

Solar Panel Reuse and Recycling Progress Report

Solar panel installation is on the rise due to new regulations and the need to meet California's progressive climate and sustainability goals. Despite the growing number of panels installed and subsequently being removed, there are currently no options for residents of Marin County to properly dispose or recycle their old panels. Installers in Marin County find that the majority of deinstalled solar panels are removed to upgrade to new technology. This leads to an excess of still working panels, with no opportunities for reuse. A lack of options for disposal, recycling, and reuse leads residents to improperly dispose of panels, or solar contractors stockpiling these unwanted or old panels.

CPSC, on behalf of Zero Waste Marin, conducted outreach in Marin County to understand the level of interest and desire for a collection event and the baseline expected volume for solar panel collection and processing.

Progress Overview

- **Conducted phone interviews** with regional solar panel installers and reuse businesses resulting in a 20% response rate.
- Analyzed **building permits** from the County.
- Distributed an **online survey** with ongoing sharing.
- Drafted **educational materials** such as social media and website content.
- Developed a **solar panel collection application** for future collection events based on installer feedback.

54% of installers do not provide advice on end-of-life management.

67% of respondents have panels in storage waiting for recycling or have stored them at some point in time.

15% of installers resell working panels

- Solarcraft Services
- Semper Solaris Construction Inc.
- Pac Solar Corporation
- Better Earth Electric Inc.
- Northern Pacific Power Systems Inc.

Top Permitted Solar Installers in the County

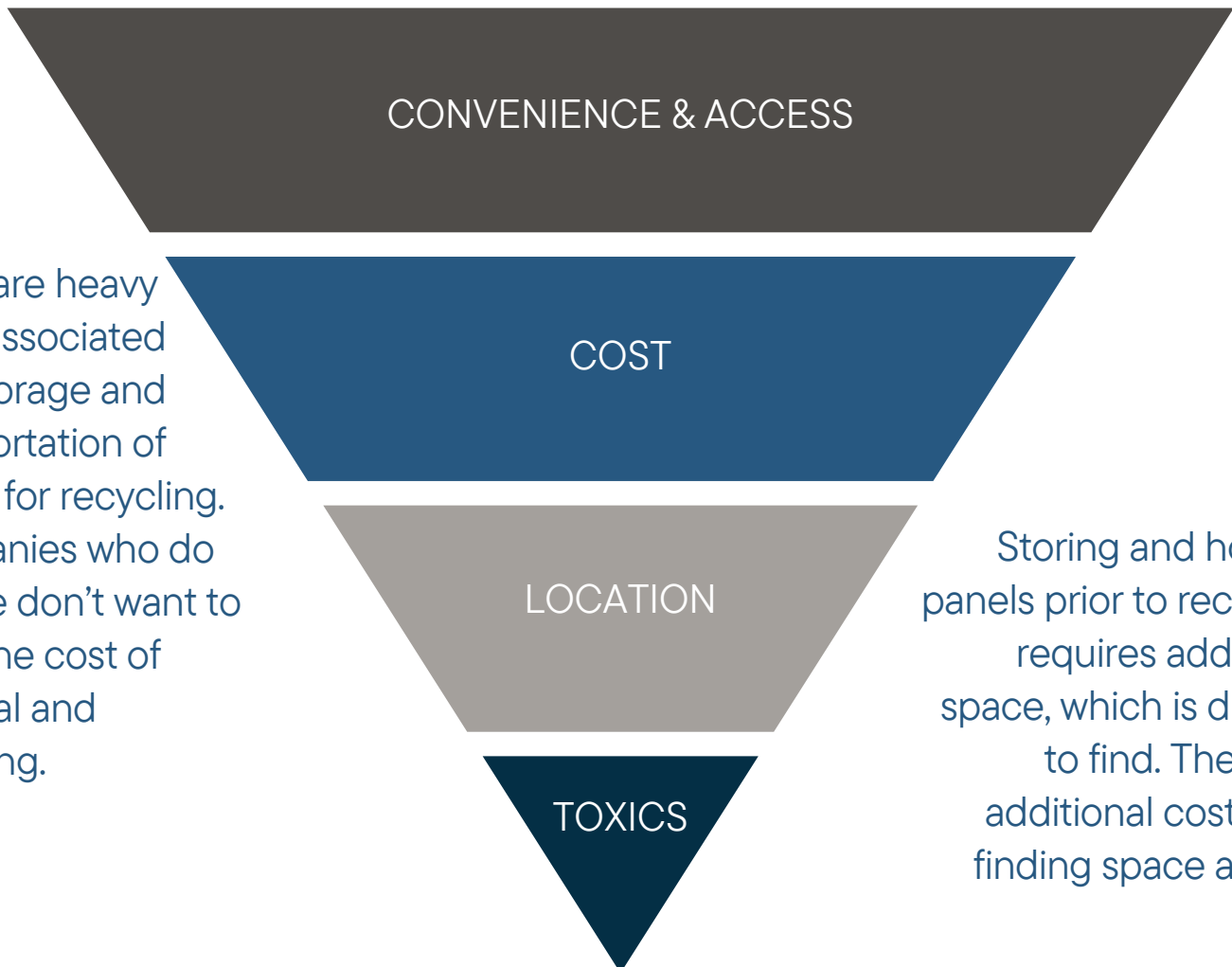


In the last decade, 2021 was the Average Year of permit issuance with 6.4% of total building permits involving solar.

Top Challenges with Solar Panel Recycling

CPSC Staff conducted interviews with installers across the county and inquired about the biggest challenges they face

Top Reported Issue: Finding a person or facility that will accept solar panels for reuse or recycling.



There are heavy costs associated with storage and transportation of panels for recycling. Companies who do recycle don't want to incur the cost of disposal and recycling.

Storing and holding panels prior to recycling requires additional space, which is difficult to find. There are additional costs with finding space as well.

Toxicity of the materials in panels is a concern for handlers and recyclers.

Examples of Solar Panel Reuse

How do you manage solar panels that are still viable or could be reused?

“Craigslist. Most people want them for off-grid purposes.”

“We are currently seeing many people who want to upgrade their panels to higher wattage panels.”

Listings for panels on online marketplaces:

- New High Performance Q Cells 420W - \$120 (Novato).
- Used 195W solar photovoltaic pv panels - \$30 (San Anselmo).



Expanding Reuse in Marin County



Reuse Alliance

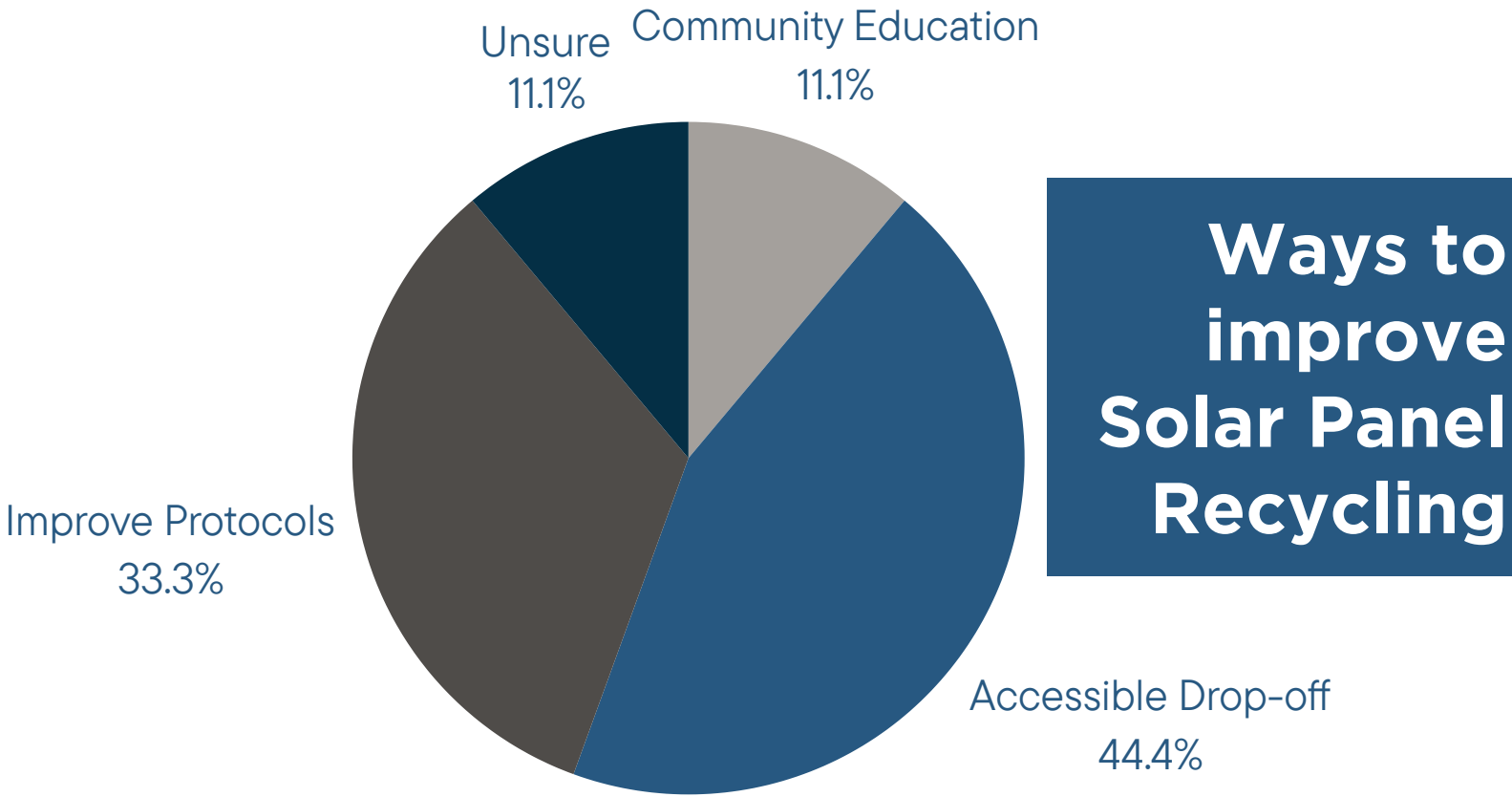
A collaboration with the Reuse Alliance for the future events will support ongoing reuse.



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CPSC Staff conducted interviews with installers across the county and asked how they think solar panel recycling can be improved in the county.



Event(s)

- 85% of interviewed installers would participate in a solar panel collection event.
- 70% of installers were willing to pay a fee for commercial panels.
- At least 7 businesses were interested in participating in a solar panel reuse event or collaboration.

Pick-Up Collection

Solar Panel Pickup Collection Event Request - www.surveymonkey.com/r/MarinSolarCollection

Pick up requests make it easy for homeowners and businesses to dispose of their panels and for the county to understand the need of their residents.

Drop-Off Collection

Location: TBD

Date: Late Fall

Goals: Drop-off in connection with reuse partners. Potentially find an ongoing reuse collection site.

Ongoing Reuse Collaborations

A reuse hub, listing organizations, including solar installers, thrifts, and nonprofits who are willing to accept reused solar panels will create easy access for residents and installers to repurpose their solar panels.



[Website Updates for CPSC and ZWM](#)

Social Media Campaign



Press Release

Ongoing calls and meetings



Outreach

Next Steps

- Secure reuse partners and collaborations for a solar reuse event.
- Hold a webinar or an in-person meeting(s) with installers and other stakeholders.
- Contact local parks for potential reuse.
- Contact other grant winners for collaboration.
- Create a solar reuse hub website.
- Start Phase 2 including events and deploying education strategy.

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