U.S. Solar 2025: The New Reality for Solar Manufacturing

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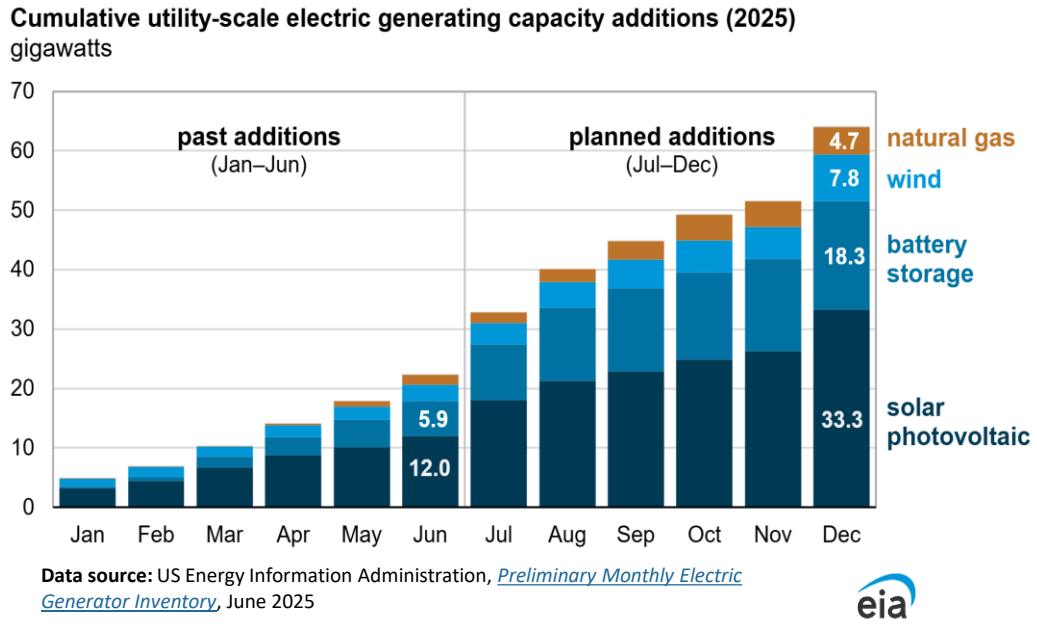
U.S. Solar Deployment

- Since 2000, the U.S. installed 247 GWdc of solar capacity—enough to power 41 million homes
- The U.S. is expected to add up to 33 GWac of utility-scale solar in 2025.
- If expected solar deployment plans are realized, over half of total grid additions in 2025 will be solar systems.
- Battery storage made up over one-quarter of new grid additions in the first half of 2025 (5.9 GW).



Data source: US Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*, June 2025

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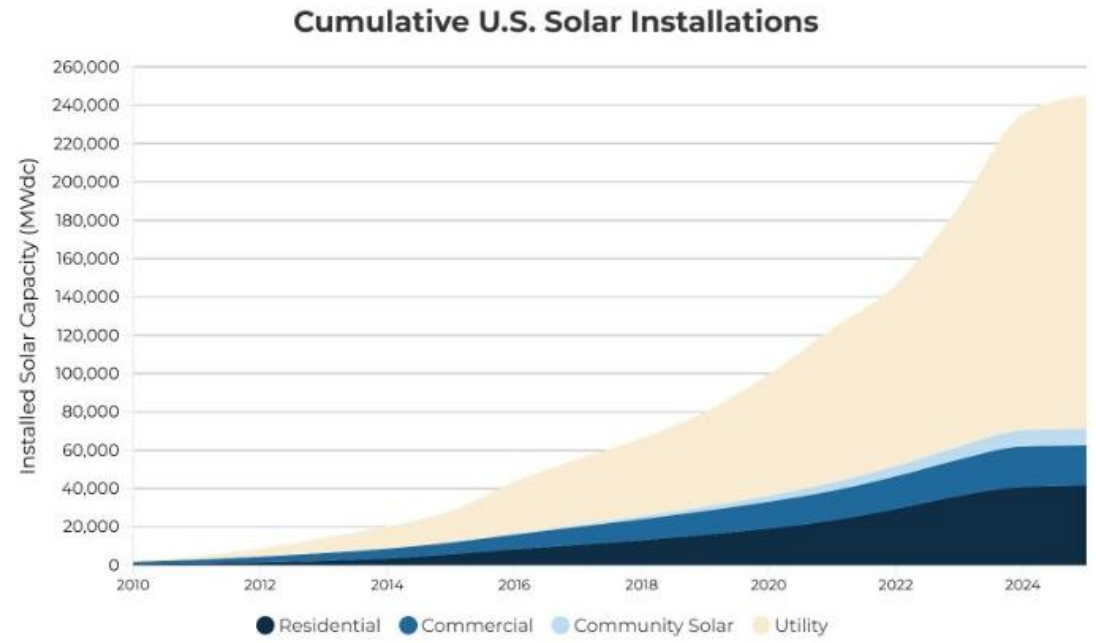
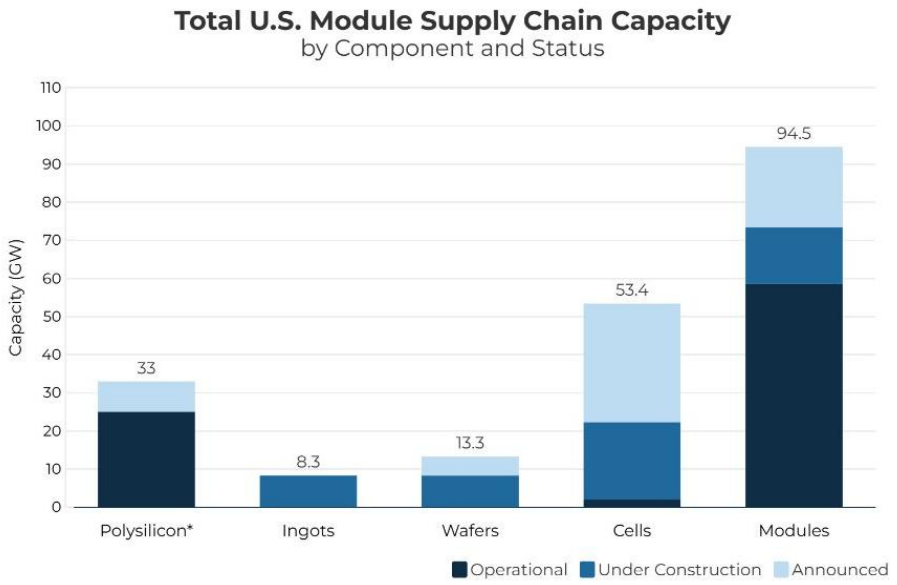


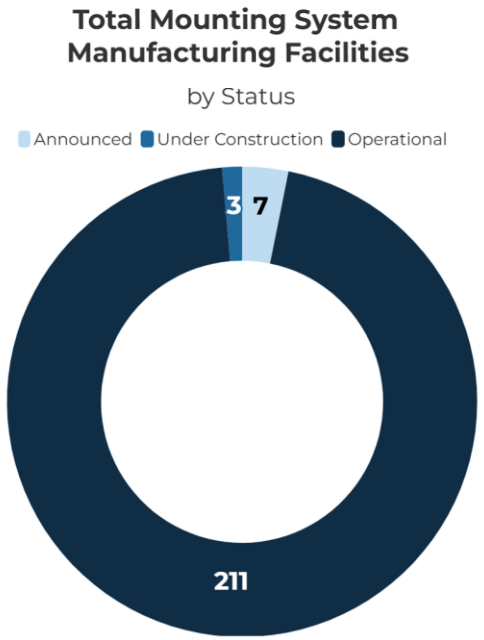
Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2025 Q2 Report

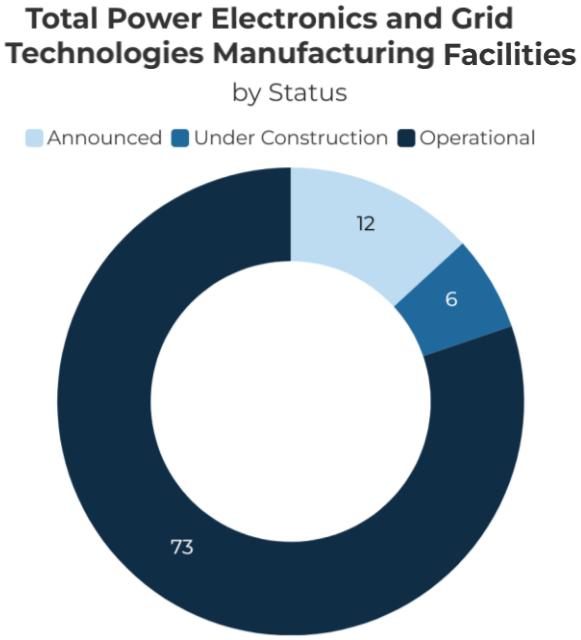
Wood Mackenzie SEIA

U.S. Solar Supply Chain

- Year-to-date the U.S. added 8.7 GW of solar module capacity, surpassing 58 GW of total production.
- In 2024 and 2025, the U.S. added 2 GW of solar cell manufacturing capacity. If all planned factories come online as expected in 2025, total capacity could reach 12.5 GW.
- There is an estimated polysilicon production capacity of about 25 GW– an additional 8 GW of capacity is announced.
- Since the passage of the federal manufacturing tax credits, mounting infrastructure production sites have increased by 50%.



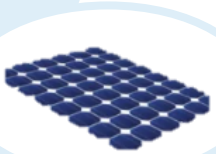


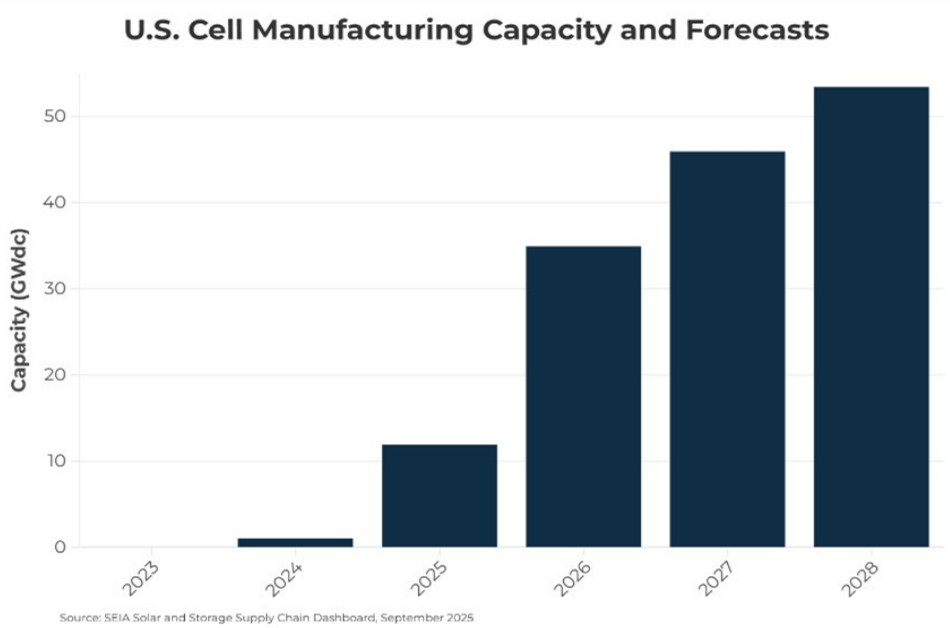


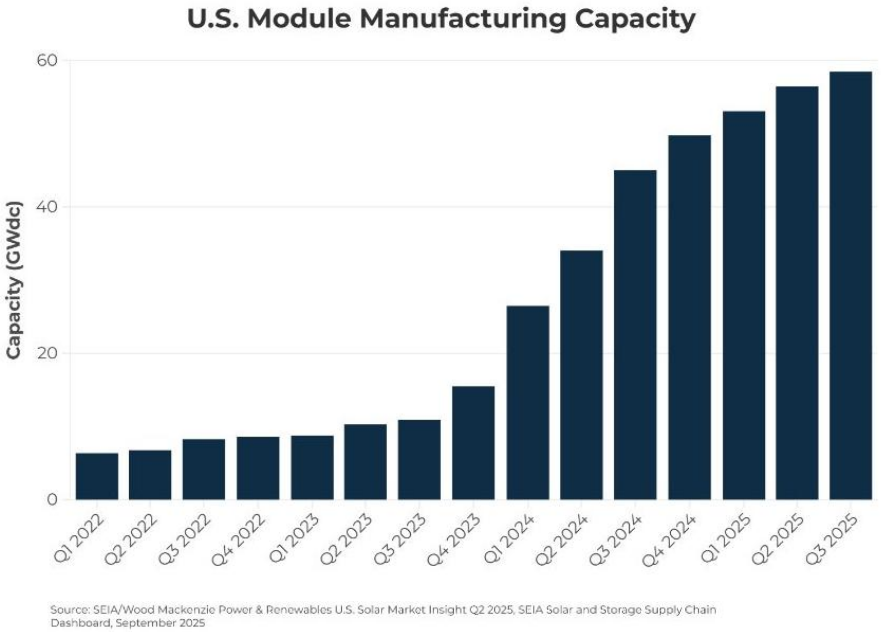
Source: SEIA Solar and Storage Supply Chain Dashboard, September 2025
*Polysilicon values have been converted to GW using NREL's assumption of 2.0 g/W

Growth of U.S. Solar Module and Cell Manufacturing

- Module manufacturing capacity has grown significantly since 2022 –now surpassing 58 GW.
- The U.S. has a current cell manufacturing capacity of 2 GW– this is expected to reach over 55 GW by 2028.

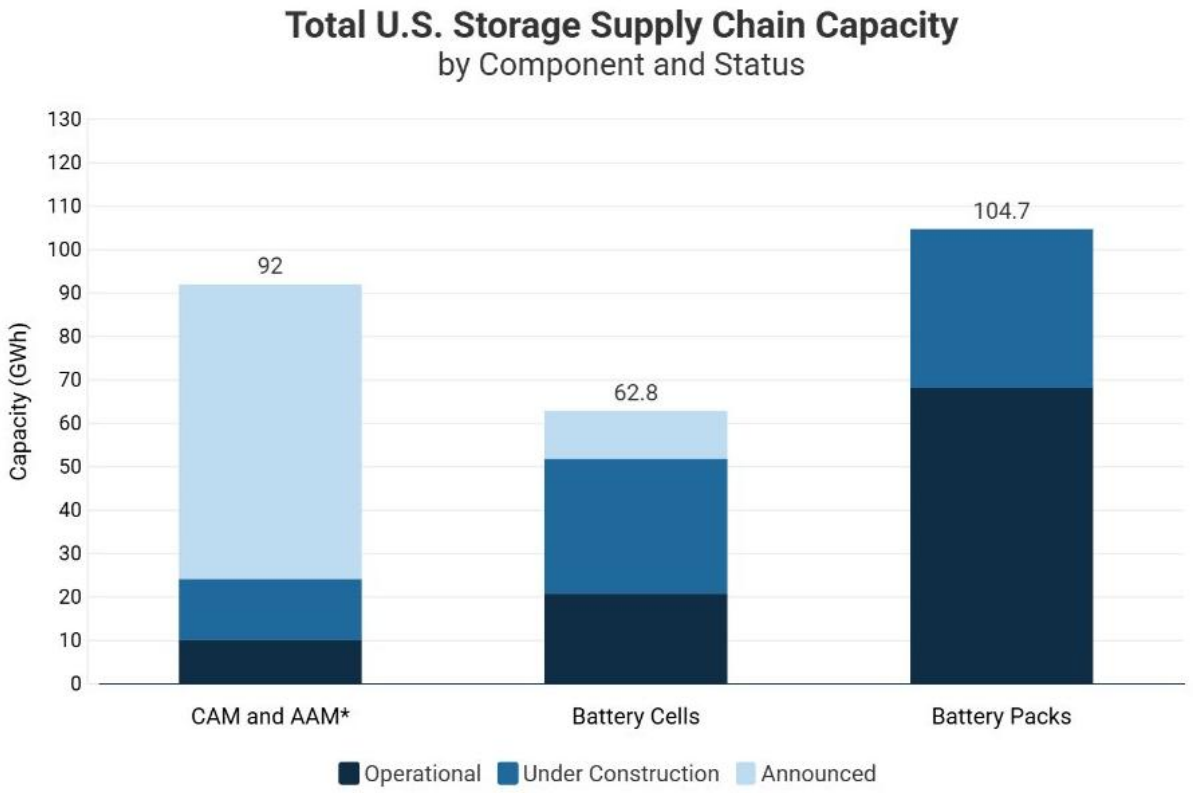






U.S. Battery Storage Supply Chain

- Annual domestic battery manufacturing capacity has doubled since 2022.
- As of 2024, the U.S. had a total battery storage supply chain capacity of 200 GWh of production.
- The U.S. has over 60 GWh of battery pack manufacturing, due to the ease of accelerating production.
- Battery cells factories are more recently coming online with 20 GWh in operation, and capacity expected to double by 2026.



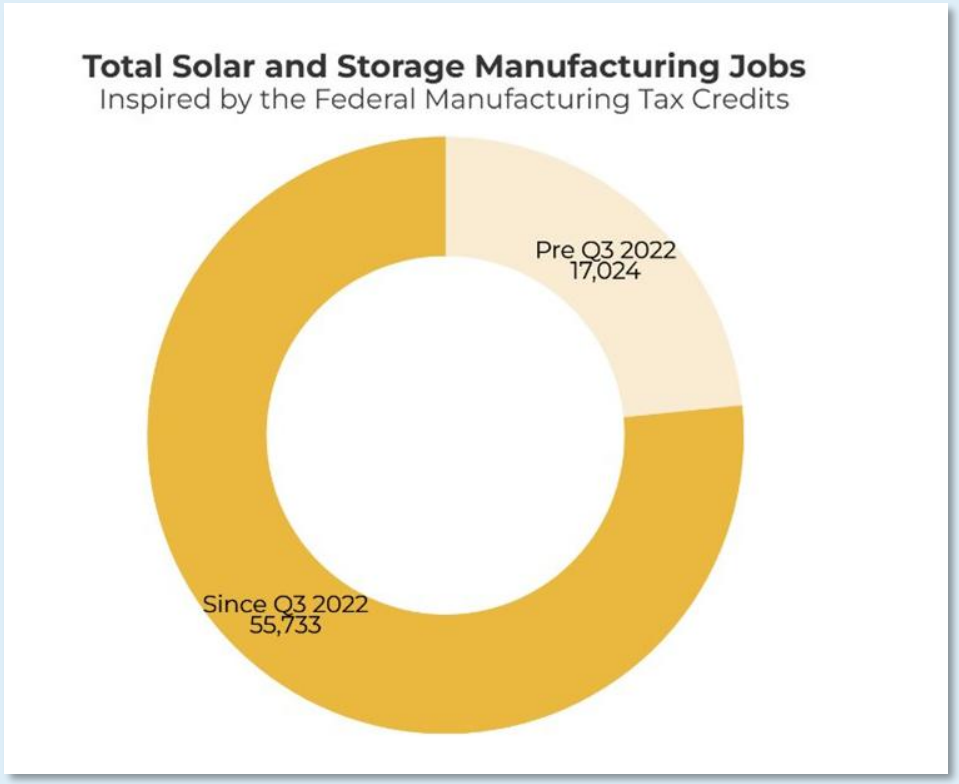
Source: SEIA Solar and Storage Supply Chain Dashboard, August 2025 • Data includes products for standalone storage applications as well as factories that make both electric vehicles and stationary storage
*Battery materials are converted from metric tons to GWh using an estimated 165 wh/kg

SEIA Solar Energy Industries Association®

Key Insights: Solar and Storage Manufacturing

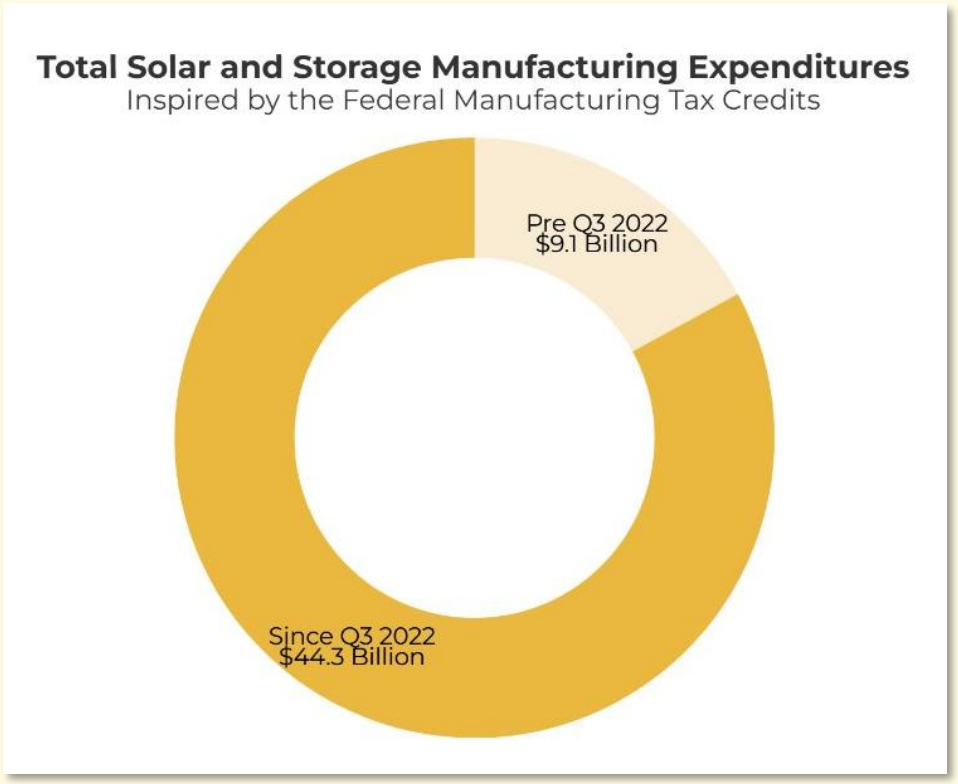
Jobs

Manufacturing jobs at solar and storage facilities since 2022 have doubled. If all facilities come online there will be over 72,000 U.S. manufacturing jobs in solar and storage.



Investments

Solar and storage manufacturing expenditures have soared to over $44 billion – nearly $20 billion of such investments are in development.



Source: SEIA Solar and Storage Supply Chain Dashboard, September 2025

Questions?

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