

# Solving the Wood Waste problem in the Solar industry.

WHITEPAPER



## The Problem

While solar panels are undoubtedly a green alternative to traditional methods of energy generation, solar panel supply chains can be detrimental to our environment and incur large spend to the bottom line.

It is estimated that 500,000-550,000 residential solar panels are installed in the United States every year. The Solar Energy Industries Association (SEIA) also estimates that over 100 new solar farms are launched in the United States every month. For the sake of this whitepaper, we will only be focusing on the solar farm sector of the solar panels market.

As is the case with many other materials and products, the majority of these solar panels are shipped on wooden pallets. The wooden pallets used to ship solar panels in the United States equate to roughly 157 million pounds of potential wood waste.

Currently, a large quantity of the pallets and other wood-waste generated as a result of these solar farm installations is either left to decompose and release carbon into the atmosphere or is disposed of improperly - commonly burned or sent to a landfill. In addition to the environmental impacts, the annual pallet usage equates to approximately \$23.6 million in asset value.

**Wood waste based on the following assumptions:** 23.6 GW of solar installed in 2021 in the United States (SEIA), 400 W-500 W average wattage per solar module (Clean Energy Reviews), 30 modules per pallet (Sinovoltaics Group), 80 lb average weight per 48" x 90" pallet (Kamps).

**Asset value based on the following assumptions:** 1,962,500 million pallets used (see above), average cost per pallet (last 5 years) (Kamps).

**X Millions in Lost Asset Value**  
Pallet spend for the solar farm industry equates to approximately \$23,550,000.

**X Negative Environmental Impacts**  
if not recovered and properly disposed of, the wood waste generated from abandoned pallets can be detrimental to the environment.

**X Non-Existent Circular Model**  
Industry does not have a circular model that continuously harvests and re-inserts pallets back into supply chains.



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# The Solution

The biggest factors propagating the wood waste problem in the Solar industry is the lack of consistent demand for pallets used to transport solar panels, the lack of reusable-friendly design, and the scale of organizations willing to solve these challenges.

The solution for the wood waste problem in the Solar industry is the creation of a national, flexible, closed loop recycling network and a newly designed standard industry pallet. The system must have the necessary resources to recover, repair, and redistribute the pallets and packaging across the nation; while being flexible enough to divert unutilized materials to other industries and sectors.



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## The Kamps Advantage

Due to our resources and expertise, Kamps is uniquely positioned to provide the only national closed loop recycling program for the solar industry.

- 400+ Locations in National Network
- Leading Experts in New Pallet Design, Pallet Recycling, and Remanufactured Pallets
- 390 Million Pallets Recycled in 2022

## Results

The Kamps Solar Panel Closed Loop program has the potential to return the following results for the industry.

**23M**



**DOLLARS**  
in pallet asset value  
recovered

**157M**



**POUNDS**  
of wood waste diverted  
from landfills