, cycle limitations, and the life of the unit. It is beneficial to take the time to meet with utility personnel, including the attorneys who will be negotiating the agreement, in advance of any contract negotiations to educate them on the project's features.

It is especially helpful—even necessary—to have this meeting if your energy storage project is something other than a straight lithium-ion battery project. While some utility personnel and attorneys have negotiated one or more energy storage agreements, many more have not. Fewer still have negotiated contracts for combination projects (e.g., batteries combined with so-

lar), behind-the-meter energy storage projects, or non-battery technologies like fly wheels, compressed air storage or thermal storage. Educating utility personnel on the realistic parameters of your project will allow you to work together to structure a contract that works for both sides.

Ease the Process for Creating an Agreement:

If you are fortunate enough to have your project shortlisted in a solicitation, do as much as possible to ease the process of creating an agreement. Remember, while you and your team are likely negotiating only one agreement, the utility lead and his or her attorney are likely negotiating several at the same time. Thus, to speed the negotiations process, offer to have separate technical meetings, where technical and operations personnel can discuss the mechanics of various processes, or risk and credit-focused meetings. Smaller, focused meetings can often be more productive than broader meetings. Additionally, take on as much of the drafting as possible. If a developer's team can draft less-controversial provisions for utility review, it can speed the process.

The energy storage pro forma agreement on which your agreement will be based will contain several mathematical equations, some quite complex. For example, the agreement may provide for adjustments to payments based on a decline in the efficiency of the unit, or if the utility schedules the project so that it is forced to discharge too deeply, or if the project fails to meet efficiency targets over the full term. To the extent possible, utilities would prefer that the parties adjust the numerical factors of, or inputs into, these equations rather than the equations themselves. The reason is simple: once the agreement is executed and the project



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comes on line, it will be managed by a different department responsible for billing and settlements. While the employees in this department have likely been trained on the pro forma equations and how they work, a person who manages dozens, if not hundreds, of contracts cannot reasonably be expected to learn and correctly manage many different flavors of deep discharge adjustments. So, except if the equations really do not work for your project, we recommend

changing the inputs, not the math.

Communication is Key:

Once the agreement has been executed, keep in communication with the utility prior to the delivery date. Let the utility know if an extension to the delivery date is needed, or if there are any issues that will impede the progress of the project. Proactivity can potentially avoid a default or triggering a penalty.

Energy storage agreements are complex documents, but considering some of these issues should speed the negotiations process and increase the chances of reaching a successful agreement.

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