

# Energy Hub Inverter and Backup Interface FAQs

**Q: What is Prism technology?**

**A:** It is the software that allows for an ever-growing range of products to be easily connected to the Energy Hub inverter. Spectrum of capabilities includes EV charging, battery storage, consumption monitoring/production metering, and smart energy devices, now and in the future.

**Q: Which batteries does Energy Hub support?**

**A:** Currently the LG Energy Solutions RESU10H and RESU16H work with Energy Hub; a SolarEdge battery is expected to be introduced in the near future.

**Q: What are the advantages of using Energy Hub inverter over other inverter models?**

**A:** With a record-setting 99% weighted CEC efficiency, Energy Hub combines the functionality of our existing home inverters in one: ready for battery, preconfigured for Smart EV Charger, and includes built-in consumption and production meters. It also comes with a built-in cellular modem. And it's future-ready: add-on possibilities will grow as SolarEdge releases more smart energy devices. It allows for 200% DC oversizing compared to 155% with the legacy HD- Wave inverters.

**Q: What is max backup panel amperage for Energy Hub inverter with Backup Interface?**

**A:** Up to 200A.

**Q: What EV Chargers does Energy Hub support?**

**A:** Energy Hub easily connects to the SolarEdge Smart EV Charger— the only home EV charger that can charge from up to 100% solar energy.

**Q: Does Energy Hub support multiple Smart EV Chargers?**

**A:** Not yet – more than one would work on separate breakers, but only one behind the inverter.

**Q: Does the Energy Hub Inverter have a charge controller that charges/discharges the batteries when the grid is up or down?**

**A:** Yes, there is a battery management system inside the battery, and an integrated energy management system in the Energy Hub.

**Q: What is the max power you can draw from the battery during an outage?**

**A:** You can backup 5kW per Energy Hub inverter with the LG Energy Solutions battery. You can then stack additional batteries, for 10kW or 15kW in backup with two or three inverters respectively.

**Q: Can the Energy Hub and Backup Interface provide backup without a battery (PV-only)?**

**A:** No. Although the system may operate, it is not supported and results will vary.

**Q: Do consumption CTs come separate or are they included with the Backup Interface?**

**A:** The CTs are built into the Backup Interface and can be used for whole home backup. For partial home backup, you can relocate to the mains and use external CTs, which are purchased separately.

**Q: In case of a power outage, how long before backup power kicks in?**

**A:** <3seconds.

**Q: Are zero-export markets supported?**

**A:** Absolutely.

**Q: Does the Energy Hub inverter come with a built-in EV Charger option, like the EV Charging inverter?**

**A:** No. Energy Hub is preconfigured to easily connect to the SolarEdge Smart EV Charger (a standalone unit) without the need for additional



components. Both offer Level 2 EV charging and both can charge from up to 100% solar energy.

**Q: Can the batteries be set to charge at the top of the bell curve?**

**A:** Yes, this is 'charge from clipped energy', and is a mode we support.

**Q: With a 200% DC/AC ratio, if the inverter is exporting max to the grid during clipping can it serve both the battery load and EV charger?**

**A:** Yes, for instance 7.6kW could flow to the grid from PV, and simultaneously 5kW can flow from PV to the battery.

**Q: Is the Energy Hub compatible with backup generators as well?**

**What kind?**

**A:** Yes, it supports generators up to ~ 22kW; this feature will be made available in a future firmware upgrade.<sup>2</sup>

Once the support is made available, we recommend using generators with an inverter output for a clean sine wave. We'll come up with a list of recommended generators soon.

<sup>2</sup> Expected availability Winter 2021

**Q: Is this compatible with Tesla Powerwall II?**

**A:** Powerwall II can be connected, but it is AC-coupled only, so you lose the advantages of DC-coupling such as higher system efficiency and increased energy production. You may also see clipped production with 200% DC oversizing.

**Q: Does Energy Hub inverter have any VPP (Virtual Power Plant) capabilities?**

**A:** Yes, it does. We are participating in multiple VPP programs through our global Grid Services team. We are working with utilities like National Grid, SMUD, and more.

**Q: Is an auto-transformer required for battery backup?** **A:** No. It's integrated into the Backup Interface.



**Q: Is the Smart EV Charger connected on the DC or AC side of the inverter?**

**A:** It is an AC Level-2 EV Charger.

**Q: Can LG Energy Solutions batteries and the new Smart EV Charger both connect to one Energy Hub inverter?**

**A:** Yes. Up to two LG Energy Solutions batteries and one Smart EV Charger can connect behind one Energy Hub inverter.

**Q: What smart devices can be controlled through the mySolarEdge app?**

**A:** PV, battery, Smart EV Charger and Smart Energy Hot Water for now. Other smart energy devices like smart switches and relays are coming soon.

**Q: Can the Backup Interface serve as a Service Entrance?**

**A:** Yes. The Backup Interface is suitable to be used as service equipment, and includes a 200A main breaker for that purpose.

**Q: Is there a way to still use backup loads panel?**

**A:** Yes. Just connect the Backup Interface to a sub-circuit, and use it to feed a backup panel for loads up to 200A.

**Q: Will the Backup Interface be backwards-compatible with existing StorEdge inverters?**

**A:** Yes. You can use the Backup Interface with existing StorEdge inverters to achieve whole home backup. However, you can only use one inverter in the same backup, whereas with Energy Hub inverter, you can stack up to three inverters.



**Q: Does the Energy Hub inverter have an RJ45 port to hardwire internet?**

**A:** Yes. There is an Ethernet connection if you prefer to hardwire.

**Q: Can the Smart EV Charger be installed on a non-solar site behind a dedicated 40A breaker?**

**A:** Yes. Our standalone Smart EV Charger can be installed without solar as well. However, when installed with solar the customer gets the added benefits of charging on up to 100% solar energy and the solar-boost mode feature.

**Q: Does the Energy Hub come equipped with a cellular card?** **A:** Yes, it includes a cellular modem, with continuous reporting capabilities.

**Q: If installing multiple Energy Hub inverters, is there an extra RS485 port for creating leader/follower connections?**

**A:** Yes. We added another RS485 port in the easily accessible interfaces board within the connection unit/DCD.

**Q: How many batteries can be connected to one Energy Hub inverter?**

**A:** Currently, each Energy Hub inverter can support two batteries. When the SolarEdge battery is launched, each inverter will support up to three SolarEdge batteries.<sup>1</sup>

<sup>1</sup> Pending firmware upgrade

**Q: Do the CTs for the consumption meter work through the Backup Interface or do they need to be run to each individual inverter?**

**A:** CTs come installed in the Backup Interface, no need to run the wires to the Energy Hub. If you aren't using the Backup Interface, you'll only need to install CTs to activate consumption metering.



**Q: Since Energy Hub comes with integrated production and consumption meters are CTs required?**

**A:** External CTs are required only for partial home backup. For whole home backup, you can use the CTs already installed inside the Backup Interface.

**Q: How far from the utility meter can the inverter be installed? A:** This is driven by code and AHJ (Authority Having Jurisdiction) – SolarEdge does not have a technical limit.

**Q: Is the inverter UL 1741SA certified? A:** Yes.

**Q: Will the Energy Hub inverter continue to function and enable grid outage microgrid islanding even if there is no Internet communication?**

**A:** Yes, it will go into backup mode without internet.

**Q: Will the Backup Interface allow PV, battery and generator to be used simultaneously, or just battery and generator?**

**A:** Yes. They can all be used at the same time.

**Q: Can Smart Energy Hot Water be used to capture energy that would otherwise be clipped?**

**A:** Yes. Excess solar energy can be redirected to Smart Energy Hot Water and limit export in the afternoon so you don't use that electricity when PV is not available.

**Q: Can more than one Backup Interface be installed, for example, on split 400A main panel with two separate 200A main breakers?**

**A:** Yes. One Backup Interface can be used for each 200A sub-panel.

**Q: Is the Backup Interface limited by the 120% rule?**

**A:** It depends on local codes, but generally yes - this is NEC. Importantly, our solution enables PV, EV and battery to be installed behind the same breaker, so the likelihood of a main breaker derate or a main panel upgrade is significantly lowered. The clever use of relocating all of the breakers into a backup panel, and interconnecting the BUI via a load side tap means the 120% rule doesn't apply.

**Q: Can I use this solution to provide home backup and/or self-consumption for a 120/208Vac service?**

**A:** Yes, in the near future.

**Q: Is the Backup Interface compatible with the legacy HD-Wave inverters?**

**A:** It is, but the legacy HD-Wave inverters will not work with batteries. For that, you need an Energy Hub inverter.

**Q: Does the Backup Interface have Canadian Certification?**

**A:** Yes. It is CSA 22.2 certified. Even our Smart EV Charger has Canadian certification.

**Q: What are the upgrade possibilities on the legacy HD-Wave inverters?**

**A:** Any HD-Wave inverter can be upgraded to EV charging: a solar-boost kit is available. Consumption Monitoring can also be enabled by installing CTs. You can also install smart energy devices like Smart Energy Hot Water, smart switches and relays. For battery, you need an Energy Hub.

**Q: Can I install the Energy Hub inverter now and add the Smart EV Charger and Batteries with Backup Interface later?**

**A:** Yes.

**Q: What are the communications options with Energy Hub inverter?**

**A:** Cellular (built-in), Ethernet or the wireless gateway. We can also interconnect inverters over RS485.

**Q: What is the surge capability per Energy Hub inverter?** **A:** In backup, with the LG Energy Solutions RESU10H, it is 7kW.

**Q: How does the inverter island itself from the grid? Does it have an extra piece of equipment like a transfer switch?**

**A:** The Backup Interface functions to separate the home from the grid.

**Q: Will the exterior disconnect button shut down backup loads for First Responders, i.e. shut down all power to all circuits in the house?**

**A:** Yes. It will turn off all power, AC and DC, PV and battery, to ensure maximum safety; However, with the new LG Prime battery series, it will turn off only the PV equipment.

**Q: What is the Energy Hub combined system efficiency (inverter and power optimizer)?**

**A:** It offers record-breaking efficiency of 98 - 99% as a PV system.

**Q: Can you explain the difference between the inverter efficiency (99%) and the overall efficiency (90.8%)?**

**A:** Energy Hub brings HD-Wave and battery backup together to deliver the highest efficiency battery energy storage in the market. 90.8% is the measure of an Energy Hub PV + battery system and includes round-trip efficiency of the battery, while 99% is the measure of inverter efficiency alone.

**Q: Can we use a bi-directional meter from auto-makers to support V2H (Vehicle to Home) charging?**

**A:** Not yet. We are waiting for auto manufacturers to support this and it looks like it is coming soon. This may just be a firmware upgrade—stay tuned for updates.



**Q: Where can my customers get more information about mySolarEdge?**

**A:** <https://www.solaredge.com/mysolaredge>. For more information, refer to our videos:

- [Overview and First Log-In](#)
- [Inverter Status](#)
- [Configuring the Inverter Communication](#)

