

EMERGING TECHNOLOGIES SHOWCASE WEBINAR: TECHNOLOGY PERFORMANCE EXCHANGE (TPEX)

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Question and Answer session

Q: How will the Building Component Library (BCL) be labeled?

A: When products from the exchange are pushed to the BCL, they're labeled, just like they are in the Exchange, with manufacturer and model number and other identifying metrics that are used to find products. Because we take such care on data provenance, when we push that product to the BCL we also include a link back to the TPEX product page so that if someone wants to know where the data came from that informed the model representation, they can click the URL and go right to the product page on the exchange. That way they can view all the metadata that is appended to the performance data that we use to create that representation.

Q: Can you show the list of the categories that are implemented? What other categories are considered?

A: You can see a lot of electric lighting (the electric lighting industry does a great job making the data available). Other than lighting, there is mostly HVAC products, some renewable energy such as PV modules and inverters. If anyone has technology categories they're interested in, please send an email to Daniel Studer. They would like to know what technologies people are interested in, and start looking into those and work with people to make sure they're implemented, although with funding it may take a little while.

Q: Regarding the "need data to get data" issue, I can see an opportunity for utilities who deal with lots of vendors to use the exchange as something like an ultimatum. As in "I won't consider your product unless it's on TPEX".

A: From my view as project manager, I think that's great. I agree that would be a powerful motivator to put products on the Exchange. Those are each utility's relationships to manage. If that's the path that the utility is considering going down, it's important to get in touch with Daniel and the rest of the TPEX team to make sure that the technology they're interested in investigating is on the exchange. We want to prevent a situation where you tell a vendor that they won't consider a product unless it's on the Exchange, and then they go to the Exchange and there isn't a technology category defined for it. We're not trying to impede efficiency solutions, we're trying to move them forward. It's particularly effective if the technologies you're working with are already on the Exchange. If they're not, work with the TPEX

team so that they can be added. That is the ultimate vision as they get the technology categories expanded over time

Q: Some of our loudest vendors are also pretty shady – at least they appear to be so. Will manufacturers with little to no known presence in the market be allowed to contribute? Or will they be screened out? How might that hinder emerging technologies?

A: This is kind of two questions. One, we know that there are some technologies being pushed like snake oil, as with any industry. If you're looking at a product in a technology category and you don't think that the performance can be real, you can ask that vendor to prove it, and have a 3rd party testing laboratory upload their test results. If they can't, they won't. The idea is to facilitate multiple data from multiple sources to get a clearer picture of particular products or technology categories. That's one possible way to address that issue.

On the other side, in terms of market size of players, in our conversations with manufacturers, we find that those with a lesser market presence actually have more motivation to prove their products perform well because they have more to gain by getting a market share than some of the more established players. From conversations we've been having with manufacturers, we're not actually seeing that as a barrier. If you start talking truly leading edge technology where there's not even a method to predict performance or no one knows quite how to model it, it's super new just off the lab bench, that's probably an area that's questionable where the data would live or know what to ask for. But certainly when you have a product that you're selling commercially, we have not observed organization size to be a barrier yet.

Q: Are there plans for Building Energy Data Exchange (BEDES) compliance?

A: The question pertains to the Building Energy Data Exchange specification. The answer is yes. Once you get down to level 3, we would certainly want the parameters we're asking for to be BEDES compliant. Right now it's only down to level 2. Because we're asking very detailed questions at the sub-product level, the BEDES effort hasn't quite gotten there yet. In the future we'd expect the parameters to go by BEDES in terms of definition and terminology. That's also true for anyone familiar with ASHRAE Standard Project Committee 205, working on a standard to identify the parameters we need to know for a technology to represent it in simulation. There are some software vendors and manufacturers working on a consensus process and standard for that. After the standard is published there will be subsequent data specs that will define the primary list for each technology. We'd expect the technology categories to be aligned with the ASHRAE effort as well. That timeline is probably many years away because it's a consensus-based process.