2025-1-16 CHAT Q&A. Topics: Heat pumps; mobile & stationary storage battery; Span; Smart Electric Meters; EV Vehicle to Home; Solar;

HEAT PUMPS

Sue: My heat pump used over 2 MWh in December. I was disappointed it used so much, but I have electric resistance backup.

* Jeffrey: Replying to "My heat pump used ov..." It may have been undersized. Or the weather was unusually cold.
* Betsy Longendorfer: Single digit temps predicted for 3 days next week in North Jersey.

MOBILE & STATONARY STORAGE BATTERY

Molly: We have 2 Tesla batteries in our garage in Ocean Twp

Robert: Are the portable battery systems displayed safe? for example to be placed in ordinary household rooms? best stored at room temp? (I believe they must be charged at >32F, at least some of them

Mark: Question for Michael: Great presentation. My town of Ho-Ho-Kus NJ is not allowing battery storage in my garage - Do you know if that is a town, county, or state rule (I am assuming not the state based upon your presentation)?

Mark: Many Thanks - I will reach out to DCA

David: I had success with the Ego battery generator during a recent power outage by powering my refrig, freezer and gas furnace/blower.

Mark : More of an FYI - I installed an EcoFLow portable/expandable battery and smart panel for my older parents home and electrifying their stove (they had two fires with the gas stove in less than 12 months). They love it the induction cooktop and the EcoFLow system.

Kathy: additional benefit of home storage is the ability to run your well if there’s a fire and the grid gets shut down

* Michael: Replying to "additional benefit o..." But well pumps have a large surge startup power needs
* Kathy: Replying to "additional benefit o..." you can manage that within the SPAN panel

Jeffrey: For either of you: I was really surprised to see Tesla as the cheapest battery supplier per kWh. Is this a recent change?

* Answer by Molly : Tesla supply and demand

SPAN

Kathy : can you talk about the smart electrical panels SPAN panels and how they can help you manage your battery use?

Kathy: I just installed solar, batteries and SPAN smart panel if anyone wants name of contractor, I totally recommend him, the whole team was amazing
[see “SOLAR” section for recommendation)

Kathy : You can use the SPAN to manage your house very easily from your phone. It also has storm watch mode, it’s tied to the weather system and can automatically fully back up battery fully ahead of storms. You can see in real time if you add or subtract different circuits how long battery will last.

Jonathan : Here is some information I found about SPAN:

A SPAN Panel is an Energy Management System that functions as a computer-controlled, app-connected electrical panel. It is designed to optimize and manage the use of electricity in your home, particularly when you have rooftop solar PV panels and a home battery.
Here's how a SPAN Panel could help with battery use:

* Critical Load Management: A SPAN Panel can be programmed to prioritize essential circuits during a power outage. It can automatically route power from your battery to critical loads, such as refrigerators
* Solar Optimization: It can intelligently manage the flow of electricity between your solar panels, battery, and the grid, ensuring your battery is charged efficiently with solar energy.
* Blackout Protection: In the event of a grid outage, a SPAN Panel can isolate your home from the grid and create a "microgrid"
* Time-of-Use Optimization:
* App-Based Monitoring:

SMART ELECTRICAL METERS

Nicholas: Thanks for the presentation. You mentioned that we don't have hourly pricing for retail customers in NJ. It seems to me that having hourly pricing means a lot to the attraction of installing a battery. Do you expect us to have hourly pricing at some point in the near future?

Steve: Details differ between electric utility. JCP&L is now installing “smart” electrical meters which broadcast the meter reading every 15 minutes? (commercial) or 1 hour? (residential). JCP&L also provides subscription to time of day pricing (higher rate for day; lower rate for night. Smart home control systems will control stationary and mobile storage and loads from home appliances like heat pump water & space heating and take advantage of day/night price differences to aim for lowest electrical bill.

EV VEHICLE TO HOME (V2H)

David GM makes a EV charger capable of V2H (bidirectional charger) that they say is compatible with GM EV's. Wouldn't the charger be compatible with any EV capable of V2H? Or is there a spec for compatibility between bi-directional chargers and EVs?

* Steve: GM, TESLA, FORD each have proprietary signaling between vehicle and the bi-directional charger on the wall.
Sue links [Tesla](Sue%20Dorward%3A%09https%3A/insideevs.com/news/742948/tesla-model-v2l-power-adapter/)
3rd party bi-directional chargers may eventually become available for GM EVs For example, Tesla 3rd party chargers are [becoming available](https://insideevs.com/news/742948/tesla-model-v2l-power-adapter/) (they have “broken the code” on the proprietary signaling). Tesla may? hold them in violation of the conditions of the Tesla Warranty.
* 1. Vertipower ($1499 with two 120volt outlets; 3.5 kw; stops the power when battery drops to 20% full)
 2. WeiDian ($350) in China?
 3. ”A2Z EV” ($130 with one outlet)

SOLAR

Betsy: For up-to-date listings of solar contractors and addresses of solar installations, see the NJBPU database of solar project activity reports: https://www.njcleanenergy.com/renewable-energy/project-activity-reports/project-activity-reports

Kathy: RECOMENDS: Reliable Solar and Roofing, Chris Deming, 973-750-8550, Chris@reliablesolarandroofing.com He uses solar himself at his home and business buildings. He is a very clear communicator, very knowledgeable and has a great network of subcontractors who specialize in solar, batteries, EV etc. They did amazing work!

GENERAL

Sue: How about Lucid?

Mark Michael - I think your comment about that there are drawbacks as well - was very important. Nothing is perfect! BUT - renewable energy, energy efficiency, electrification are all steps forward (not perfect but better, and getting better!).

Aaron @ Kathy: where are you and this great contractor? If near East Bay of CA, please post contact info, or send to me at: aaronreaven@hotmail.com

Mark: Another FYI - I’m an early adopter of Tesla and have free supercharging for life! Going to be interesting when I power my home temporarily off my Tesla.

* Sue: Reacted to "Another FYI - I’m an..." with 👍 Me too!
* Betsy: Reacted to "Another FYI - I’m an..." with 😯
* Mark: Reacted to "Me too!" with 👍

Jeffrey: Highly recommend the book, Climate Capitalism, that just came out.