

America's solar market enters a new phase

US solar continues to expand at remarkable speed, but the market around it is changing. Record deployment, rising electricity demand and rapid battery development are meeting a tougher federal policy environment, trade disputes, supply chain questions and an electricity grid struggling to connect everything developers want to build.


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US solar in 2026 is a market full of contradictions. By many measures, the industry has never been stronger. Developers continue to build large amounts of new capacity, solar generation is rising rapidly and batteries are changing what solar can contribute to the grid. But doing business has also become more complicated.

Federal incentives have changed. Trade measures are reshaping equipment sourcing. Developers face lengthy waits for grid connections and the country is trying to build a stronger domestic manufacturing base while continuing to deliver projects at considerable speed.

Solar is not retreating, but the market around it is changing fast.

Record growth continues

The numbers are hard to ignore. At the beginning of 2026, the US Energy Information Administration (EIA) reported that developers planned to add 43.4 GW of utility-scale solar during the year. If all of that capacity is realised, it would represent a 60% increase on the 27.2 GW added in 2025 and account for 51% of all planned new US utility-scale generating capacity in 2026.[1]

Solar generation is rising too. In its September Short-Term Energy Outlook, the EIA forecast growth in US solar generation of 21% in 2026 and a further 18% in 2027.[2]

The timing matters because America needs more electricity. After years in which US electricity consumption remained relatively flat, demand is growing again, with data centre development and increased manufacturing activity among the factors behind that change.[2]

Solar has an obvious opportunity here. It can be deployed comparatively quickly and, increasingly, it is being developed alongside battery storage. But putting more generating capacity in the ground is only part of the challenge.

Texas changes the map

California was once the obvious place to start any conversation about US solar. It is still hugely important, but it no longer tells the whole story.

Of the utility-scale solar capacity developers expected to add during 2026, 40% was planned for Texas. Arizona and California each accounted for 6%, with Michigan at 5%.[1]

Texas shows just how quickly solar can change an electricity market.

The EIA has forecast that annual utility-scale solar generation in the Electric Reliability Council of Texas (ERCOT) market will exceed coal generation for the first time in 2026. Solar generation is expected to reach 78 billion kWh, compared with 60 billion kWh from coal.[3]

Go back only a few years and the change is striking. Solar supplied just 4% of ERCOT generation in 2021. By 2025, that share had reached 12%. Over the same period, coal's share fell from 19% to 13%.[3]

California offers another glimpse of what is happening. During the first five months of 2026, utility-scale solar generated more electricity than natural gas on 82% of days in the California Independent System Operator (CAISO) market.[4]

These are important milestones, but they also bring a familiar solar challenge into sharper focus. Generating large quantities of electricity during daylight hours is one thing. Having that electricity available when people need it is another. This is where batteries are becoming increasingly important.

Solar and storage become partners

Utility-scale battery storage capacity in the US reached nearly 52 GW by the end of June 2026, according to the EIA. Operators added 8.3 GW during the first six months of the year alone, following average annual capacity growth of 70% over the previous three years.[5]

At the beginning of 2026, developers were planning 24 GW of new utility-scale battery capacity during the year. Around 80% of those planned additions were concentrated in Texas, California and Arizona.[1]

The connection with solar is easy to see. Storage can move electricity from periods of high solar production into later hours, reduce the need to curtail generation when supply exceeds immediate demand and provide services that help grid operators keep the system balanced.

It means the conversation around solar is changing. Simply asking how much photovoltaic capacity America can install is no longer enough. The more useful question is how solar works alongside storage, transmission and other forms of generation. As electricity demand grows, that becomes increasingly important.

The policy landscape has shifted

If the deployment figures tell one story about US solar, federal policy tells another.

The Inflation Reduction Act of 2022 introduced long-term incentives for renewable energy development and domestic clean energy manufacturing. Public Law 119-21, enacted in July 2025, subsequently accelerated the termination of several of those incentives and changed the timetable facing solar developers.[6,7]

For homeowners, one effect is already clear. The Residential Clean Energy Credit, which provided a credit equal to 30% of qualifying residential clean energy expenditure, is no longer available for expenditure made after 31st December 2025. Under IRS rules, expenditure on solar equipment is generally treated as made when its original installation is completed.[6]

Utility-scale developers face a different deadline. Changes to the Section 45Y clean electricity production credit and Section 48E clean electricity investment credit terminate those credits for applicable solar facilities placed in service after 31st December 2027 where construction begins after 4th July 2026.[7]

The supply chain rules have become more complicated as well. In February 2026, the US Treasury and Internal Revenue Service issued guidance covering new restrictions involving material assistance from a prohibited foreign entity. The provisions can affect eligibility for Sections 45Y and 48E and the Section 45X advanced manufacturing production credit.[8]

For companies making investment decisions now, none of this is an abstract political debate in Washington. Timetables, tax eligibility and sourcing rules can affect when a project moves forward, where its equipment comes from and how it is financed.

Made in America, but how American?

Meanwhile, the US has been rebuilding its solar manufacturing industry. According to the Solar Energy Industries Association and Wood Mackenzie, US module manufacturing capacity reached 65.5 GW by the end of 2025, up from 42.5 GW a year earlier. Domestic cell manufacturing also expanded and US wafer manufacturing returned for the first time since 2016.[9] That is a significant change in a short period.

But assembling modules is only one part of a photovoltaic supply chain. Cells, wafers, ingots, polysilicon and numerous other materials and components all have to come from somewhere. SEIA and Wood Mackenzie also report that actual output from US manufacturing facilities remains considerably below domestic demand.[9] And this is where things become more complicated.

The US wants a stronger domestic manufacturing base. Developers, meanwhile, need enough equipment, at commercially viable prices, to deliver a very large pipeline of projects. Trade policy sits squarely between those two objectives.

On 11th September 2026, the US Department of Commerce announced final affirmative determinations in antidumping and countervailing duty investigations covering crystalline silicon photovoltaic cells, whether or not assembled into modules, from India, Indonesia and Laos.[10]

The dumping margins announced by Commerce were substantial, although they varied by country and producer.[10]

Trade remedies are intended to address imports that US authorities determine have been unfairly priced or subsidised. From a developer's or equipment buyer's perspective, however, additional duties and changes to the countries affected by trade action also become part of decisions about sourcing, costs and procurement risk.

There is no simple answer to that tension. Building a stronger domestic supply chain and maintaining rapid solar deployment are not necessarily incompatible. But nor can the industry assume that achieving one will automatically make the other easier.

The grid problem cannot be ignored

Then there is the grid. At the end of 2025, around 8,200 projects representing 1,312 GW of generation and approximately 749 GW of storage were actively seeking interconnection to the US transmission grid, according to Lawrence Berkeley National Laboratory. Solar alone represented 773 GW of generation capacity in the queues.[11]

That does not mean 773 GW of solar is waiting to be switched on. Far from it. Historically, most proposed capacity entering US interconnection queues has never reached commercial operation. Of the capacity that submitted interconnection requests between 2000 and 2020, only 13% had reached commercial operation by the end of 2025.[11]

Even so, the figures give some idea of both the appetite to build and the pressure on the system.

For projects that do make it through, the wait is getting longer. In regions where sufficient data were available, the median period between an interconnection request and commercial operation exceeded five years for projects completed in 2025.[11]

There are some encouraging signs. Total active queue volume fell by around 10% during 2025 and the volume of interconnection agreements being processed increased in several regions. Reforms including FERC Order 2023 are also being implemented, although Berkeley Lab says it is still too early to judge their full impact.[11]

The problem itself is easy to understand. A solar project can have its land, equipment and finance in place, but none of that puts electricity onto the grid if the project cannot connect.

For the next stage of US solar, transmission and interconnection could prove every bit as important as module efficiency or manufacturing capacity.

What comes next?

So where does that leave US solar? It is growing rapidly, but under a tougher federal policy regime. America is rebuilding domestic manufacturing while remaining connected to an international supply chain. Developers want to install large amounts of new capacity, while hundreds of gigawatts of proposed solar remain in interconnection queues. Batteries are being added at extraordinary speed because electricity produced at midday has a very different value from electricity that is still available after sunset.





Perhaps the biggest change is that solar no longer has to prove it can become a meaningful part of the American electricity system. In some of the country's largest power markets, it already has.

The harder question now is whether the wider energy system can keep up. Electricity demand is growing. Developers continue to pursue solar and storage projects and the EIA expects solar generation to increase strongly through 2027.[2] But adding more panels will not, by itself, answer every challenge.

Projects need to reach the grid. Storage and transmission need to keep pace. Domestic manufacturing has to find a commercially sustainable footing. And developers have to make investment and procurement decisions against a federal policy and trade backdrop that has changed markedly in a short period.

America has already shown how quickly it can build solar. What happens next may depend just as much on everything surrounding it.

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