

Solar Market Insight Update: Trends in PV Deployment and Pricing

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Powering the Solar+ Decade



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Photovoltaics (PV)

Installations + Market Analysis:

- By Market Segment
- By State
- Number of Installations
- PV systems paired with storage

Installed Price Manufacturing:

- Polysilicon
- Wafers
- Cells
- Modules
- Active U.S. Manufacturing Plants
- Inverters

Component Pricing:

- Polysilicon, Wafers, Cells and Modules
- Inverters
- PV Mounting Structures

Demand Projections:

- By Market Segment
- By State

For more information on US Solar Market Insight™ and to download this quarter's free Executive Summary, visit www.woodmac.com/industry/power-and-renewables/us-solar-market-insight/ or www.seia.org/about-solar-market-insight-report.

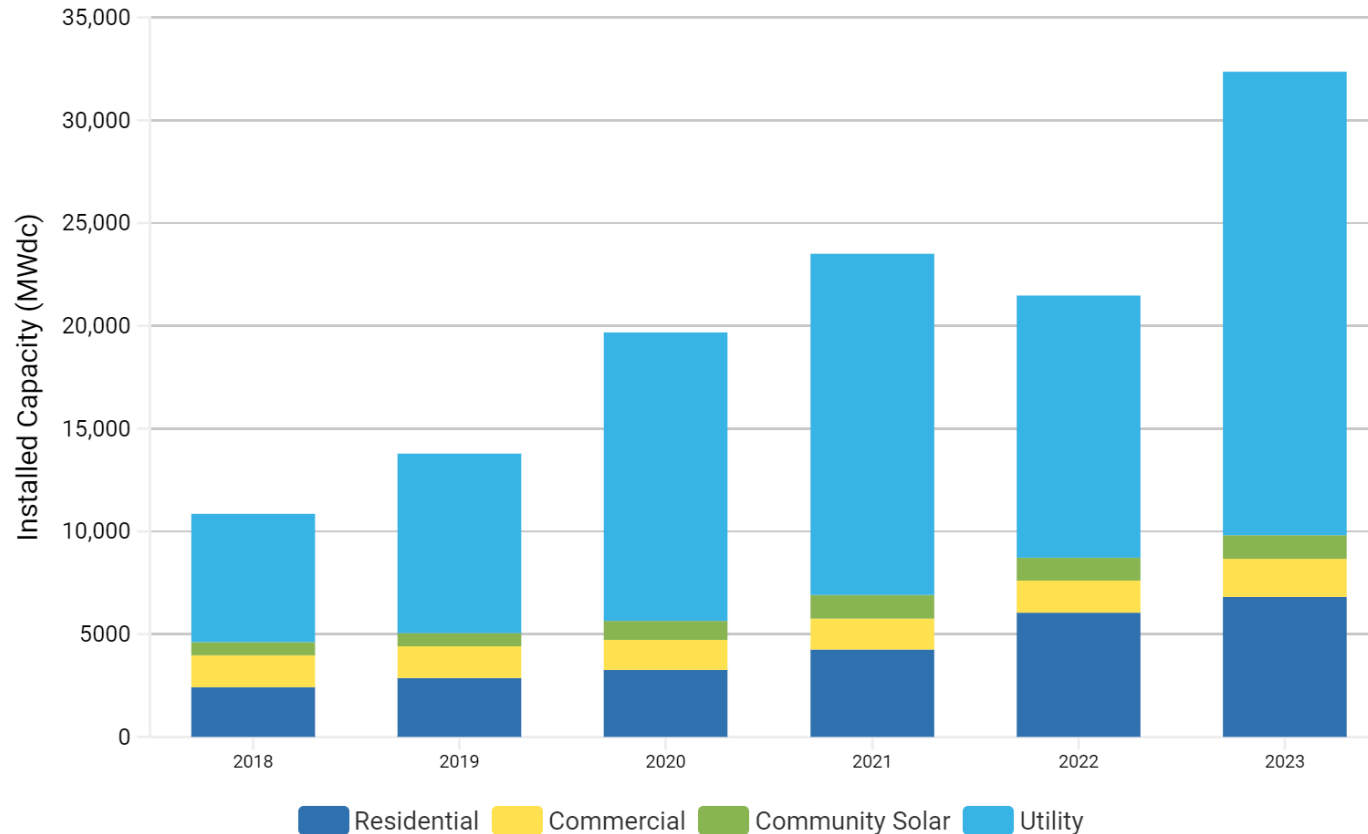
The US Solar Market Insight™ is also available as a part of Wood Mackenzie's US Utility Solar and US Distributed Solar Services. In addition to this report, the services include analysis of the competitive landscape and additional market data and insights.

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- Joint quarterly report from SEIA/Wood Mackenzie since 2010
- Covers deployment trends and 5-year forecasts across four market segments in all 50 states plus DC
- Also covers installed system pricing, domestic manufacturing capacity and production, component pricing across value chain
- Executive Summary covering national trends available at no cost to public
- More detailed Full Report can be purchased quarterly or as part of an annual subscription
 - Significant discount for SEIA Members
 - Included with SEIA TW and GW Membership

Record 2023 Installations

Annual U.S. Solar PV Deployment



- 2023 installations eclipse 32 GWdc, including a record 13 GW in Q4
- Utility-scale projects delayed from 2022 bolster 2023 installation volumes
- Residential & commercial demand pull-in from California NEM 3.0
- Record year for commercial solar
- Community solar growth limited by interconnection, siting challenges, but upside in new markets

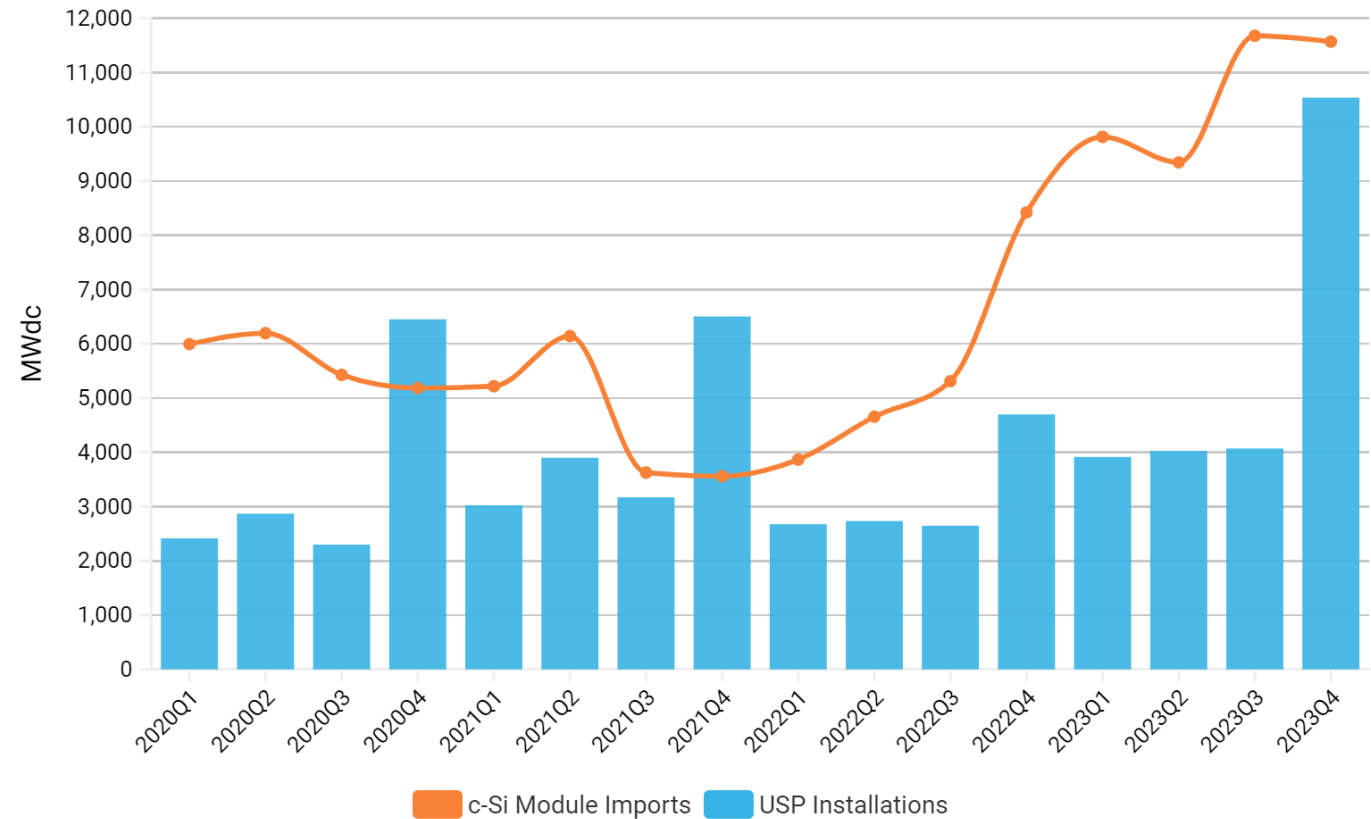
Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2023 Year in Review



Utility-Scale Segment Rebounds from Supply Chain Constraints

- 10 GW Q4 in the segment caps off a record year for the segment
- Module import volumes rose from 2022 dip due to Auxin petition, UFLPA
- Utility scale installations reach 77% growth year-over-year

Utility PV Installations vs. c-Si Module Imports

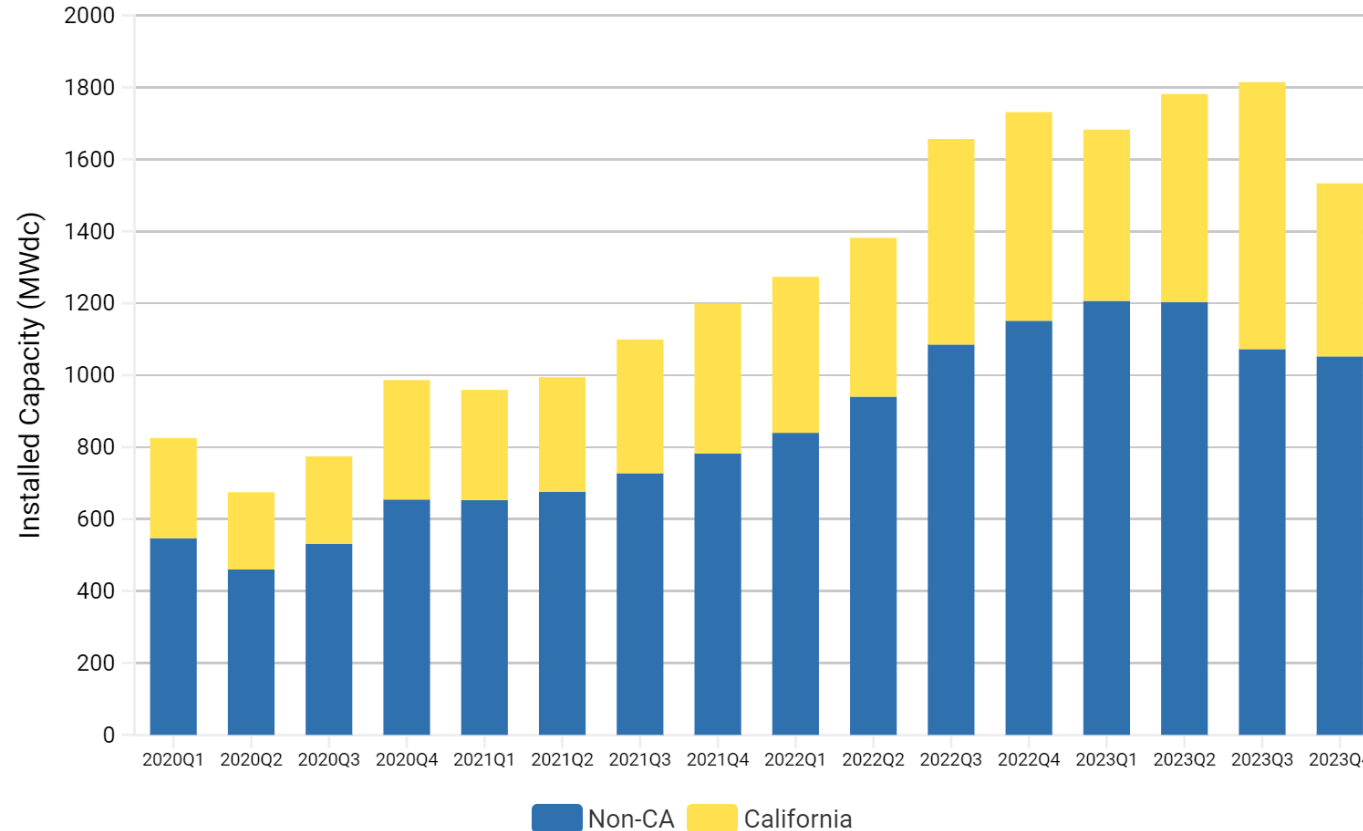


Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2023 Year in Review, USITC



California Buildout Bolsters Residential Market

Residential Solar Deployment



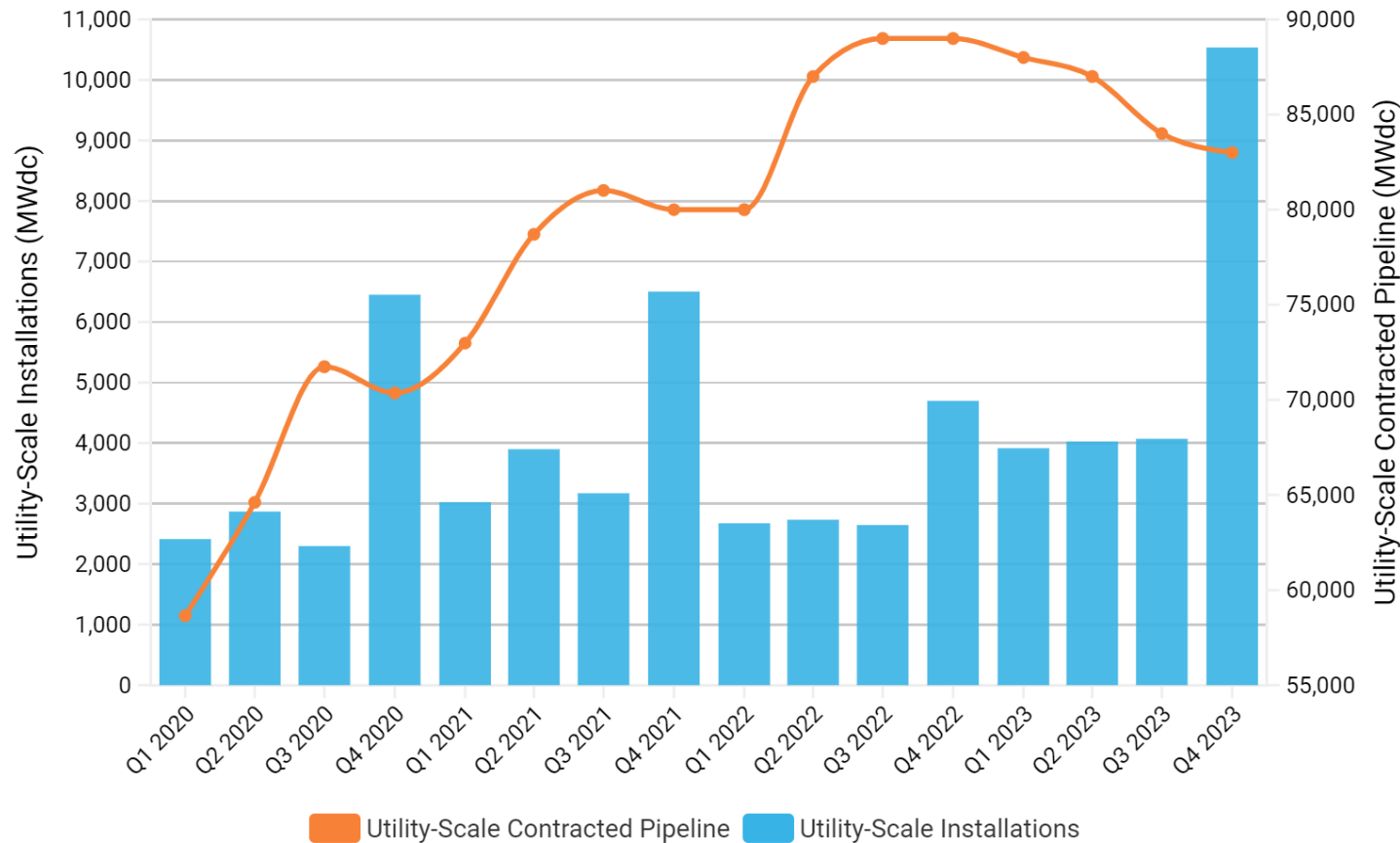
- The backlog of residential solar projects in California contracted under NEM 2.0 continues to be installed and has driven growth
- Retail rate increases in non-CA states drive demand
- Market headwinds of NEM 3.0, higher financing costs

Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2023 Year in Review



Finance Challenges Impact DG & USP

Utility PV Installations vs. Contracted Pipeline



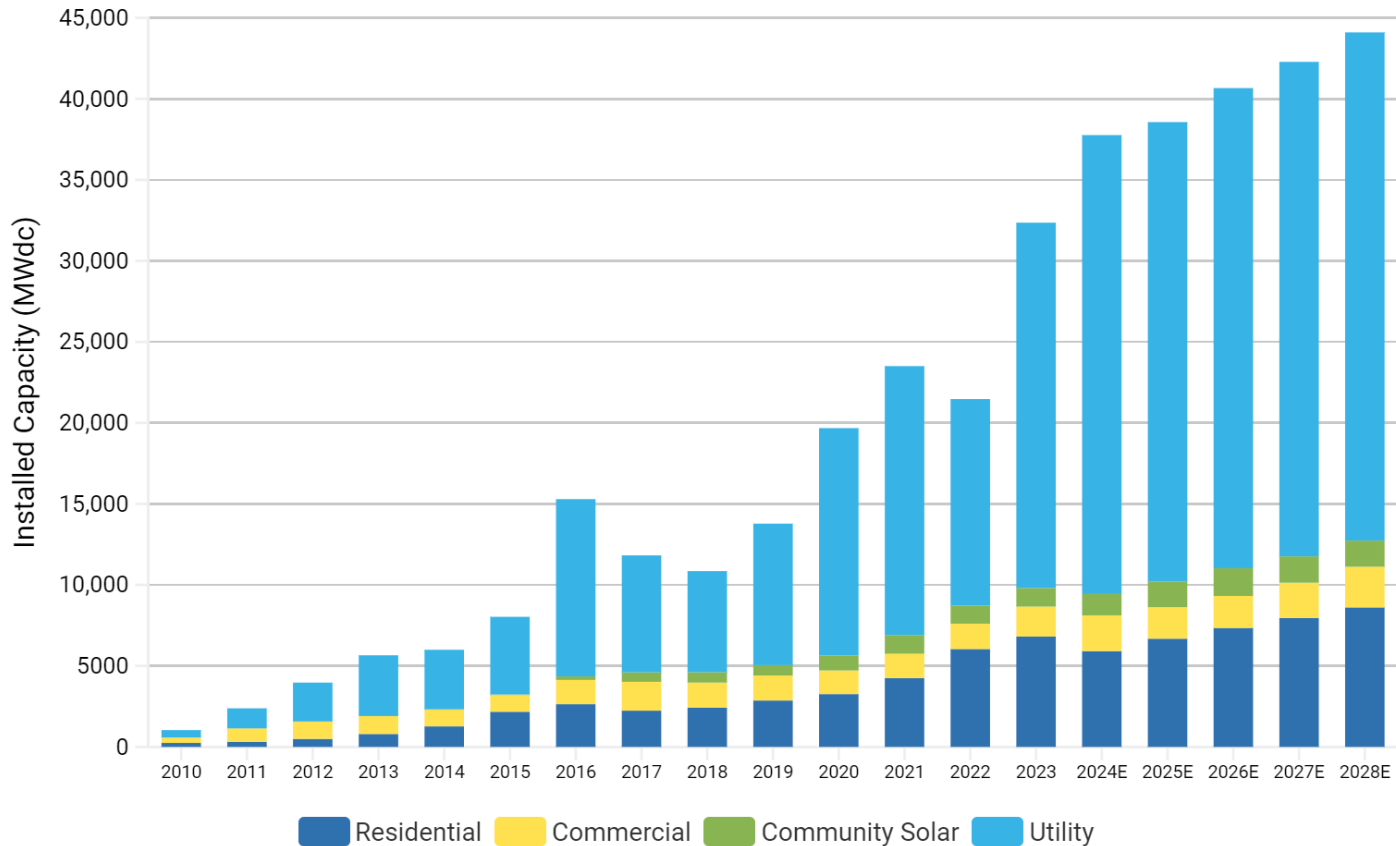
- Basel III endgame poses risk to tax equity market
- Cost of capital increases contributed to lower USP contract volume
- Interconnection limits growth
- Higher interest rates hurting residential sales market, decline forecasted in 2024
- 4% average annual growth over next decade (25% for prior decade)

Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2023 Year in Review



IRA Brings Upside to Solar Market

U.S. Solar PV Deployment Forecast



- Tax credit transferability creates new financing paths for solar projects
- Clarity and comfort levels surrounding IRA adders
- Residential TPO growing due to IRA adders and financing costs
- Growing power demand, decarbonization goals to drive demand
- Post 2030 annual installation volumes 45-50 GW
- 670 GW cumulative by 2034

Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2023 Year in Review

