

This was public comment given to the CalRecycle SB 54: Plastic Pollution Prevention and Packaging Producers Responsibility Act: <https://calrecycle.ca.gov/packaging/packaging-epr/>

We shaped Circular Solar & Waste-to-SolarEnergy designs around seeing how they could be utilized to help provide recycled feedstock to new products and green infrastructure materials. Natural resources, glass, silica for ex., could be waste from breakage in packaging materials life cycle. Plus, households, people could perhaps sort and return for this infrastructure. Especially, if they know it goes towards lowering their electric EV charging or recycling water/drought materials into landscaping glass mulch – that is cooler around the house vs say dark wood mulch.

Questions for the comment's submission request:

Could SB54 also work alongside with SB1013 Bottle Bill to help retrieve, recycle and reuse some glass and plastic breakage, waste as new economic, climate and new critical material supply-chain and the host of some new innovative products, and for additional solar energy yields and other energy infrastructure?

Recycling breakage and waste:

Could it start with, adding a smaller glass breakage bins or reusing packaging boxes (in support of near-term SB1013) where SB54 criteria could reuse corrugated, plastic boxes and packaging and also single-use plastic bags for storing and transporting glass breakage and separately plastic breakage waste?

Where and as what new products:

- Could some grocery, restaurants, bars, wineries, resorts and future sustainable housing neighborhoods add a small breakage bin or box for dumping the glass breakage that accumulates at the bottom of the whole bottle recycling bin?
- What about if households participate with their clean glass and plastic breakage?
- Glass producers or packaging producers who use glass containers sort and use their post-industrial manufacturing breakage for the suggested critical infrastructure and Critical Materials, minerals and potential future metal supply-chain (see DOE link below)?
 - A) Critical supply chain of breakage for potential xeriscaping, flooding (small mesh mulch/gravel to sand spec in bags), defensible space and vegetation management, cooler mulch or gravel.
 - B) Mulch, or gravel or aggregates for thermal management of grid, solar and EV chargers and pavement, or as solar charging infrastructure; for some utility and rooftop solar. Potentially also to assist in Agrivoltaics as vegetation, thermal, water and healthier soil solutions. Well suited during some peak charging times and during heatwaves or cloudy, rainy, snowy days.

- C) Could SB54 be planned to work with SB1013 Bottle Bill participation such as breakage returns in separate packaging to specific drop-off zones at resorts, wineries, farmer's markets and entertainment venues along with recycling, waste management locations.
- D) If 100% breakage reuse and recycling rates are unattainable and/or unsafe, could this be offset by transporting SB54 landfill waste using hybrid or zero emissions transportation, fleets or some passenger vehicles? Such as, commercial fleets with no returning load/back-haul have last minute pickup and transportation to breakage recycling depots.
- E) How could waterway and street clean-up efforts with environmental justice non-profits, new work programs for underserved communities, businesses or government agencies offset to achieve 100% recycling rates?

DOE Critical Materials updates, including silicon moving to a more critical position, silica and some other minerals or metals may be found in glass breakage waste:

<https://www.energy.gov/eere/articles/us-department-energy-releases-2023-critical-materials-assessment-evaluate-supply>

Thank you,

The Petker Family

Innovations and inventions which may support SB54 and SB1013 as well are:

Waste-to-SolarEnergy and Circular Solar DAC, created and made possible by: George, Cherise & Jessika Petker family, supporters and past glass packaging and mining clients.