

CERA Consulting

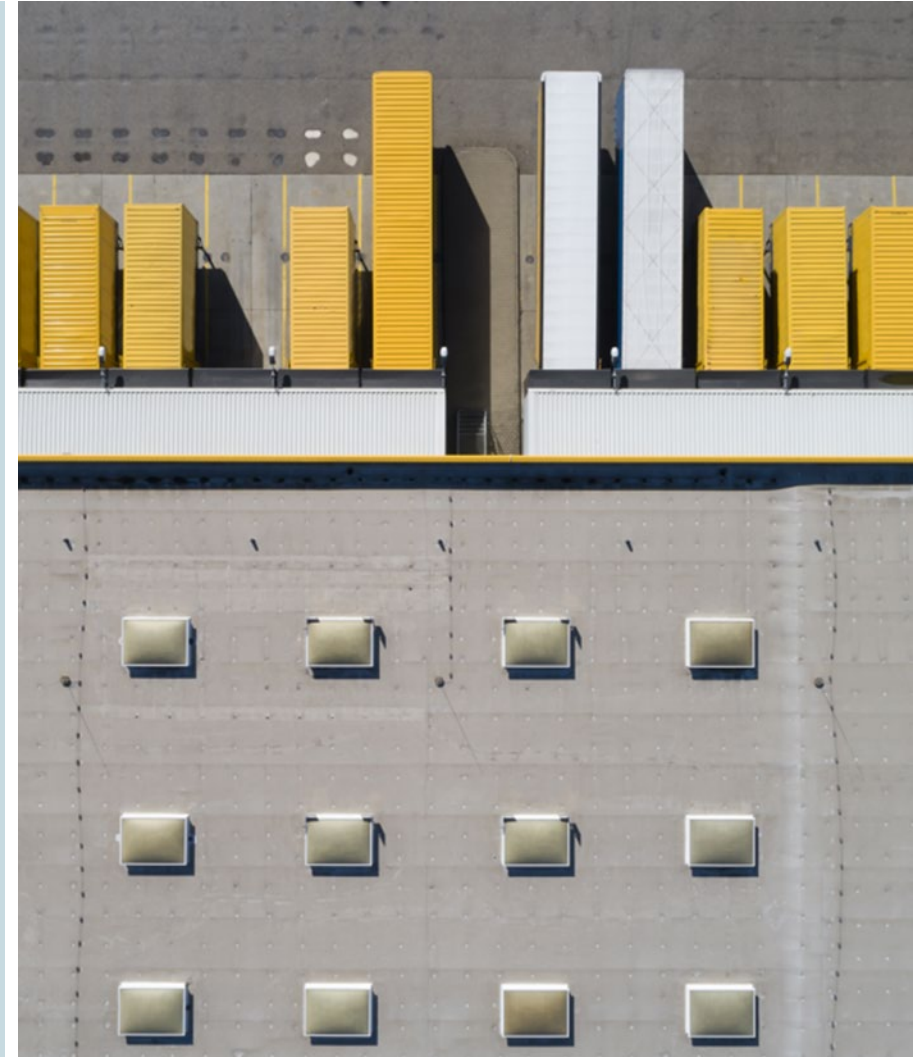
PJM Solar and Battery Forecast 2026

Prepared for PJM

July 13, 2026

Phase I – Key Assumptions

CERA Consulting is the consulting arm of S&P Global Energy



Contents

1. Scenario Assumptions

2. Policy Assumptions

3. Capital Cost Assumptions

Solar PV and battery forecasting methodology



Analytical Framework

The S&P Global outlook for solar power takes into account multiple drivers and inhibitors that reflect the maturity of the market and its growth potential for solar and batteries.

Key components of our framework for assessing market attractiveness for solar:

- State renewable policy (including renewable portfolio standard [RPS], net energy metering [NEM], community solar, and renewable corporate policies)
- Regulatory incentives
- Solar resources
- Site approval
- Grid access and offtake



Short-term data points

In the short term (one to four years), our forecast is based primarily on existing policies, the late-stage project pipeline, and status of procurement and equipment orders.

Key data inputs collected and assessed by S&P Global energy analysts include:

- Project announcements
- Utility requests for proposal (RFPs), auctions, and tenders
- Existing mandates and incentives
- Project development track record
- Reported costs and pricing
- Supply chain announcements and equipment orders



Longer-term assumptions

In the longer term (5–20 years), our forecast draws upon rigorous bottom-up research and on economic fundamentals, energy prices, and macroeconomic factors.

Key data inputs and assumptions include

- Policy and regulatory trends
- Power demand growth and capacity retirements
- Annual solar power pricing forecasts
- Power and gas prices
- Transmission and grid infrastructure

Key assumptions

Solar forecast scenario overview			
Assumptions	Scenario 1: “Higher for longer”	Scenario 2: “Base case”	Scenario 3: “Solar Rebound”
Federal policy support	OBBBA Update to ITC (Homeowner-collected ITC expired Dec 2025, other tax credits for solar expire Dec 2027)	OBBBA Update to ITC (Homeowner-collected ITC expired Dec 2025, other tax credits for solar expire Dec 2027)	OBBBA Update to ITC (Homeowner-collected ITC expired Dec 2025, other tax credits for solar expire Dec 2027)
NEM policies and retail rate structures	Utilities/PUCs (and regulators approve) reform NEM policy earlier owing to costly DG programs. Current retail rate structures are adjusted; existing NEM caps are maintained (and many reduced). Utilities and PUCs also phase out “community solar” and carve-outs for DERs.	From 2026 to 2028, utilities adopt (and regulators approve) changes to NEM and retail rate structures, which result in a more cost-based approach to customer-sited solar compensation (see slide X); current detailed state NEM policy (see slides x–x).	Reflecting a greater emphasis distributed solar as a resource for decarbonization, current retail rate structures and NEM are maintained for three years beyond the reform timeline in the base case; they are then reformed in a similar manner.
Solar costs (\$/kW)	Solar costs continue to increase for the next five years owing to continued supply chain disruptions and trade tensions before resuming their prior rate of decline. Disruptions are linked to continued trade disruptions and uncertainty associated with ever changing trade policies, shipping backlogs, and higher raw material prices due to elevated global demand. Panel availability is restricted through the early 2030s. Continued project delays owing to grid interconnection, zoning and local ordinances cause development costs to increase. Post 2031, costs are expected to increase at a rate of 0.5% per year.	Residential solar costs continue to rise due to increased tariffs and supply constraints as well as the generally inflationary environment. Moving forward, residential solar costs decline by 4% in nominal terms from 2026 to 2033 before slowly increasing to 3% above 2026 by 2047. In real \$ terms, prices are expected to be 35% lower in 2047 compared to 2026.	Solar costs decline by 10% in nominal terms from 2026 to 2034, driven by a combination of technology advancements and a more conducive environment for trade post 2028. Post 2034, the decline in costs levels out owing to technology maturity, land scarcity and greater onshoring, ending 5% below 2026 cost on a nominal basis by 2047.
State policy support	Current RPS policies and state-level incentives are maintained.	Current RPS policies and state-level incentives are maintained.	Current RPS policies and state-level incentives are maintained.
Power demand	Base-case demand	Base-case demand	Base-case demand
Note: DG = distributed generation. ITC = investment tax credit. PUCs = public utility commissions. DERs = distributed energy resources. Source: S&P Global Energy			
			© 2026 S&P Global

The OBBBA, executive orders, and updated Treasury guidance severely diminish credit opportunities for residential solar projects moving forward

- The One Big Beautiful Bill Act (OBBBA) (signed into law on July 4, 2025), brought significant changes to the tax credits for wind and solar generation, including behind the meter generation
- The OBBBA shortened or abruptly ended all tax credits outlined by the Inflation Reduction Act of 2022 (IRA) for solar
 - Starting in 2026, homeowner-owned residential solar PV systems no longer qualify for the ITC
 - Tax credits for third-party owned systems (leased) are available for projects until 2028
- Historically, qualification for renewable generation tax credits have been subject to safe-harbor provisions that allow for projects to qualify for the full value of the tax credit in the year that “construction begins” so long as the project is online within four years of the start of construction
 - The state of construction was previously defined as either physical work of a significant nature or when a taxpayer pays or incurs over 5% of the total cost. Updated guidance from the Treasury Department requires that physical on site construction started before July 4th, 2026 in order to qualify for the ITC
 - Qualified projects still must be online within four years to maintain qualification
- Also under the OBBBA, Foreign Entity of Concern (FEOC) restrictions were expanded to prevent FEOC’s and domestic organizations with certain relationships to FEOC’s from qualifying for any production, investment, or manufacturing tax credits currently available, depending on the amount of material for a project that originated from a FEOC.

Amended timelines for solar construction

- Most utility scale solar projects must be installed by 2028 to qualify for the production and investment tax credits (PTC and ITC) provided for in the IRA
- FEOC restrictions likely to constrain some solar installations after 2026
- 30% ITC offered to homeowners who install solar + storage projects in their home is no longer available for projects installed after December 31, 2025, which eliminates all federal tax credits available for homeowner-owned systems
- Third-party owned systems still collect ITC through 2027
- Projects must be *installed* by these deadlines but it is not stated that they must be interconnected

Example construction start dates and impact on tax credits for non-homeowner owned solar systems

Start of construction (solar PV and wind)	ITC and PTC credit value %	FEOC restriction	In-service deadline
Before December 2025	100%	No	*4 years
January to July 2026	100%	Yes (40%)	*4 years
August to December 2026	100%	Yes (40%)	Dec. 2027
January to December 2027	100%	Yes (45%)	Dec. 2027

Example construction start dates and impact on homeowner-collected solar investment tax credits

Start of construction (solar PV and wind)	ITC and PTC credit value %	FEOC restriction	In-service deadline
Before December 2025	100%	No	Dec. 2025

Options for NEM and retail rate reform

- SPGE will not predict specific changes to state or utility NEM policies or rate structures; however, we assume states will choose from a variety of options that reduce the compensation for customer-sited solar but still provide sufficient compensation for a moderate pace of additions.
- Holistic rate reform options for all residential customers: lower volumetric (dollars per kilowatt-hour) price in favor of higher
 - Minimum (fixed) bill charge
 - Peak-demand (dollars per kilowatt) charge
- Narrowly tailored NEM reform options:
 - Reduce bill credits for all solar generation exported to the grid in real time (may require new meters)
 - Add “standby” or similar charges for NEM customers only
- NEM replacement options:
 - Value-based tariff (adjusted periodically to account for changes in wholesale power markets, transmission and distribution costs, etc.)
 - Transition toward time-of-use (TOU) pricing for all NEM customers
 - Competitive process (for example, rolling tenders or RFPs)

Contents

1. Scenario Assumptions

2. Policy Assumptions

3. Capital Cost Assumptions

RPS and NEM policy assumptions by state

Detailed RPS policy assumptions		
State	RPS target (percentage of retail sales)*	Solar carve-out (percentage of retail sales)*/Distributed carve-outs
DE	25% by 2025, 28% by 2030, 40% by 2035	3.5% by 2025, 5% by 2030, 10% by 2035
DC	100% by 2032	2.85% by 2023, 9% by 2032, 15% by 2041
MD	52.5% by 2030	14.5% by 2030
NJ	50% by 2030* (100% CES by 2035)	5.1% by 2021, declining to 2.2% by 2030, gradually reduced to 1.1% by 2033
OH	8.5% by 2026	- (solar carve-out eliminated in 2020)
PA	18% by 2021	0.5% by 2021
WV	-	-
IN	10% by 2025 (voluntary)	-
IL	25% by 2025, 40% by 2030, 50% by 2040** (100% CES by 2050)	-Solar PV 55% of retail sales (27.5% for DG and Community Solar, 25.9% from utility-scale, 1.6% from brownfield projects)**
KY	-	-
MI	50% by 2030, 60% by 2035*** (80% CES by 2035; 100% CES by 2040)	
NC	12.5% by 2021**** (100% CES by 2050)	0.2% by 2020****
VA	100% by 2045 (Phase II) 100% by 2050 (Phase I)*****	No fixed solar carve-out; Dominion: 1.1 GW solar procurement by 2035) + 1% in-state DG requirement. Dominion procurement details: nameplate capacity between 50kW-3 MW. Of the 1,100 MW, 35% of capacity procured shall be from the from solar facilities owned by persons other than a utility. Dominion is required to meet 1% of RPS requirements from DG sources less than 1 MW, no more than 3 MW in one single location. No less than 25% of such 1% shall be composed of low-income qualifying projects.
TN	-	-

Note: RPS includes solar carve-outs. RPS targets are based on Tier 1 requirements where applicable. *New Jersey RPS target only includes Class I renewable technologies and the solar carve-out. **Illinois requires 55% of RPS procurement from solar, and ≥50% solar procurements from distributed/community. RPS mandates at least 75% of the standard come from wind and solar. Climate and Equitable Jobs Act invests \$580 million a year to increase Illinois's clean energy from 9% to 50% by 2040 ***MI also now has a Clean energy standard, which adds nuclear and natural gas generation with CCS to the RPS and requires 80% by 2035 and 100% by 2040. ****RPS compliance in North Carolina can be achieved through energy efficiency and renewable energy credits (RECs) from any state. *****In VA, Phase I utilities are required to achieve 14% by 2025, 30% by 2030, 65% by 2040, and 100% by 2050 while Phase II utilities are required to achieve 26% by 2025, 41% by 2030, and 100% by 2045. The primary drivers for solar development include existing Public Utility Regulatory Policies Act (PURPA) policy, planned requests for proposal (RFPs), solar resources, solar costs, and the previous state tax credit.

Source: S&P Global Energy

© 2026 S&P Global

RPS and NEM policy assumptions by state (continued)

State net energy metering assumptions			
State	Utility/territory	NEM cap	NEM system size limits
DE	All utilities	8% of the capacity needed to meet the electric utility's average Delaware transmission peak demand (utilities may increase limit). Utilities are authorized to disallow additional net-metered energy systems if the aggregate capacity of all net-metered systems exceeds 8% for a particular calendar year.	For all systems designed to produce no more than 110% of expected aggregate electrical consumptions, subject to limits by rate class: 25 kW (residential), 2 MW (Delmarva nonresidential), 500 kW (DEC, DEMEC nonresidential), 150 kW (farms on residential rates, waivers possible for larger systems depending on usage)
DC	Potomac Electric Power Co (Pepco)	No cap	For 2024 and thereafter, no more than 200% of historical 12-month usage
MD	All utilities	3,000 MW	2 MW or 200% of customer load
NJ	Investor-owned utilities (IOUs), electric suppliers	No cap (soft cap 5.8% of retail sales)*	100% of customer load
OH	IOUs	No cap	Not to exceed 120% of customer annual average load
PA	IOUs	No cap	50 kW (residential), 3 MW (nonresidential), 5 MW (microgrids)
WV	All utilities	3% of peak demand during previous year	5 kW (residential), 2 MW (industrial for large IOUs), 1 MW (commercial for large IOUs), 50 kW (C&I for small IOUs)
IN	IOUs	No cap (previous 1.5% aggregated cap eliminated with the transition to net billing) **	1 MW, not to exceed customer's 12-month usage
IL	IOUs, retail suppliers	Removed the NEM cap, but included a cap date of December 31, 2024 or whenever new compensation values are approved, whichever is sooner	5 MW, systems must be sized to meet on-site electrical needs
KY	IOUs, electric cooperatives except TVA	1% of utility's peak load in prior year	45 kW
MI	All utilities	10% of utility average in-state peak load, 50% of which is allocated to systems >20kW but less than 550kW	550 kW, or ≤ 110% of customer load
NC	IOUs, electric suppliers	No aggregate cap limit (customer-owned systems) Leased Photovoltaic Systems: 1% of the utility's previous five-year average coincident retail peak demand	5 MW or ≤100% of contract demand (customer-owned); lower limits for leased systems (residential: lesser of 20 kW or 100% estimated demand / non-residential: lesser of 1 MW or 100% of contract demand)
VA	IOUs, electric cooperatives	1% of in-state peak load	25 kW (residential), 3 MW (nonresidential), Agricultural: 500 kW (aggregated capacity), up to 100% of expected demand
TN	N/A	N/A	N/A

Note: *While no mandatory cap exists, it is at the discretion of the NJBPU to cap at 5.8% of retail sales. **As of July 2022, the Indiana Utility Regulatory Commission has approved four utilities in Indiana to transition from net metering to a new lower rate known as "excess distribution generation" and proposed to instantaneous netting rather than monthly net metering.

RPS and NEM policy assumptions by state (continued)

State net energy metering assumptions			
State	NEM remuneration for on-site use or export generation*	NEG remuneration**	Community solar
DE	Retail (For commission-regulated utilities, retail does not include the societal benefits charges). Excess generation credits set to the volumetric supply and distribution service charges for all customers and shall not reduce any fixed monthly distribution charges	Monthly carryover at the utility's retail rate . At the end of the annualized billing period, excess kWh credits shall revert to the electric distribution company and are not reimbursed, credited or otherwise remunerated. Excess kWh credits do not include charges for the societal benefits program	Virtual net metering. Subscribers to the output of a community system receive retail credit if they are located on the same distribution feeder as the facility. If not, receive wholesale rate.
DC	Retail	Carries over at retail rate (generation, transmission and distribution components) indefinitely for systems 100 kW or less , at generation rate for systems up to 1 MW ***	Virtual net metering (less than 5 MW)
MD	Retail	Credited to customer's next bill at retail rate; reconciled annually in April at the commodity energy supply rate or can be accrued indefinitely	Virtual net metering (less than 5 MW), individual subscriptions capped at 200kW and credits cannot exceed 200% of subscribers baseline annual usage
NJ	Base \$85 SREC-II price (\$0.085/kWh), non-residential rooftop < 1MW receives \$110, 1-5MW receives \$100 SREC-II, non-residential ground mount <1MW receives \$90, 1-5MW receives \$85 ****	Monthly carryover. At the end of the annualized period customer is compensated at the avoided-cost of wholesale power.	Up to 5 MW receives \$90 SREC-II (\$0.09/kWh)
OH	Less than retail	Credited to next bill at unbundled generation rate (includes energy component but excludes capacity-related compensation)	None
PA	Retail	Credited at retail rate for a year, then any leftover excess is credited at generation and transmission portion of the retail rate, but not the distribution	Virtual meter aggregation*****
WV	Retail (credits cannot reduce monthly bills below the fixed monthly charge)	Retail, perpetual rollover, no annual true up	Virtual net metering
IN	Full retail through 2047 for net metering facilities installed by 2017 and through 2032 for those installed by 2022 ; 125% of average energy market price for facilities installed after 2022. Per SB 309, retail rate net metering has been phased out by July 2022.	Full retail through 2047 for net metering facilities installed by 2017 and through 2032 for those installed by 2022; Net billing thereafter determined by instantaneous comparison of generation and consumption. Excess kWh credited at 125% of avoided cost (1.25 x the locational marginal price (LMP) for the applicable utility). NEG credits rollover indefinitely. If a customer elects to cease net metering, any unused credit will revert to the utility.	None
IL	Retail (TOU for customers paying TOU rates)	Non-competitive customers: Credited to customer's next bill as a credit based on electricity supply components of retail rate; granted to utility at end of a 12-month billing cycle Competitive customers: Credited to customer's next bill as a kWh credit at electricity provider's avoided cost of electricity supply over the monthly period.	Virtual net metering
KY	Less than retail	Utility will purchase all electricity produced at the rate set by the PSC, instead of the retail rate	Utility-run program
MI	Retail	Retail for systems <20kW, for systems >20kW, credited at power supply component of rate. Perpetual rollover	None
NC	Retail, for existing. Starting on October 1, 2023 current NEM rider replaced with Residential Solar Choice (Rider RSC) and Net Metering Bridge (Rider NMB). Rider RSC requires TOU Pricing , minimum monthly bills, non-bypassable charges, and grid access fees for systems above 15kW-ac. Rider NMB will be available for a limited number of new customers annually for three years and will not require TOU rates. Customers on Rider NMB can stay on that rate for 15 years, before switching to Rider RSC. Existing net metering customers will be switched to Rider NMB on January 1, 2027.	Systems installed prior to October 1, 2023: Credited to customer's next bill at retail rate; granted to utility at beginning of summer billing season Systems installed on or after October 1, 2023: Monthly net excess generation credited at the avoided cost rate Production and consumption are netted on a monthly basis. For customers on a time-of-use tariff, netting will occur separately within each time period.	Utility-run program
VA	Retail	Retail	Utility-run program
TN	N/A	N/A	None

Note: *NEM remuneration is a tariff structure under which the utility pays customers for excess generation, up to a given amount. The most common arrangement is "full retail rate NEM," in which excess generation is paid the same volumetric price that the customer pays for electricity; so, exports are effectively netted against grid consumption over a given period (typically one year). **NEG over that period is sometimes paid at a lower rate, often based on the utility's avoided cost. ***[Production and consumption are netted on a monthly basis](#). ****SREC-II replaced the transition program (TREC). *****Virtual meter aggregation is limited to the account holder's meters and only those within two miles of the POI.

RPS and NEM policy assumptions by state (continued)

State C&I procurement assumptions				
State	Unbundled energy attribute certificates	Virtual power purchasing allowed	Renewable energy offerings from utilities or electric suppliers/green tariff	Production for self-consumption—net metering
DE	Allowed	Allowed	Retail choice	Up to 2 MW
DC	Allowed	Allowed	Retail choice	Up to 1 MW
MD	Allowed	Allowed	Retail choice	Up to 2 MW
NJ	Allowed	Allowed	Retail choice	Cannot exceed on-site load
OH	Allowed	Allowed	Retail choice	No size limit
PA	Allowed	Allowed	Retail choice	Up to 3 MW, 5 MW for microgrids
WV	-	Allowed	-	Up to 2 MW
IN	-	-	Utility green tariffs / riders are available but utility-specific	Lesser of 1 MW or the customer's average annual electricity consumption (customer-owned)
IL	Allowed	Allowed	Retail choice	Up to 5 MW
KY	Voluntary	-	Green tariff enabled	Up to 45 kW
MI	Allowed	-	-	1 MW
NC	Allowed	Allowed*	Green tariff in development	Customer-owned: Up to 5 MW or 100% contracted demand (1 MW if leased system)
VA	Allowed	Allowed**	Green tariff enabled	Up to 1 MW
TN	-		-	-

Note: Green tariffs only include programs where utilities build new renewables on behalf of corporate customers. *In specific utilities **for agricultural sites and school districts up to 10 MW

© 2026 S&P Global

Source: S&P Global

Federal and regional energy storage policy assumptions

Federal and regional energy storage policy assumptions		
Category	Policy	Base case
Federal	Investment Tax Credit (ITC)	Under the One Big Beautiful Bill Act (OBBA) section 48E ITC, projects that begin construction until the end of 2033 qualify for 100% of the 30% ITC, after which it phases down to 75% credit (22.5%) available in 2034, 50% credit (15%) in 2035, and 0% thereafter. Projects over 1 MW automatically receive a base tax credit of 6% and can qualify for the full 30% tax credit if prevailing wage and apprenticeship requirements are met. Battery projects that start construction in January 2026 or thereafter are subject to the Foreign Entity of Concern (FEOC) restrictions and the material assistance cost ratio.
Regional	PJM capacity market (as applicable to battery)	Assume Minimum Offer Price Rule (MOPR) is revised All other existing market rules, including updated ELCC values, remain in place over forecast period
State/city	Energy storage targets	Remain in current form
State	Tax credits	Remain or expire as currently scheduled
State	Incentives (e.g., rebates)	Assume VA and NJ utilities roll out an incentive program for BTM batteries in effort to comply with state target. Other states remain unchanged

Source: S&P Global

© 2026 S&P Global

Battery policies by state

Detailed state energy storage policy assumptions		
State	Energy Storage Target (MW)	Tax Credits and rebate programs
DE		
DC		
MD	750 MW by 2027, 1.5 GW by 2030, 3 GW by 2023	30% tax credit*
NJ	2 GW by 2030	
OH		
PA		
WV		
IN		
IL		Rebate programs (typically for systems below 5 MW): ComEd: Commercial and community solar: \$250/kWh for battery associated with eligible DG facility; Residential and small commercial: \$300/kWh for battery associated with eligible DG facility; Ameren Illinois: \$250-300/kW-DC for battery
KY		
MI	2.5 GW by 2029	
NC		Rebate program: Battery Storage: \$400/kWh, max. incentive \$5,400 and max. system size: 13.5 kWh Energy storage systems greater than 5 MW and less than 150 MW are exempt from sales tax.
VA	2.7 GW by 2035 (Dominion), 400 MW by 2035 (APCo)	
TN	2.4 GW by 2028 and 5.3 GW by 2038 (Tennessee Valley Authority)	

Note: *Maryland Energy Administration (MEA) 2018 Energy Storage Tax Credit Program offered 30% tax credit of the total installation costs (up to \$5,000 for a residential project and \$75,000 for commercial). ** In May 2018, lawmakers passed legislation (S 2314/A 3723) to implement energy storage targets of 600 MW by 2021 and 2 GW by 2030 and requires the BPU to establish a process and mechanism for achieving these targets. ***The regulations instruct APCo and Dominion to construct or acquire 400 MW and 2,700 MW, respectively, of FTM energy storage resources by 2035. ****Indianapolis Power & Light's (IPL) 2019 IRP proposes replacing coal power with renewables and storage, amounting to approximately 240 MW based on an assumed installed capacity of 3 GW.

Source: S&P Global

© 2026 S&P Global

Contents

1. Scenario Assumptions

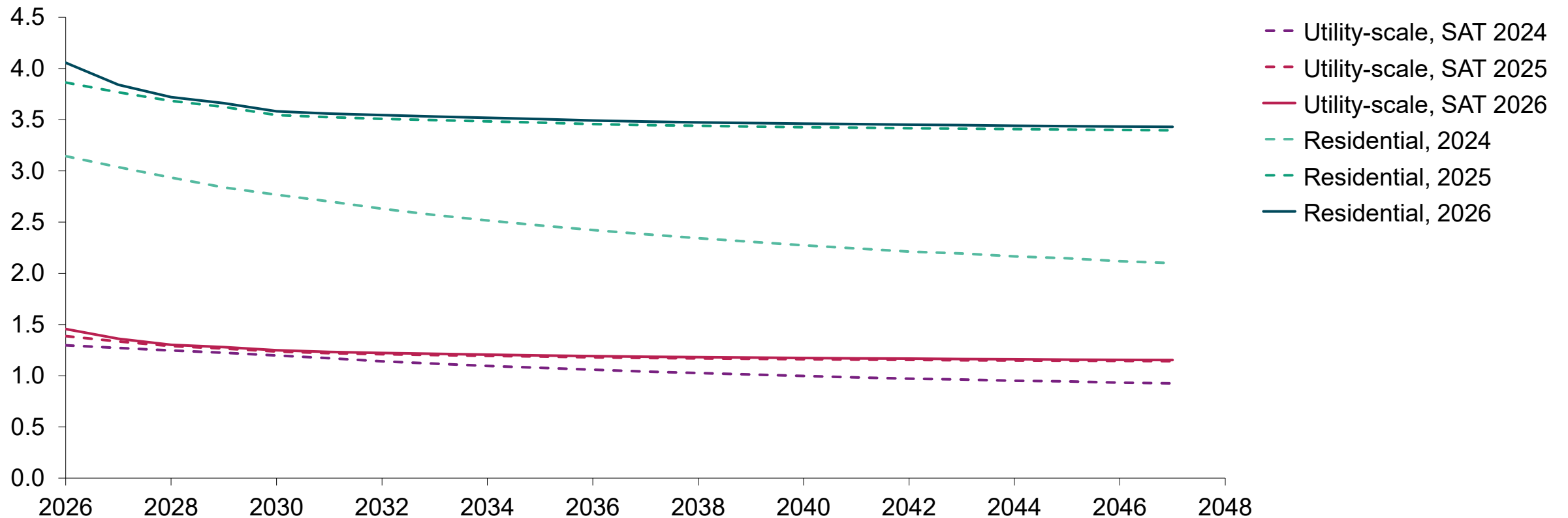
2. Policy Assumptions

3. Capital Cost Assumptions

PJM solar capital costs are higher than the previous forecast, especially in the next 1-3 years

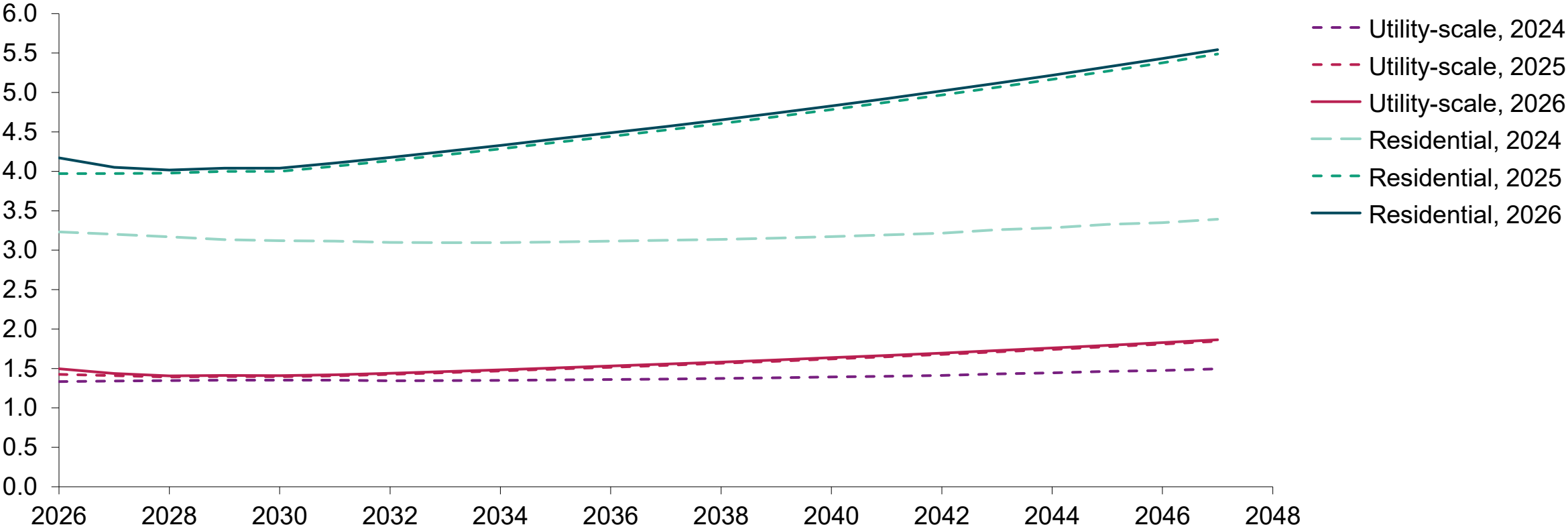
PJM solar capital costs

Real 2025\$/Wac



PJM solar capital costs (nominal)

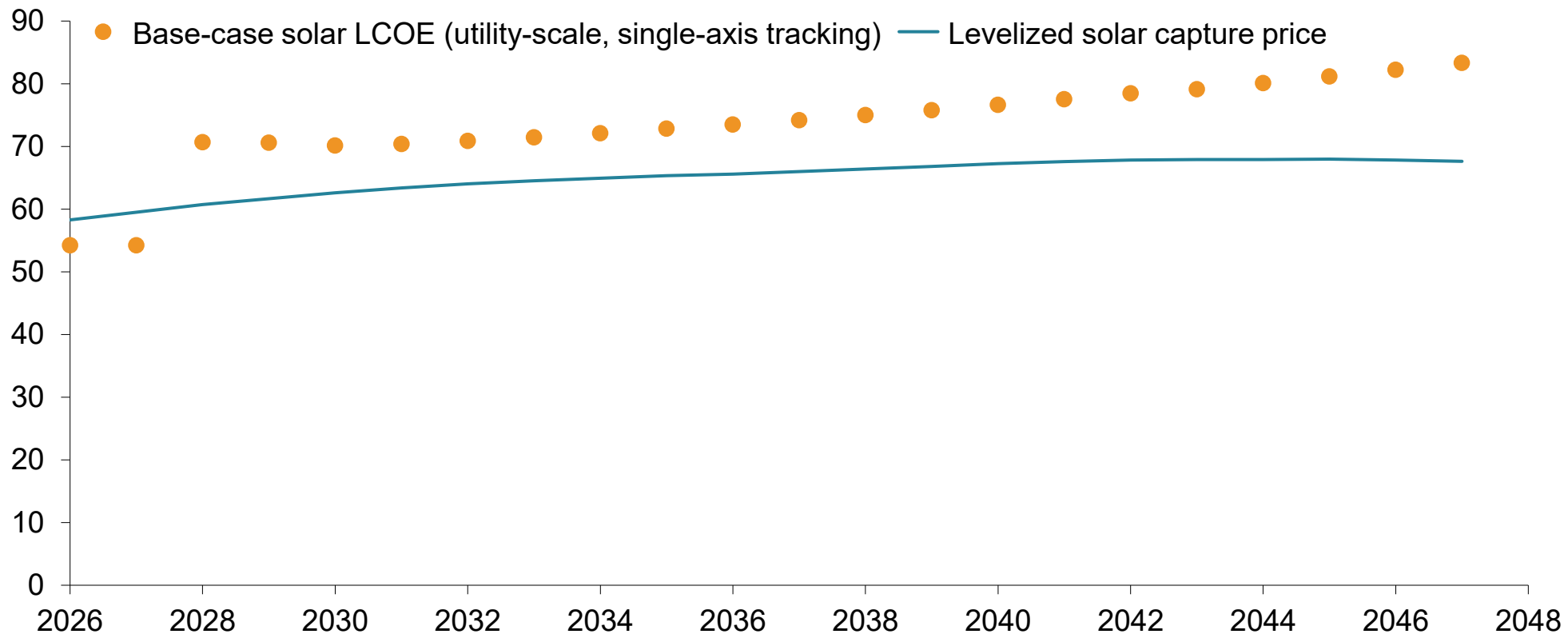
PJM solar capital costs
Nominal \$/Wac



Utility scale solar economics illustrates the impact of the end of the tax credits on levelized costs starting in 2028

PJM utility solar economics

Nominal \$/MWh



Captured energy prices to solar PV: simple average of PJM East, Dominion Hub, PJM AEP Dayton, PJM ComEd average annual wholesale power prices, In-house View H1 2026

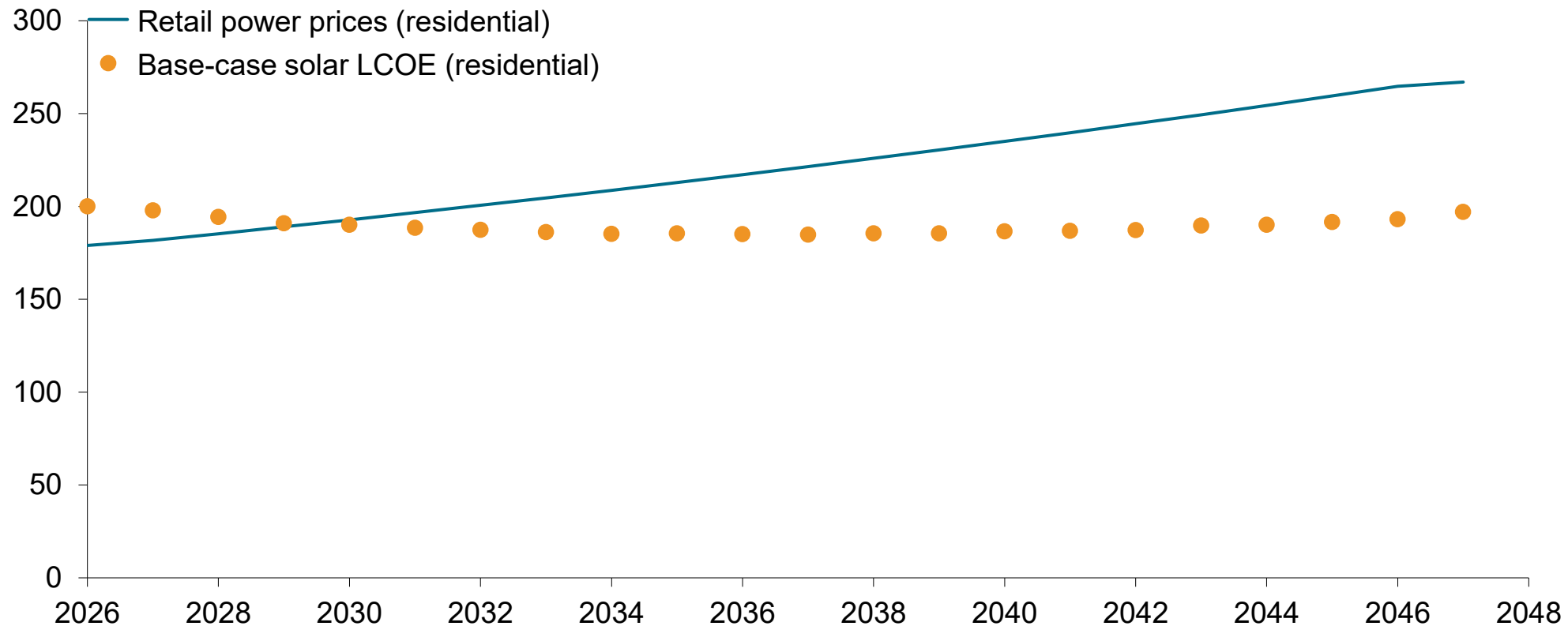
Source: S&P Global Energy

© 2026 by S&P Global Inc.

Residential solar economics demonstrate the attractiveness of homeowner systems, even after accounting for the impact of the ITC ending

PJM residential solar economics

Nominal \$/MWh



Retail power prices (residential) from EIA Annual Energy Outlook 2026 Table 3, Mid-Atlantic Region

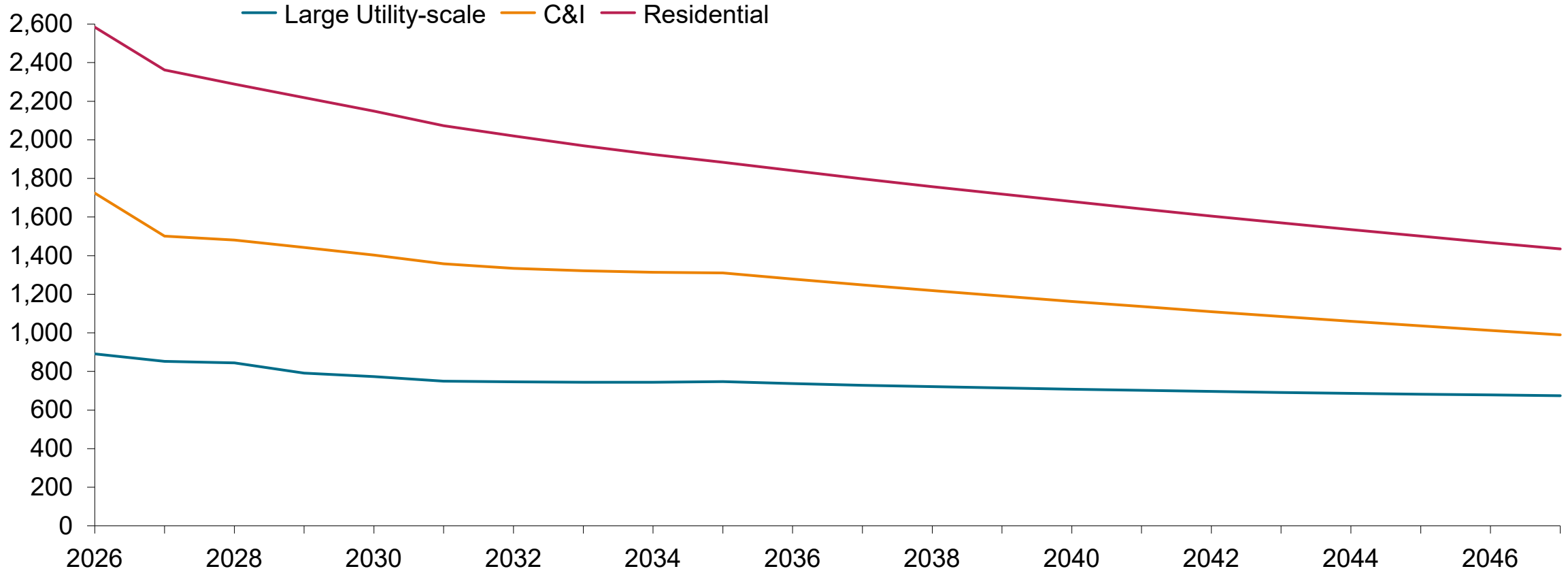
Source: EIA and S&P Global Energy

© 2026 by S&P Global Inc.

Residential battery systems experience the greatest capex decline, driven by increasing scale and manufacturing efficiencies

PJM battery capital costs

Real 2025\$/MWac

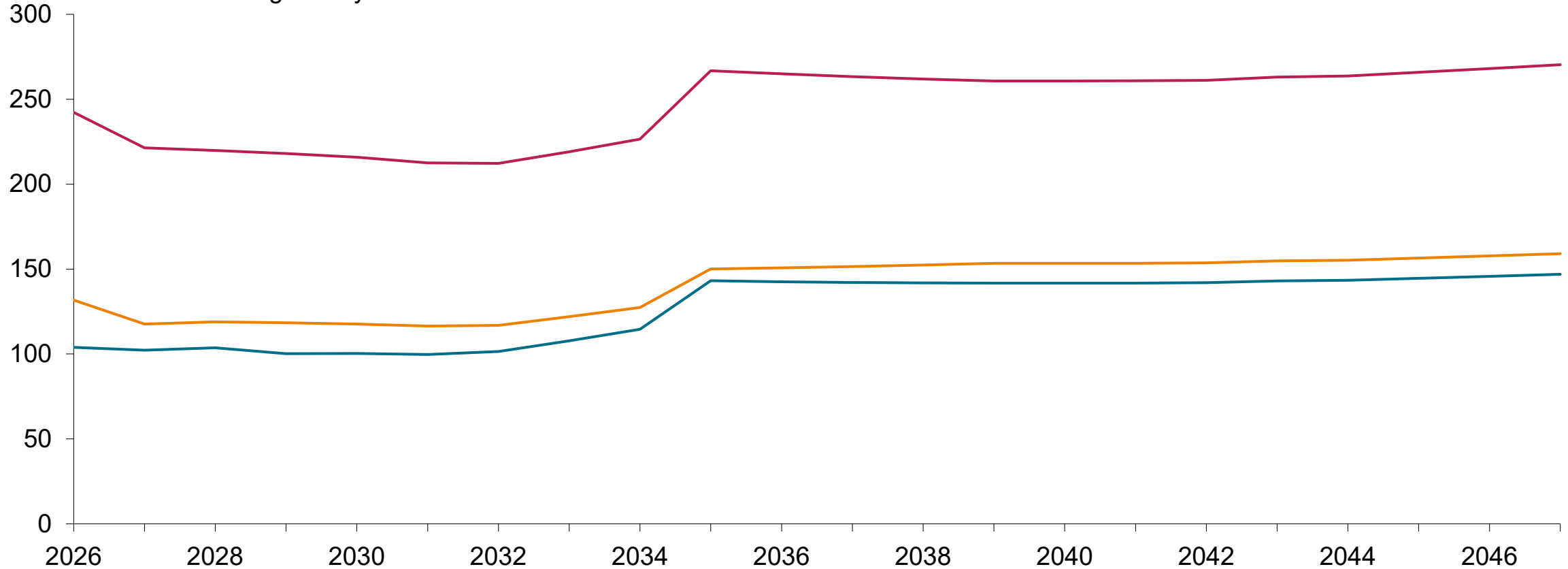


Representative levelized cost of capacity with the phase out of tax credits between 2034 and 2036

PJM levelized cost of capacity

Nominal \$/kW-year

— Large Utility-scale — C&I — Residential



Disclaimer

S&P Global Energy (“SPGE”) is a business division of S&P Global Inc. The reports, data, and information referenced in this document (“Deliverables”) are the copyrighted property of SPGE and represent data, research, opinions, or viewpoints of SPGE. SPGE prepared the Deliverables using reasonable skill and care in accordance with normal industry practice. The Deliverables speak to the original publication date of the Deliverables. The information and opinions expressed in the Deliverables are subject to change without notice and SPGE has no duty or responsibility to update the Deliverables (unless SPGE has expressly agreed to update the Deliverables). Forecasts are inherently uncertain because of events or combinations of events that cannot reasonably be foreseen including the actions of government, individuals, third parties and competitors. The Deliverables are from sources considered by SPGE (in its professional opinion) to be reliable, but SPGE does not assume responsibility for the accuracy or completeness thereof, nor is their accuracy or completeness or the opinions and analyses based upon them warranted.

To the extent permitted by law, SPGE shall not be liable for any errors or omissions or any loss, damage, or expense incurred by reliance on the Deliverables or any statement contained therein, or resulting from any omission. THE DELIVERABLES ARE PROVIDED “AS IS” AND TO THE MAXIMUM EXTENT ALLOWED BY LAW, NEITHER SPGE, ITS AFFILIATES NOR ANY THIRD-PARTY PROVIDERS MAKES ANY REPRESENTATION, WARRANTY, CONDITION, OR UNDERTAKING, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, RELATING TO THE DELIVERABLES OR THE RESULTS OBTAINED IN USING THEM; INCLUDING: A) THEIR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE; OR B) THEIR CONTINUITY, ACCURACY, TIMELINESS OR COMPLETENESS. The Deliverables are supplied without obligation and on the understanding that any recipient who acts upon the Deliverables or otherwise changes its position in reliance thereon does so entirely at its own risk.

The Deliverables should not be construed as financial, investment, legal, or tax advice or any advice regarding any recipient’s corporate or legal structure, assets or, liabilities, financial capital or debt structure, current or potential credit rating or advice directed at improving any recipient’s creditworthiness nor should they be regarded as an offer, recommendation, or as a solicitation of an offer to buy, sell or otherwise deal in any investment or securities or make any other investment decisions. The Deliverables should not be relied on by Client in making any investment or other decision and should not in any way serve as a substitute for other enquiries or procedures which may be appropriate. The Deliverables should not be used as the basis of or input for any ESG rating, score, opinion, or evaluation. The Deliverables should not be reproduced or made available to any other person without SPGE’s prior written consent. Client may not use the Deliverables to transmit, undertake or encourage any unauthorised investment advice or financial promotions, or to generate any advice, recommendations, guidance, publications or alerts made available to its own customers or any other third-parties. Nothing in the Deliverables constitutes a solicitation by SPGE or its Affiliates of the purchase or sale of any loans, securities or investments. SPGE Personnel are not providing legal advice or acting in the capacity of lawyers under any jurisdiction in the performance of Services or delivery of Deliverables. SPGE is not a registered lobbyist and cannot advocate on anyone’s behalf to government officials regarding specific policies. The Deliverables contain the results of SPGE’s independent research and analysis and are intended for general informational purposes only. The Deliverables are not intended, and may not be used, to promote, directly or indirectly, the supply or use of any product or business interest, including, but not limited to, the benefits of any product, business, or business activity for protecting or restoring the environment or mitigating the causes or effects of climate change. No data or opinions contained in the Deliverables constitute a representation to the public with respect to the benefits of any product, business or business activity, and should not be relied on as a recommendation for any specific action to be taken.

S&P Global Inc. also has the following divisions: S&P Dow Jones Indices, S&P Global Market Intelligence, S&P Global Mobility, and S&P Global Ratings, each of which provides different products and services. S&P Global keeps the activities of its business divisions separate from each other in order to preserve the independence and objectivity of their activities. SPGE publishes commodity information, including price assessments and indices and maintains clear structural and operational separation between SPGE’s price assessment activities and the other activities carried out by SPGE and the other business divisions of S&P Global Inc. to safeguard the quality, independence and integrity of its price assessments and indices and ensure they are free from any actual or perceived conflicts of interest. The Deliverables should not be construed or regarded as a recommendation of any specific price assessment or benchmark.

Unless SPGE has expressly agreed otherwise, the Deliverables are not works-made-for-hire and SPGE shall own all right, title, and interest in and to the Deliverables, including all intellectual property rights which subsist in the Deliverables. Use of the Deliverables is subject to any licence terms and restrictions agreed between SPGE and the commissioning Client. The SPGE name(s) and logo(s) and their related trademarks appearing in the Deliverables are the property of S&P Global Inc., or their respective owners.

Christopher Wilfong

Director, Power Market Consulting

Christopher.Wilfong@spglobal.com

Ivonne Pena Cabra

Consulting Manager

Ivonne.pena.cabra@spglobal.com



S&P Global Energy