Turning a solar power system into its own backup

Rather than directly converting photons into electricity, concentrated solar energy uses mirrors to turn sunlight into heat, which can then be used to drive traditional generating turbines. Up to about a decade ago, there was a case to be made that concentrated solar energy had a bright future, as improvements in heat storage had turned it into a way to generate power around the clock.

It wasn’t to be. While concentrated solar costs fell enough to compete with nuclear power, the price of photovoltaics plunged, making solar panels the cheapest source of power in most locations. Currently, if you have a good site to generate solar power, then the economics of PV panels are hard to beat.

That has left us needing to build a mixture of other facilities—typically batteries and natural gas facilities—to handle overnight needs or weather-driven shortfalls. But a small company is promising that it can help avoid the need to build a separate facility. Its version of concentrated solar is designed so that a fossil-fueled backup system shares most of the generating hardware with the solar side.

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