



Planet Pulse

**A rhythmic check-in on
climate issues**



Floating hybrids

- Last month, New York put into service its first hybrid-electric ferry.
- The Harbor Charger is one of only a such ferries operating in the U.S.
- The new ferry is expected to reduce CO2 emissions by 600 tons per year.
- Given it shuttles people to Governor's Island - an evolving hub for climate change research - the transition is symbolically important.
- The previous ferry consumed 420 gallon of diesel daily.
- The Harbor Charger is expected to save the city more than \$200,000/year which will be sorely needed to cover its \$33 million price tag.
- Nationwide, there are over 600 ferries that continue to rely on old, inefficient diesel engines, making them some of the highest emitters among commercial harbor craft.



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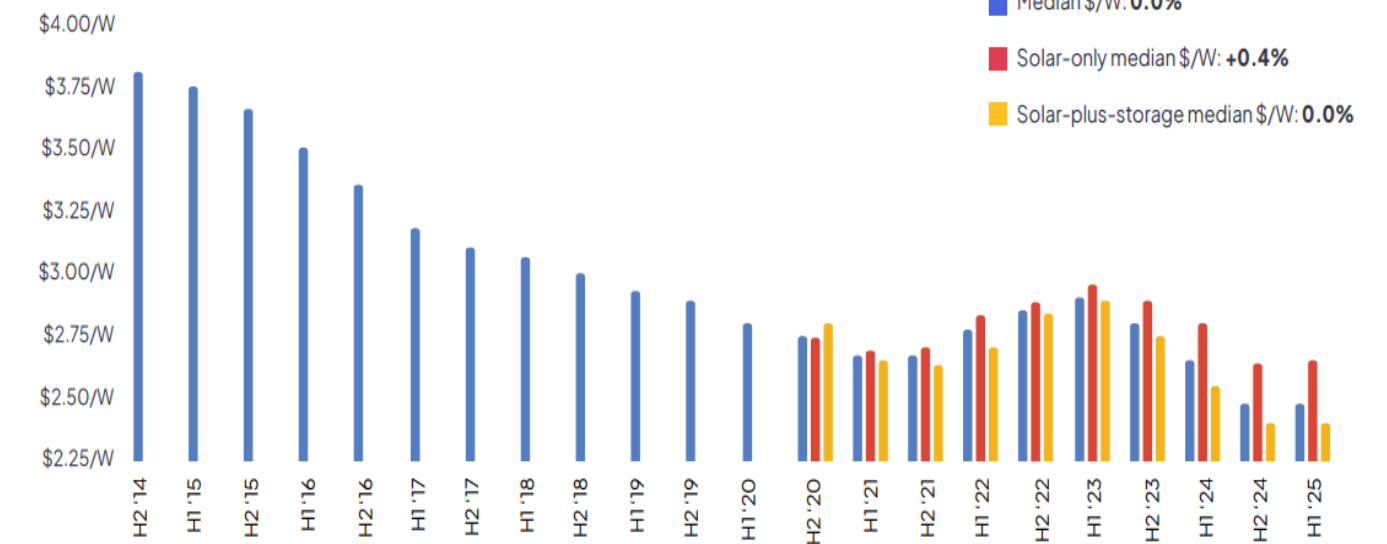




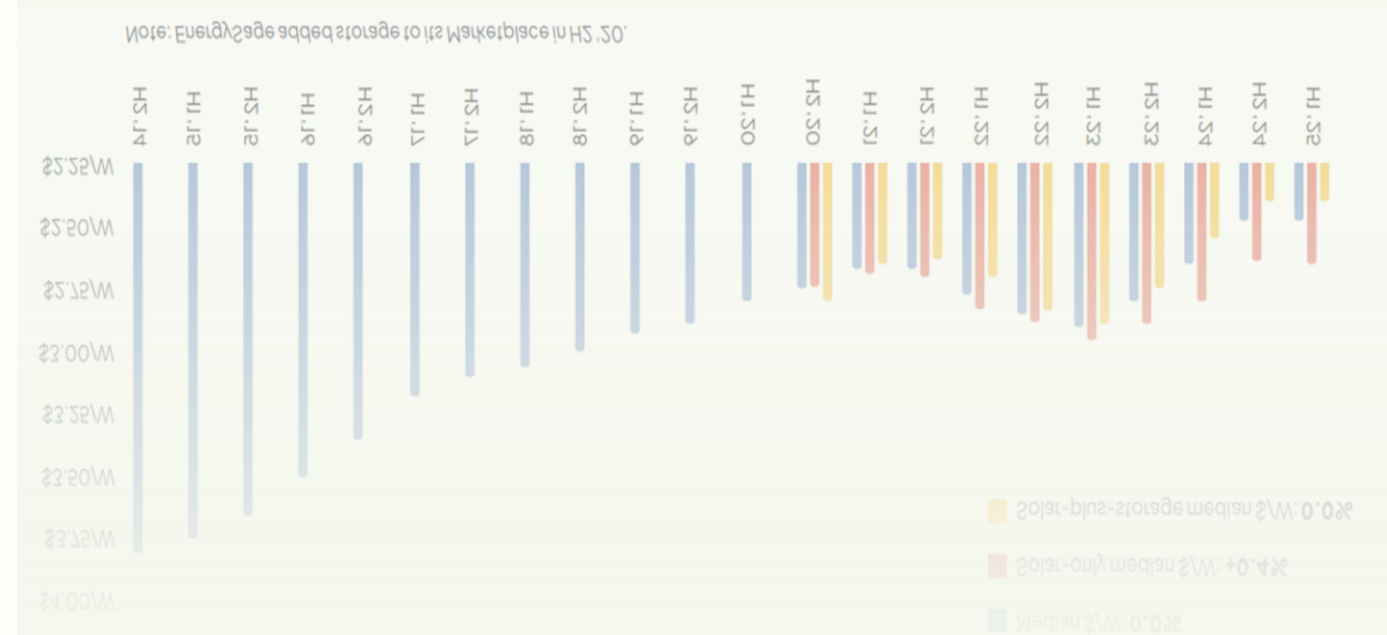
Some good solar news

- According to EnergySage, the average cost for residential solar hit a record low of \$29,000.
- In the first half of this year, median quoted prices tied the 2024 second half record low cost per watt of \$2.48.
- Given 92% of contractors surveyed by EnergySage said that the elimination of the 30% tax credit will hurt their business, prices can't come down fast enough.
- The industry's goal is to get prices down to \$2/watt.

GROSS PRICE PER WATT, BY HALF YEAR



Note: EnergySage added storage to its Marketplace in H2 '20.



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Faster, cheaper, cleaner? Hopefully



Spun out of the University of California Berkley, startup ChemFinity recently raised \$7 million. The company claims its mineral recovery systems is 10x faster, 3x cheaper, and 99% cleaner than existing methods. Given the need, and environmental impact from metal mining, let's hope the company can prove its claims in the market.



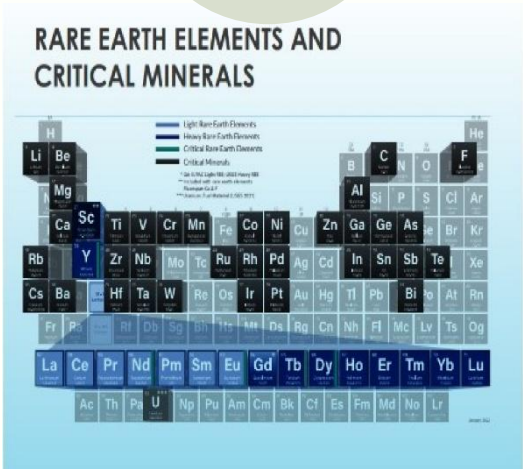
80% of the U.S. critical mineral supply comes from foreign sources



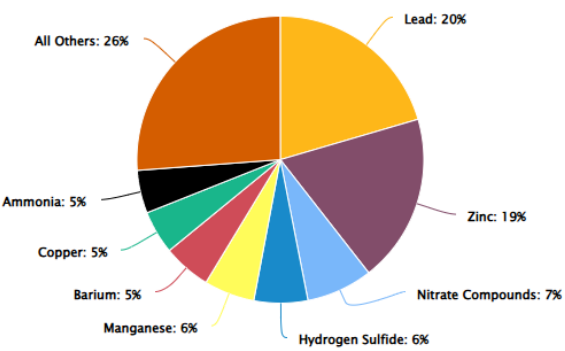
15% of global energy consumption is used on industrial separations.



44% of all U.S. toxic chemical release, and 7% of global GHG emissions come from the metal mining industry.



Total Disposal or Other Releases by Chemical, 2023
3.3 billion pounds



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A concept drawing of green space in Copenhagen that can retain and filter stormwater.
Image: City of Copenhagen



Sponge cities?

- **Urban planners have a new goal: design municipalities to soak up water.**
- **After a catastrophic 2011 flood that caused \$1.8 billion in damage, Copenhagen started reshaping its urban planning strategy.**
- **It built wetlands, parks, and underground pipes and basins to collect and redirect rainwater.**
- **The effort is on-going, but has already proven effective.**
- **Auckland, Nairobi, Singapore, New York, Rotterdam, and Berlin are all integrating the “sponge city” model.**

Unbiased and Unfiltered

An honest assessment of the cleantech industry and the effort to stem climate change.

