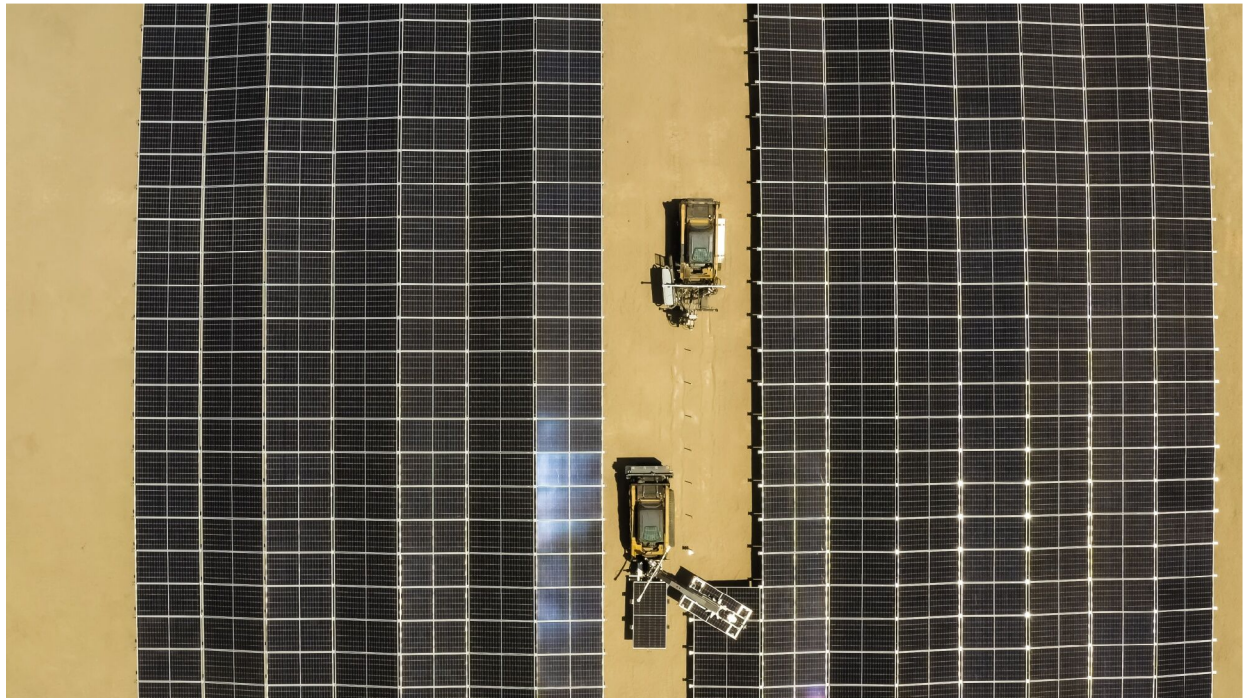


Green | Cleaner Tech

Robots and Specialized Software Open New Solar Farm Development Opportunities

Startup Planted Solar is working to speed up the timeline for developing and deploying power plants that harness the sun.



Planted Solar field assembly robots at work. *Planted Solar*

By [Rafaela Jinich](#)

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A solar farm development startup just received a boost, lining up \$20 million in Series A funding from Bill Gates' Breakthrough Energy Ventures and Khosla Ventures. The company promises to cut down on land and labor needed, allowing solar to be built in previously inaccessible locations.

California-based Planted Solar designs arrays to harness the sun that fall like a blanket on terrain typically too challenging to develop. It does this with unique modeling software and robots that help with the construction process.

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Once a power plant's digital design is ready, robots receive construction protocols and get to work in the field building it. Using robotic assembly reduces the time and cost of deploying solar power plants, according to Planted.



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The company also promises to use land more efficiently and minimize environmental damage. Its systems typically require about two acres of land to produce a megawatt of power, compared to the conventional solar plant that needs around five acres, according to Planted Solar Chief Executive Officer Eric Brown. (One megawatt of solar can provide power for approximately 170 homes.) Minimizing space, material and construction time, Planted says it can cut system costs by 50%, delivering carbon-free energy cheaper and faster.

That matters since land requirements for renewable energy could be a limiting factor to installing utility-scale solar. The US Bureau of Land Management projects the country will need 22 million acres for solar panels.

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“The immediate shift for us is moving from pilots to portfolios with customers requiring the ability to execute multiple projects simultaneously,”

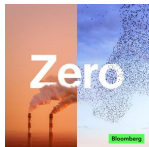
said Brown, who also noted the funding would allow Planted to expand in the US and eventually other markets.

As part of that shift, the startup announced 11 megawatts of solar projects in 2024 with Cultivate Power, a solar and storage development company.

Planted's specialized approach is what attracted the interest of Breakthrough Energy Ventures, according to partner Christina Karapataki.

How useful Planted's ability to site farms on steep slopes remains to be seen, though. Solar farms are typically built on flat land with low agricultural value, so erosion and preserving vegetation is not necessarily something on the forefront of people's minds, says Lara Hayim, the head of solar research at BloombergNEF.

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