

## **Zero Waste Marin Piloting Solar Panel Reuse, Repair, and Recycling: Meet Some Businesses and Organizations Leading the Way**

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Marin County residents were early adopters of solar panels, and with that comes an early onset of decommissioned and unwanted solar panels. In response, Zero Waste Marin, in collaboration with the California Product Stewardship Council, began piloting collection of unwanted solar panels in 2024, which extended into 2025. This pilot was inspired by the rapid rise in calls from residents and businesses asking what to do with unwanted solar panels, which are not currently accepted at any of the regional E-waste collection sites. What was discovered shocked everyone.

Within the last decade, 2021 was noted as the median year of permit issuance in Marin County, with 6.4% of total building permits involving solar. This percentage is expected to rise as more installations as well as deinstallations for system upgrades continue. The County can expect to see an increase in the volume of solar panels within the next 10-15 years.

Of the 264 panels collected in 2025, over 11% are headed for reuse opportunities. The average age of the unwanted panels collected is only 12.8 years. It was obvious that reuse and repair businesses needed to manage panels that still had energy generation capacity.

Meet the solar panel reuse and repair leaders bringing success to the Zero Waste Marin Solar Panel Pilot. They set the standard for best practices prioritizing reuse over recycling.

### **Marin County Builders Association**

The Marin Builders Association hosted an inaugural Solar Panel Reuse Training and Certification, funded by the Department of Energy's American Made Challenge, CPSC, and Zero Waste Marin. The training event was well attended and included professional instructors, including FabTech Solar Solutions and Quattro Solar. The outcomes of the training event were certificates of completion for participants, and feedback for the pilot to expand into the next phase(s).

### **Quattro Solar**

At the inaugural solar panel reuse and repair training event, local installer, David Quattro, demonstrated proper panel maintenance, cleaning, and handling so panels can get used after de-installation. Quattro Solar works with secondhand panels, if clients want to safely install used panels. If the panels are not usable, he finds appropriate recycling options.

“Leaders in the solar industry are those who set the example. People commit to environmental stewardship by carrying hardware from cradle to cradle. This means adoption and expansion of photovoltaic recycling technologies on an exponential scale. It is critical that manufacturers participate in this sea change. Since profitability has classically been the sole driver of related decisions, realistically government regulation will be essential to enforce important standards for responsible behavior,” -

David Quattro



David Quattro and 16 students at the Marin Builders Association’s Inaugural Solar Panel Reuse Training, funded by the Department of Energy and hosted by CPSC and ZWM

### Recycle 1234

Eddie Inamdar owns Recycle 1234, a recycling e-waste business in Union City. Mr. Inamdar is a Department of Toxic Substances Control (DTSC) approved handler, allowing him to dismantle solar panels. At Recycle 1234, Eddie and his team accept working and nonworking solar panels from installers, contractors, homeowners, individuals, and companies. Solar panels can be tested for working capacity utilizing a multimeter.

“Recycle1234 offers solar panel reuse and recycling services. We can pick up panels at request, and follow our procedures to clean, test, and find responsible markets. Residents can also stop by our warehouses in El Cerrito or Hayward. For more information go to: <https://recycle1234.com/>”

### Reuse Alliance

CPSC and Zero Waste Marin partnered with Reuse Alliance, a Bay Area organization advocating reuse and recirculation practices. Reuse Alliance hosts repair fairs and supported the solar panel pilot with a case study for the used panels.

Funding from the Department of Energy RE-X Reuse Before Recycling Prize purchased a Portable Power Station with a built-in MPPT and a set of connectors (MC3 to MC4), creating a micro grid with battery storage and plug-in capabilities. These micro-grids will be utilized at the Reuse Alliance repair fairs for powering up repair equipment and testing repaired items.



“According to the [NREL](#), 60-70% of the embodied emissions in a solar panel comes from its manufacturer which is why it's so vital we refurbish and reuse them. Plus, reuse generally creates 30 times more jobs per ton than disposal, so it's good for the environment and for our economy!” – Phoebe Schenker

These are just a few of the local solar panel reuse and repair leaders. Based on solar panels' working capacity, panels may be sent to reuse, to secondhand markets including Habitat for Humanity, E-Bay, Rheaply, and more. Solar panel installation is projected to reach 47% of households by 2050 according to Enverus, with Marin County remaining a leading County in renewable energy. As we transition to a green, clean energy future, reuse and repair will be an essential aspect of solar energy's success.

Interested in engaging in solar panel reuse? Have unwanted solar panels? Request a collection pick-up: <https://www.surveymonkey.com/r/MarinSolarCollection>

Want to receive free used solar panels for your own case study? Request free panels: <https://www.surveymonkey.com/r/Freeusedpanels>