

# Join a winning team

Join Generac as a certified installer and register for PowerPlayCE to get access to a robust pipeline of in-home appointments with leads in your area.

**GENERAC®**

# Designing PWRcell Systems



## ADVERTISING AND LEAD GENERATION

Generac advertises directly to homeowners so that you don't have to. Take advantage of our marketing to grow your business with a pipeline of pre-booked in-home sales appointments.



## 24/7/365 SUPPORT

Get used to US-based support for PWRcell products, whenever you need it.



## NATIONAL BRAND

Sell what your customers are already looking for: leading home power solutions from Generac.



## ATTEND TRAINING

Get access to all of the benefits above when you attend a training and register for PowerPlayCE.

## QUICK START GUIDE



## DC coupled solar-plus-storage

PWRcell systems are DC coupled for greater efficiency, power throughput and design elegance. PV system designers can create powerful backup and cost saving systems using a single inverter when they design with PWRcell.

PWRcell gets its power from REbus, the Generac nanogrid platform. REbus transmits power, communications and control to connected PWRcell devices without extra hardware. REbus lets PWRcell make more power more efficiently.

Visit [Generac.com/CESTraining](https://www.generac.com/CESTraining) to learn more and register today

**CLEAN ENERGY SOLUTIONS**

# PWRcell system sizing

Size a PWRcell system for customer success based on their needs. Factors such as average power consumption and intended use should influence your design process.



## SIZING FOR COST SAVINGS

If your customer plans to cycle their battery every day to reduce energy costs, size the battery to supply all or the majority of energy consumption that would occur during a day's peak-rate (or high use) period. Generally, size the array to 100% offset the home's average daily power consumption.

**TIP:** The new owners of solar energy systems sometimes increase their energy consumption. Keep track of energy consumption before and after install by installing a Generac PWRview meter on site.



## SIZING FOR BACKUP POWER

If your customer's top priority is backup power, size to have capacity to supply half of their daily energy consumption at a minimum. You can always add more storage to an undersized system thanks to PWRcell's modular design.

\*PV Link is an 8A device. Typical conditions and wire-run lengths allow for up to 3x PV Link's (24A) on a 10ga conductor (30A).

\*\*NEC (702.4(B)) states that the sum of the loads connected to the protected loads output cannot exceed the continuous output capacity of the inverter.

\*\*\*PV Link voltage input range 60-420Voc. See manual for details.

# AC side design

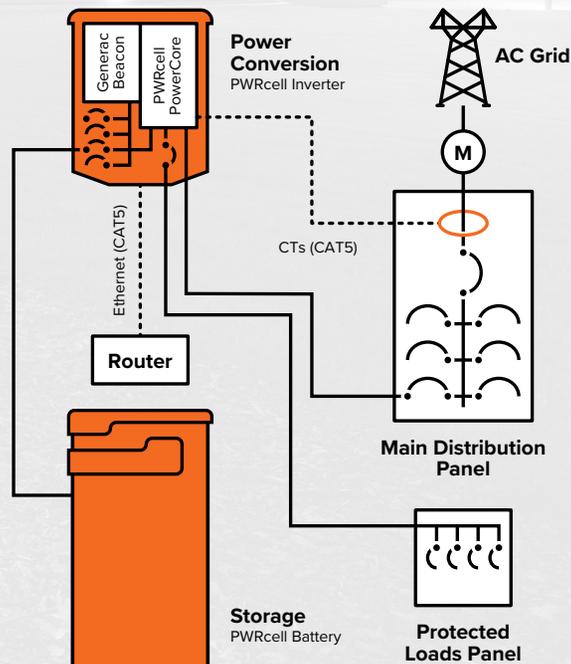
To backup or not to backup? Whether or not your customer needs a battery on day 1, it's a good idea to install the AC-side components that will be needed to ensure a smooth transition to solar plus storage.

## INSTALL A PROTECTED LOADS PANEL

If your customer wants backup power now or in the future, design a protected loads panel into their system. Circuits that connect in this panel will be powered by a PWRcell system that includes a battery, even when the grid goes down.\*\*

## INSTALL CTS

All PWRcell systems come with CTs. Installing them gives you access to powerful capabilities that your customers will want to have access to.



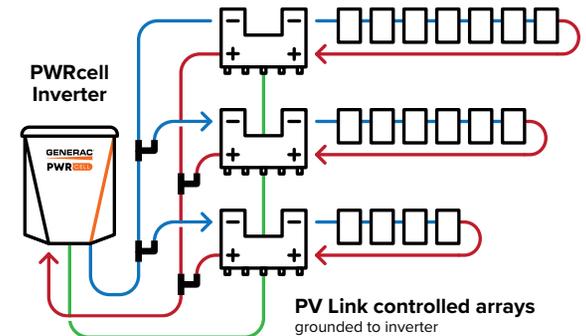
# Solar design basics

When you design solar with PWRcell, you will design around PV Link, the PWRcell substring optimizer. A PWRcell inverter can handle up to 6x PV Link optimizers for ~15kW of solar on two homeruns.\*

## SERIES IN, PARALLEL OUT

Connect ~8 PV modules in series\*\*\* on the input side of each PV Link. Parallel-connect up to 3x\* PV Links on a homerun with MC4 "Y" connectors.

Make sure that all modules on a sub-string are of the same type and oriented to the same tilt and azimuth.



## NEC 2017+ RAPID SHUTDOWN

Design with a SnapRS device connected to each module in the array to comply with module-level rapid shutdown requirements.

SnapRS will install to the negative (-) lead of each module and will work with Generac PV Link to ensure per-module isolation.