

Playing Catch Up: Valuation, Resource Classification, and the Future of Community Solar in California

Authors:

Robert Cudd

Sid Shah

Executive Summary

Community solar and storage is an approach to building renewable energy infrastructure which has gained considerable traction in the U.S. over the last 5-10 years. Driven by the need to shift towards a more renewable generation mix and the fact that large-scale renewable generation projects can take decades to reach implementation, state governments have encouraged private developers, investors, and supportive localities to construct smaller-scale solar generation and storage systems closer to where power is consumed. Several states, including New York, Illinois, and Maryland have developed community solar and storage programs that provide utility customers with low-cost, renewable power by developing community solar programs that facilitate the siting, construction, and profitable operation of such resources.

A vitally important aspect of efforts to develop more distributed solar generation and storage capacity is the way that utilities, community choice aggregators (CCAs) and public regulatory commissions value the performance of community solar and storage systems. The valuation of the energy and non-energy benefits of grid-connected generators is a politically sensitive topic because decisions about how generation and storage assets can operate in conjunction with existing infrastructure have short and long-term consequences for ratepayers, the cleantech industry, utilities, and other stakeholders as well. As we discuss in this memorandum, the careful valuation of distributed generation and storage resources can align the interests of utilities, ratepayers, and developers. However, achieving this alignment and growing distributed generation capacity requires that regulators recognize and measure the ability of these resources to provide more than just electricity: as we describe, regulators in states other than California have done so successfully, and California could follow suit if it were to change its current valuation framework. The core issues we identify with California's current approach to community solar and storage are the inconsistent manner in which it applies the energy resource valuation tools it has developed, and as well as the refusal of regulators to perform the measurements necessary to make an empirical determination as to the capacity, locational, and other forms value that distributed generation and storage resources can provide.

Based on our analysis, we believe AB 1813 would help address the valuation issues that have slowed the development of distributed generation and storage in California, and help break the impasse between regulators, some load-serving entities, and the broad coalition of groups supportive of community solar.

Introduction: What is Community Solar and Storage Worth?

This policy memorandum addresses the classification and valuation of community solar and storage. Nationally, community solar and storage is an increasingly popular and successful template for the development of distributed generation and storage resources interconnected to lower-voltage distribution networks. Valued appropriately, community solar and storage can expand access to renewably-generated power for utility customers ineligible for rooftop solar and storage, decrease energy costs for all ratepayers by reducing the need to invest in distribution infrastructure, and spur the growth of domestic cleantech industries and their workforces.

But realizing the potential benefits of community solar and storage in California's regulated electricity market depends on changing the way the state values distributed energy resources (DERs). The subsequent sections explain how community solar programs work, how they structure collaboration between utilities, developers, and communities, and identify specific features of California's current energy resource classification and valuation practices that are contradictory and inconsistent. Like all other forms of energy resource development in a regulated market setting, community solar and storage development in California must involve the careful design of programs to ensure that costs, benefits, and risks are realistically and responsibly addressed. For that reason, we also provide examples of how other states have answered questions about what community solar and storage is worth and how its development may be properly incented.

Community Solar and Storage: Development, Finance, and Compensation

I. Regulated Electricity Markets and Distributed Generation Compensation

In a regulated electricity market, the compensation structures for distributed generation must be carefully calibrated by state public regulatory commissions because generation outside the utility's rate base may erode the revenue the utility collects to recover its fixed infrastructure costs if it is valued improperly. However, distributed generation and storage resources can provide forms of value to utilities and their ratepayers that other kinds of generation resources do not. To encourage the development of distributed generation while avoiding cost shift, utilities and regulators commonly offer sell rates below full retail value, or by adding a fixed monthly service charge to recover the utility's costs for serving distributed generation owners.¹

The challenge for regulators is that distributing resources like rooftop solar and community solar and storage do provide some economic benefits to non-participating customers in the form of avoided utility cost for energy, capacity, and distribution system investments. While compensating rooftop solar at full retail rates does result in cost shifts, a well designed payment structure can reward both participating customers and non-participating customers. California's NEM evolution illustrates how this plays out in practice: as solar costs declined and participation scaled, the CPUC moved from NEM 1.0 (retail-rate compensation for all exports) to NEM 2.0 (with non-bypassable charges to address cost-shift concerns) and ultimately to NEM 3.0, which attempts to align export prices with actual avoided system costs.²

II. The Community Solar Development Process

A community solar project moves through several distinct phases before a single kilowatt-hour reaches a subscriber's bill. The development process typically runs from site origination through site control, site survey and initial design, zoning and permitting, utility interconnection, state program enrollment, and final design, procurement, and construction—a timeline that can stretch from roughly 12 to 24 months in which interconnection alone often represents 50 to 60 percent of total project cost and time.³ Most community solar programs also include a capacity cap (typically less than 5 MW) and require that community solar projects interconnect to the distribution grid.⁴

Subscriber acquisition runs concurrently with late-stage development, and many state programs require a project to demonstrate at least 50 percent subscription at the time it receives permission to operate.⁵

This creates a distinctive financial pressure point: developers must build a subscriber base before they can guarantee revenue, often relying on community-based organizations and third-party subscriber acquisition firms whose costs add to overall project budgets. Consumer protection requirements at the state level, including mandatory savings guarantees for low-income subscribers, cancellation windows, and prohibitions on deceptive marketing, add further compliance complexity to the acquisition process.

III. The Community Solar Capital Stack

The capital stack financing a community solar project is typically layered across three interdependent sources, each with distinct risk profiles, return expectations, and relationships to the federal tax code.

Tax equity, structured most commonly as a partnership flip, accounts for roughly one-third to two-thirds of total project financing.⁶

In a typical transaction, the project sponsor forms a partnership with a tax equity investor to jointly own the renewable energy project LLC. The investor holds a large majority ownership interest initially, often around 99 percent, and claims the federal Investment Tax Credit (ITC) along with accelerated depreciation benefits, before the ownership interest flips to the sponsor once the investor achieves its targeted after-tax return.⁷

The Inflation Reduction Act's transferability provisions have meaningfully changed this picture for smaller developers: Section 6418 now allows ITCs to be sold directly to third-party buyers rather than requiring a full tax equity partnership structure, which keeps the capital stack workable for developers who lack the balance sheet or deal size to attract traditional tax equity investors.⁸ The remaining capital is predominantly project debt, often structured as back-leveraged debt sitting behind the tax equity investor in the repayment hierarchy, with sponsor equity filling the residual gap.⁹ Operating cash flows are distributed in sequence: operating expenses first, then tax equity distributions, then debt service, with any remainder going to the sponsor.¹⁰ Pre-construction and pre-notice-to-proceed financing has become a critical bottleneck for smaller developers, since this capital must be deployed before the ITC is available and before revenue begins flowing from subscribers.¹¹

The capital stack for community solar serving low-income or moderate-income subscribers may also include layered public subsidy (to accelerate deployment or drive bill savings for low-income residents) including state green bank financing, grant funding through programs like Solar for All (where available), and concessionary debt provided through community development financial institutions.

IV. How Community Solar and Storage Are Valued: A State-by-State Comparison

The central question in community solar compensation runs deeper than how much to pay: it concerns what the payment is actually supposed to represent. States that have moved beyond simple net metering have developed meaningfully different answers to this question, ranging from frameworks that treat distributed generation much like wholesale resources to multi-attribute value stacks that attempt to price in both energy and non-energy services. The contrasts between Illinois, New York, Maryland, and California illustrate both the range of regulatory ambition and the degree to which compensation structure determines whether a workable market for community solar and storage exists at all.

A. Illinois: Long-Term REC Contracts Under Illinois Shines

Illinois takes a distinctive approach to community solar compensation through its Illinois Shines program, authorized under the Future Energy Jobs Act (FEJA) in 2016 and substantially expanded under the 2021 Climate and Equitable Jobs Act (CEJA).¹² Rather than compensating only subscribers through a tariff applied to metered output, Illinois Shines structures compensation around several revenue streams: 1) developer revenue around long-term Renewable Energy Credit (REC) contracts purchased by the Illinois Power Agency (IPA) under a 15-year horizon; 2) an inverter rebate which allows the utility to treat the inverter as a regulated asset and provide grid value; and 3) the bill credit revenue, which flows to subscribers and is tied to the their retail electricity rate.

Community solar in Illinois does not receive distribution credits, meaning the compensation framework maps primarily to the wholesale and energy value components that projects deliver. Projects do, however, receive an inverter rebate, compensating for the grid services that could be provided by community solar and storage systems. Any unsubscribed energy from a community solar project must be purchased by utilities at their avoided cost rate at the end of the month.¹³

The Illinois Commerce Commission has since commissioned a full avoided-cost investigation under CEJA's mandate to examine the value of, and compensation for, distributed energy resources, a proceeding that could reshape the compensation structure going forward.¹⁴

The resulting report on this topic from Energy + Environmental Economics, delivered to the Illinois Commerce Commission in January 2025, maps the full range of distributed energy resource benefits

and compensation methodologies, and notes that community solar, unlike rooftop net metering, does not receive distribution credits under the current framework, an asymmetry that may not reflect the actual grid value these projects provide when properly sited and sized.¹⁵

From a developer financing perspective, the REC contract structure has proven highly bankable precisely because it provides a fixed, state-backed revenue stream over a 15-year period that is not subject to retail rate volatility. The Illinois Power Agency sets the amount of capacity necessary to ensure compliance with the state's Renewable Portfolio Standard, and the Adjustable Block Program allocates REC contracts to projects in each capacity block, with prices stepping down as blocks fill.¹⁶

The subscriber-side savings guarantee, typically 10 to 20 percent below retail, is structured into subscription agreements rather than mandated at a fixed statewide rate, giving developers flexibility to set pricing while maintaining the economic proposition for subscribers.

B. New York: The VDER Value Stack

New York's Value of Distributed Energy Resources (VDER) framework, established by the Public Service Commission in 2017 as part of the broader Reforming the Energy Vision (REV) initiative, is the most architecturally ambitious distributed energy compensation structure in the country.¹⁷

Traditional distributed energy tariffs tie compensation to retail rates; VDER compensates resources based on a multi-attribute value stack meant to reflect the actual benefits a resource provides to New York's electric grid, accounting for both the time of day and the location of resource itself. The framework treats distributed generation as a grid asset whose value varies based on when and where it produces energy, rather than as a simple offset against a customer's retail bill.

The Value Stack for Community Distributed Generation projects is composed of several distinct components. The energy value tracks the wholesale price of electricity at the time of generation. The capacity value reflects the contribution the resource makes during peak demand hours, calculated using Installed Capacity (ICAP) rates. A foundational feature of the VDER framework is that the NY Public Service Commission treats all qualifying distributed resources as carrying long-run avoided distribution and transmission value regardless of their location on the grid, embedding that value directly in the stack. The Demand Reduction Value (DRV) captures the project's contribution to reducing distribution system demand. The Locational System Relief Value (LSRV) provides compensation for projects sited in particularly constrained or expensive locations, where local capacity needs are most acute.^{18, 19}

When VDER was first implemented, a Market Transition Credit closed the gap between the VDER value and the retail rate, stepping down as capacity was released. A Community Credit of \$0.05 per kilowatt-hour layered additional compensation on top of the base stack to reflect the social and equity value of shared solar access. Both credits have been fully allocated and are no longer available in any utility territory outside of ConEdison, where a NYSEDA Community Adder remains open because of the difficulty of developing community solar projects in New York City. Projects in all other utility territories now receive only an avoided-costs-based credit.²⁰

The VDER framework has proven especially significant for storage. Storage resources can earn higher returns through VDER than through direct participation in wholesale markets, thanks to the potential to earn higher capacity accreditation along with additional revenue streams such as the DRV, energy arbitrage, and optimized charging opportunities.²¹

NYSEDA maintains both a Solar Value Stack Calculator and a Stand-alone Storage Value Stack Calculator to help developers estimate project compensation.²²

Maryland has since adopted New York's net crediting billing model following a February 2025 PSC order, signaling that the VDER billing architecture is increasingly seen as a national template.

C. Maryland: Retail-Rate Bill Credits and Equity-First Program Design

Maryland's community solar program, administered by the Public Service Commission under authority granted by the Community Solar Energy Generating Systems Pilot Program and subsequently expanded through permanent program legislation, offers one of the most subscriber-favorable compensation structures in the country. Subscriber bill credits are required to be valued the same as a

reduction in metered kilowatt-hours, meaning compensation runs at the full retail rate rather than at an avoided cost or wholesale rate.²³

This approach maximizes the economic value passed through to subscribers and makes the financial proposition straightforward for both subscribers and developers, who are responsible for structuring subscription pricing. The program's design reflects an explicit equity orientation. Projects must allocate at least 40 percent of their kilowatt-hour output to low-and-moderate income (LMI) subscribers unless wholly owned by the subscribers themselves. LMI subscribers cannot be charged more than 90 percent of the monetary value of their bill credits, guaranteeing at least 10 percent savings as a statutory floor. Credit checks are also prohibited for LMI subscriber acquisition.²⁴

Individual project capacity is capped at 5 MW, with projects over 2 MW requiring a Certificate of Public Convenience and Necessity from the Public Service Commission, and all projects must be sited within the same utility service territory as their subscribers, typically serving BGE, Pepco, Delmarva Power, or Potomac Edison customers. The treatment of unsubscribed energy has evolved as the program has matured. Originally, any unsubscribed energy was immediately purchased by the utility at its avoided cost rate. Maryland's 2025 Renewable Energy Certainty Act updated this practice: community solar projects may now bank unsubscribed energy and redistribute the credits to subscribers at any point within a year, with any energy that rolls over the full year paid out at avoided cost.²⁵

The billing mechanism has also recently aligned more closely with New York's net crediting model: following a November 2024 Public Service Commission hearing and a February 2025 order, Maryland utilities are now required to offer the net crediting approach, a significant administrative improvement for project owners and subscribers alike.²⁶

Unlike in Illinois, subscriber organizations in Maryland earn and retain all rights to renewable energy certificates, creating an additional revenue stream that can meaningfully affect project economics.²⁷

D. California: Wholesale Classification, Regulatory Failure, and the Limits of Avoided-Cost-Only Frameworks

California's struggle with community solar is one of the most consequential regulatory failures in the U.S. clean energy transition, and its roots lie in a persistent classification problem. The issue is that front-of-the-meter (FTM) community solar projects in California (meaning projects that interconnect on the utility side of the meter rather than behind a customer's service point), have been treated by the California Public Utilities Commission (CPUC) as wholesale generation resources, rather than distributed retail assets—assets whose value (at least in other states) encompasses avoided distribution and transmission costs, capacity contributions, and locational grid benefits. The CPUC's classification of community solar projects as wholesale generation resources (and their opposition to any reclassification) carries serious structural consequences: it is the reason California has failed to build a workable community solar market despite its reputation as the first among equals in the national effort to build renewable energy infrastructure²⁸

The CPUC's 2024 decision (D.24-05-065) created a Community Renewable Energy Program built on existing wholesale tariffs, primarily the Renewable Energy Market Adjusting Tariff (ReMAT), with a subscription model layered on top. The decision was premised on topping up wholesale revenues with external state and federal funding, specifically the \$250 million Solar for All grant awarded to California by the EPA, which was essential to make the program financially viable.²⁹ When the Trump Administration cancelled that federal funding, the wholesale-only compensation structure was left standing alone. The CPUC's June 2026 vote finalized the program using the existing ReMAT pricing structure for grid export compensation, rejecting the solar industry-backed Net Value Billing Tariff (NVBT), which would have based compensation on the hourly value of energy produced.³⁰ The Solar Energy Industries Association (SEIA) responded that the CPUC's decision virtually ensures no new community solar projects will be developed in the state.³¹ The core technical objection from the industry is precise: by limiting compensation to wholesale prices based on standalone, large solar projects under legacy PURPA-based frameworks and declining to recognize the full value that distributed solar and storage provide to the grid, the CPUC's framework makes it impossible for firms to attract private capital.³²

Other proposals to change how community solar projects are classified (and thus valued) have also been opposed by the CPUC. The decision finalizing the Community Renewable Energy (CRE) Program determined that community solar projects in California do not qualify as load-modifying resources.

Classifying community solar projects as load-modifying resources (as is the practice for other distributed energy resources) would provide assurance that load serving entities (the utilities and community choice aggregators) can count them in their load reductions and thereby have lower Resource Adequacy procurement requirements. The CPUC's refusal to reclassify community solar and storage foreclosed upon a significant additional revenue stream for developers. The CPUC's CRE Program also does not include resource adequacy value for community solar and storage because CPUC and ISO rules stipulate that only projects included in cluster interconnection studies can receive them.³³ The CPUC further concluded that it is unable to determine whether community solar projects avoid any transmission or distribution costs, even while maintaining its own Avoided Cost Calculator that critics argue would demonstrate precisely those benefits if applied consistently.³⁴

The legislative response to this impasse between the CPUC and solar industry in California is [Assembly Bill 1813](#) (Ward), which would require the CPUC to establish a mechanism to determine whether community renewable energy generators are load-modifying resources and to calculate avoided costs using the commission's own methods for calculating the full set of benefits of eligible customer-generator distributed energy resources. AB 1813 passed out of the Assembly with bipartisan support from the Committee on Utilities and Energy in May 2026 and was under consideration by the Senate Committee on Appropriations at time of writing.³⁵ Whether or not AB 1813 passes, California's community solar situation illustrates in sharp relief what is at stake in compensation structure debates: a state that leads the nation in installed solar capacity, with 35,000 MW of installed solar (providing nearly 30 percent of state electricity generation), and that has created the most ambitious storage deployment targets in the country, targeting 52,000 MW of storage by 2045, has nonetheless been unable to build a workable FTM community solar market. However, community solar and storage development is at a standstill because its existing regulatory framework prices those assets as if their only value is what a generic wholesale generator would earn in the California Independent System Operator's spot market.^{36, 37}

V. Why California May Be Missing the Mark on Properly Evaluating These Resources

The CPUC's repeated refusal to compensate community solar and storage at anything above a wholesale avoided cost floor reflects a set of methodological and institutional commitments that, taken together, systematically exclude the categories of value that make distributed solar and storage meaningfully different from generic wholesale generation. Three specific gaps in California's current valuation framework deserve closer attention by decision-makers: the non-application of the state's own Avoided Cost Calculator to FTM community solar; the categorical denial of Resource Adequacy credit eligibility; and the failure to recognize locational distribution and transmission value. Each represents a decision to ignore documented grid benefits of community scale solar and storage resources - benefits that other states have successfully incorporated into their community solar and storage programs.

A. The Avoided Cost Calculator Is Not Being Applied to the Resources It Was Built to Measure

The CPUC's Avoided Cost Calculator (ACC) was purpose built to measure the value that distributed energy resources generate when interconnected to California's electrical grid. The ACC incorporates production simulation modeling to estimate the energy, capacity, ancillary services, and emissions benefits produced when distributed energy resources generate electricity, allowing for comparison between such resources and other alternatives for procurement.³⁸

It is the tool the CPUC uses to set the export compensation rates under NEM 3.0 for rooftop solar, in addition to being a methodological foundation for how the state values distributed generation in a variety of other instances. Yet for community solar and storage projects, the CPUC determined it was unreasonable to apply the ACC, on the grounds that these resources would not reliably avoid costs that ratepayers would otherwise bear for generation capacity, distribution, and transmission.³⁹

This is a circular argument of the first order: The ACC cannot be used to value community solar because the CPUC has already determined that community solar does not avoid the costs the ACC is designed to measure. Yet the CPUC has never performed the site-specific analysis required to determine whether a given community solar project, properly sited and dispatched, would in fact

avoid those costs. Advocates including the Executive Director of Californians for Local, Affordable Solar and Storage have noted the paradox directly: the CPUC is not applying its own calculator to value these types of projects, and all advocates are asking is that the commission apply it and see what the results show.⁴⁰

The California Alliance for Community Energy has similarly documented that the ACC, even when applied to rooftop solar, already undervalues distributed resources by failing to capture the full greenhouse gas reduction benefits from more rapid deployment of distributed versus utility-scale renewables.⁴¹ A further structural limitation of the ACC as applied in California is that it produces a system-wide average avoided cost rather than a location-specific determination of value. Because avoided cost is a general value applied across the entirety of California's grid, the ACC cannot capture locational benefits down to the level of individual substations and circuits.⁴² These issues, however, do not present insurmountable barriers to the development of California's solar market.

In fact, New York's VDER framework was designed to address this very set of distributed resource valuation challenges. VDER's authors created the Demand Reduction Value (DRV) and the Locational System Relief Value (LSRV) as distinct compensation components aimed at compensating projects for their distribution value. DRV is compensated to all projects on the VDER tariff, reflecting the Commission's determination that areas without near term distribution upgrades nonetheless have an avoided cost distribution value. LSRV is aimed at areas with acute, higher cost needs where injections from DERs can offset these higher costs. Between these two components, VDER compensates projects for their long-run avoided distribution cost value while providing additional incentive to locate projects in areas with the most acute need. The reasoning applied by regulators in New York contrasts sharply with the arguments against including locational value California. Rather than developing a framework for calculating said value, the CPUC has held that uncertainty about the locational value of distributed resources is a reason not to compensate projects for location-specific relief value.

B. Denial of Resource Adequacy Credit Eligibility Ignores Documented Capacity Value

The CPUC's determination that community solar projects do not qualify as load-modifying resources, and therefore cannot generate Resource Adequacy (RA) value for utilities and community choice aggregators, is a significant valuation error with considerable financial consequences. RA is a core mechanism through which California procures the generation capacity needed to ensure peak or net-peak reliably. When a resource qualifies for RA, its owner can sell capacity to load-serving entities at prices that reflect the full scarcity value of generation during peak and net-peak periods. Denying that credit to community solar projects treats them as being incapable of contributing to peak reliability, even when storage-paired projects are specifically designed and dispatched to do so.⁴³ One clear way to provide this RA value is by treating resources as "load modifying", which has the effect of reducing the overall amount of capacity a utility or CCA must purchase. This is already done for rooftop solar and some virtual power plant (VPP) programs.

An April 2025 study commissioned by the Coalition for Community Solar Access and conducted by [Aurora Energy Research](#) directly contradicts the CPUC's determination that community solar and storage projects cannot provide RA benefits. Modeling capacity expansion and simulating production in the CAISO system, Aurora found that a scaled deployment of community solar and storage in California would reduce statewide capacity required for Resource Adequacy, producing \$4.6 billion in associated cost savings over a 20-year horizon. The same study found that community solar and storage would reduce electricity prices by \$4.2 billion by bypassing transmission constraints and displacing gas generation, avoid \$910 million in future distribution infrastructure upgrades by using the existing distribution system, and reduce total California power system costs by 0.6 percent, equivalent to \$6.5 billion in savings over 20 years.⁴⁴ None of these benefits are reflected in the CPUC's compensation framework because the CPUC has not measured them.

Intriguingly, the CPUC's own storage procurement work has reached adjacent conclusions. The 2024 energy storage scaling study commissioned by the CPUC identified a persistent disconnect between customer-sited energy storage resources and the services they could provide to the broader grid, noting growing needs for community resilience solutions and evidence that smaller distributed resources can produce high ratepayer value due to their unique ability to produce value streams for both the transmission system and the distribution system simultaneously.⁴⁵ The study the CPUC

commissioned documented the multi-attribute value of distributed storage assets at the grid edge. The community solar proceeding has simply declined to recognize or act on these findings.

Front-of-the-meter distributed energy resources offer a complementary deployment pathway to utility-scale generation, one that draws on different siting, permitting, and interconnection processes and therefore does not compete directly with large-scale projects for the same development pipeline. The SB 100 Joint Agency Report modeling assumes average annual solar build rates of approximately 5 GW per year between 2025 and 2045, a level that substantially exceeds California's historical deployment rate of 1 to 3 GW per year, and the CPUC's own IRP Transmission Planning Process Ruling has noted that the implied utility-scale solar buildout "calls into question whether it can feasibly be built in the quantities and timing identified." FTM distributed energy resources can help address these deployment pressures precisely because they do not add to the bottlenecks driving tightness in utility-scale markets.

Regarding interconnection, properly sited FTM projects that achieve load-modifier status by serving downstream distribution-connected load can interconnect as Energy Only resources through Rule 21 or the Western Distribution Access Tariff (WDAT), without requiring a lengthy CAISO deliverability study. DERs can complete interconnection studies in under 12 months and reach commercial operation within approximately 24 months, and the WDAT Fast Track process for projects under 2 MWac provides an even faster pathway. On permitting, FTM DERs have a smaller geographic footprint and generally lack a federal approvals nexus, reducing exposure to federal obstruction. With respect to land use, a 5 MW solar plus storage ground-mount project requires roughly 30 acres, and the mid-scale 3 to 5 MW market in California is largely undeveloped, meaning the best sites in this capacity range remain available. Such projects can be sited in the built environment, including brownfields, commercial and industrial rooftops, and shared agricultural sites.

Aurora Energy Research modeling found that deploying approximately 5.4 GW of distributed solar-plus-storage across CAISO Local Reliability Areas could ease pressure on utility-scale build rates, lower in-state emissions from gas generation, and reduce system costs by approximately \$6.5 billion over twenty years through avoided energy, capacity, and transmission costs. The CCSA/SEIA letter also notes that the Joint Agencies had previously committed to evaluating a High-DER scenario in the SB 100 study planning process, including in the October 2023 Analytical Framework Workshop and the February 2024 Inputs and Assumptions Workshop, but that scenario was not included in the February 2026 draft results.⁴⁶

C. The Structural Contradiction: A State That Builds Grid-Edge Resources While Refusing to Value Them

California's position produces a structural contradiction that is difficult to rationalize on purely technical grounds. The state leads the nation in utility-scale storage deployment and has set a target of 52,000 MW of storage by 2045.⁴⁷ It has invested heavily in grid modeling, integrated resource planning, and demand-side management programs. It has developed the Avoided Cost Calculator specifically to price distributed resources. And yet when front-of-the-meter community solar and storage projects are evaluated for compensation, the CPUC applies none of these tools and instead defaults to the ReMAT wholesale tariff, a mechanism originally designed for small-scale renewable procurements under PURPA, rather than for valuing co-located solar and storage assets capable of providing peak capacity, distribution deferral, and locational congestion relief simultaneously.⁴⁸ The Utility Dive commentary on the omission of community solar from California's distributed energy policies framed this contradiction as a missed opportunity to enable distributed solar to support the grid through careful siting and sizing of resources. The authors of the same Utility Dive article noted that the CPUC's current approach sacrifices the economic, resiliency, and grid support benefits that the state and utility ratepayers could realize from properly designed community solar deployments.⁴⁹

The Clean Coalition, in comments to the CPUC on the 2026 ACC guidelines, has specifically called for the inclusion of front-of-the-meter resources in the ACC and greater geographic granularity in the calculator's outputs, both of which would be necessary preconditions for properly valuing community solar and storage in the California context.⁵⁰

Taken together, the three valuation failures described in this section - non-application of the ACC, categorical RA ineligibility, and zero locational distribution and transmission value recognition - compound upon one another. A project that cannot earn RA credits cannot cover its capacity costs. A project valued at a system-wide average avoided cost rather than a locational one cannot recover the

value associated with its siting decisions. A project excluded from the ACC framework cannot demonstrate through the commission's own tools that it avoids the costs the commission says it does not avoid. The result is a self-sealing regulatory logic that makes it structurally impossible for community solar and storage to demonstrate their value within the frameworks the CPUC controls, while the commission simultaneously declines to apply the frameworks that would reveal it.^{51, 52}

VI. Comparative Summary: State Compensation Structures

The four states examined in this analysis illustrate a spectrum of regulatory philosophy on distributed energy compensation. California's wholesale-only framework has produced no meaningful community solar market. New York's VDER value stack and Maryland's retail-rate bill credit structure have created active markets with demonstrated project financing. Illinois occupies a middle position, using long-term REC contracts to provide developer revenue certainty while passing subscriber savings through separately.

State	Compensation Basis	Developer Revenue Mechanism	Storage Valuation	Market Status
New York	VDER Value Stack (energy, capacity, DRV, LSRV, Community Credit)	Bill credits via Value Stack; monetized through subscriber subscription fees	Strong: storage earns higher returns through VDER than wholesale markets via multi-attribute valuation	Active; significant project financing underway for solar, storage, and hybrid projects
Maryland	Full retail-rate bill credit (kWh-equivalent valuation)	Subscription fees plus SREC revenue retained by developer	Developing; program primarily solar-focused but storage eligible	Active; strong equity requirements, no program cap, net crediting model adopted Feb. 2025
Illinois	REC contracts (15-yr IPA purchase) plus retail subscriber bill credits	Long-term REC contract revenue from Illinois Shines / IPA	Limited; program primarily solar-focused under current Illinois Shines structure	Active; highly bankable due to long-term state REC contracts
California	Wholesale avoided cost only (ReMAT pricing)	No viable private developer revenue at current compensation levels	Not meaningfully valued; CPUC denies RA credit eligibility and distribution avoided-cost recognition	Non-functional; no market-rate community solar projects built under current framework

Conclusion: AB 1813 is a critical step towards a scalable and equitable build-out of renewable, community-scale energy infrastructure

The evidence assembled in this memorandum points toward a single, consistent finding: how a state classifies and values distributed energy resources is a constitutive decision about which benefits

count, whose costs are recoverable, and which markets can exist at all. Illinois, New York, and Maryland have each demonstrated, through different program architectures, that community solar and storage can be financed, built, and operated in ways that deliver measurable savings to subscribers, generate reliable returns for private investors, and contribute to grid reliability. The variation across those three states also demonstrates that there is no single correct design for programs: long-term REC contracts, retail-rate bill credits, and multi-attribute value stacks each represent workable answers to the same underlying question about how to compensate distributed generation fairly and effectively. California's experience stands apart because the state has approached the valuation of community solar and storage in ways that preclude that question from being asked at all.

What the California case reveals, examined alongside the comparative state evidence, is a gap between the state's stated energy policy objectives and the regulatory instruments it has deployed to advance them. California has articulated among the most ambitious distributed energy and storage targets in the country, invested substantially in the modeling and planning infrastructure needed to pursue those targets, and developed analytical tools, including the Avoided Cost Calculator, capable of measuring the full range of benefits that distributed solar and storage resources provide. The persistent non-application of those tools to front-of-the-meter community solar projects, and the exclusion of such projects from resource adequacy and load-modifying resource classifications, raises questions that warrant further investigation. Does the current compensation framework accurately reflect the costs and benefits of community solar to California ratepayers. Would the state's existing valuation methodologies, if applied consistently and with appropriate geographic granularity, produce surprising or encouraging results?.

These are empirical questions, and they deserve empirical answers. The experience of peer states, and the independent modeling conducted by researchers and energy consultants examining the California grid, suggest that community solar and storage may provide benefits to ratepayers and to the grid that the current framework does not capture. Whether and to what degree that holds in California's specific regulatory and infrastructural context is a question that is answerable with the methods available. Rigorous, publicly available analysis - using the state's own valuation methodologies for full range of services distributed resources can provide - could answer to a suitable degree of precision. That analysis, wherever it leads, could provide a more durable foundation for California's community solar policy than the practices and programs that exist currently.

Key Sources

Net Metering and Compensation Policy

- Tom Stanton, *Review of State Net Energy Metering and Successor Rate Designs*, NRRI Report No. 19-01 (NARUC/NRRI, 2019): <https://pubs.naruc.org/pub/A107102C-92E5-776D-4114-9148841DE66B>

Development Process and Interconnection

- New Mexico CCSA Community Solar presentation: [https://www.nmlegis.gov/\(X\(1\)S\(4qv1sisxq1qaf1cpi0sbk52u\)\)/handouts/WNR%20102824%20Item%209%20CCSA%20Com](https://www.nmlegis.gov/(X(1)S(4qv1sisxq1qaf1cpi0sbk52u))/handouts/WNR%20102824%20Item%209%20CCSA%20Com)
- Stoel Rives, *Law of Solar, Community Solar Programs*: <https://www.stoel.com/insights/reports/the-law-of-solar/community-solar>
- Ballard Spahr, *Community Solar alert*: <https://www.ballardspahr.com/insights/alerts-and-articles/2024/04/community-solar-major-moves-in-pennsylvania-maryland-and-california>

Capital Stack and Tax Equity

- ACORE, *The Risk Profile of Renewable Energy Tax Equity Investments*: <https://acore.org/resources/the-risk-profile-of-renewable-energy-tax-equity-investments/>
- Ballast Rock, *Community Solar Lending: Navigating the ITC Sunset*: <https://www.ballastrock.com/insights/solar-lending-itc-sunset-opportunities>
- Stoel Rives, *Law of Solar, Project Finance*: <https://www.stoel.com/insights/reports/the-law-of-solar/project-finance-for-solar-projects>
- Renewables Valuation Institute, *Tax Equity in U.S. Renewables*: <https://courses.renewablesvaluationinstitute.com/pages/academy/tax-equity-in-us-renewables-itc-ptc-structures>

Illinois

- ILSR, *Illinois Community Solar Program*: <https://ilsr.org/article/energy-democracy/illinois-community-solar-program/>
- E3/Illinois Commerce Commission, *The Value of, and Compensation for, Distributed Energy Resources in Illinois (January 2025)*: <https://www.ethree.com/wp-content/uploads/2025/01/ICC-VDER-Report-FINAL-2025-1-17.pdf>
- Illinois Commerce Commission, *CEJA DER Investigation*: <https://icc.illinois.gov/programs/climate-and-equitable-jobs-act-implementation-investigation>

New York

- NYSEDA, *Value of Distributed Energy Resources*: <https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Value-of-Distributed-Energy-Resources>
- NYSEDA, *Value Stack Resources*: <https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Value-of-Distributed-Energy-Resources/Value-Stack-Resources>
- NYSEDA, *Value Stack Fact Sheet*: <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/NY-Sun/value-stack-overview.pdf>
- Ascend Analytics, *VDER overview*: <https://www.ascendanalytics.com/blog/vder-new-yorks-valuable-distributed-energy-generation-opportunity>
- Joint Utilities of NY, *VDER*: <https://jointutilitiesofny.org/distributed-generation/VDER>

Maryland

- Maryland PSC, *Community Solar Program*: <https://psc.maryland.gov/regulated-utilities/electricity/renewable-energy/community-solar-program/>
- ILSR, *Maryland's Community Solar Program*: <https://ilsr.org/article/energy-democracy/marylands-community-solar-program/>
- Solstice, *Maryland Policy Tracker*: <https://site.solstice.us/policy/maryland>
- Maryland PSC, *CSEGS Pilot Report*: <https://psc.maryland.gov/wp-content/uploads/Report-on-the-Community-Solar-Energy-Generating-Systems-CSEGS.pdf>

California

- CPUC, *Community Solar in California*: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/community-solar-in-california>
- CPUC, *CRE Program Decision (D.24-05-065)*: <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-expands-existing-community-solar>
- CCSA/Renewable Energy World, *California cant seem to figure out community solar*: <https://www.renewableenergyworld.com/solar/community-solar/two-steps-forward-one-step-back-california-cant-seem-to-figure-out-community-solar/>
- SEIA, *statement on CPUC proposed decision*: <https://seia.org/news/statement-on-cpuc-community-solar-decision/>
- pv magazine, *June 2026: California doubles down on unworkable community solar program*: <https://www.pv-magazine.com/2026/06/15/california-doubles-down-on-unworkable-community-solar-program/>
- Utility Dive, *AB 1813 and CPUC final decision*: <https://www.utilitydive.com/news/cpuc-final-decision-community-solar-program/820234/>
- Utility Dive, *California omission of community solar*: <https://www.utilitydive.com/news/californias-omission-of-community-solar-from-distributed-energy-policies-i/618451/>
- Solar Power World, *June 2026: CPUC passes through failed community solar program industry advocates say*: <https://www.solarpowerworldonline.com/2026/06/cpuc-passes-through-failed-community-solar-program-industry-advocates-say/>
- Aurora Energy Research/CCSA, *The Value of Community Solar and Storage in CAISO (2025)*: <https://communitysolaraccess.org/wp-content/uploads/the-value-of-community-solar-and-storage-in-caiso.pdf>
- CCSA, *Aurora study press release*: <https://communitysolaraccess.org/news/new-study-community-solar-and-storage-would-save-california-ratepayers-6-5-billion-and-deliver-lower-bills-for-everyone>
- CPUC, *2024 ACC Documentation*: <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/demand-side-management/acc-models-latest-version/updated-2024-acc-documentation-v1b.pdf>
- California Alliance for Community Energy, *ACC Analysis*: <https://cacommunityenergy.org/the-avoided-cost-calculator-and-why-it-matters/>
- Canary Media, *The Avoided Cost Calculator*: <https://www.canarymedia.com/articles/policy-regulation/the-avoided-cost-calculator-the-controversial-metric-at-the-center-of-californias-solar-net-metering-fight>

- CPUC, *Scaling Up and Crossing Bounds (Energy Storage Scaling Study, 2024)*: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-storage/2024-05-01_lumen_scaling-up-and-crossing-bounds-reportfinal.pdf
- Clean Coalition, *ACC Comments and Regulatory Filings*: <https://clean-coalition.org/regulatory-filings/>

Footnotes

1. Stanton, NRRI 19-01: <https://pubs.naruc.org/pub/A107102C-92E5-776D-4114-9148841DE66B>
2. *Ibid.*
3. CCSA/NM Legislature: [https://www.nmlegis.gov/\(X\(1\)S\(4qv1sisxq1qaflcpi0sbk52u\)\)/handouts/WNR%20102824%20Item%209%20CCSA%20Comr](https://www.nmlegis.gov/(X(1)S(4qv1sisxq1qaflcpi0sbk52u))/handouts/WNR%20102824%20Item%209%20CCSA%20Comr)
4. Stoel Rives, *Law of Solar*: <https://www.stoel.com/insights/reports/the-law-of-solar/community-solar>
5. Ballard Spahr: <https://www.ballardspahr.com/insights/alerts-and-articles/2024/04/community-solar-major-moves-in-pennsylvania-maryland-and-california>
6. ACORE: <https://acore.org/resources/the-risk-profile-of-renewable-energy-tax-equity-investments/>
7. Stoel Rives, *Project Finance*: <https://www.stoel.com/insights/reports/the-law-of-solar/project-finance-for-solar-projects>
8. Ballast Rock: <https://www.ballastrock.com/insights/solar-lending-itc-sunset-opportunities>
9. ACORE: <https://acore.org/resources/the-risk-profile-of-renewable-energy-tax-equity-investments/>
10. Renewables Valuation Institute: <https://courses.renewablesvaluationinstitute.com/pages/academy/tax-equity-in-us-renewables-itc-ptc-structures>
11. Ballast Rock: <https://www.ballastrock.com/insights/solar-lending-itc-sunset-opportunities>
12. ILSR, *Illinois Community Solar*: <https://ilsr.org/article/energy-democracy/illinois-community-solar-program/>
13. *Ibid.*
14. ICC, *CEJA DER Investigation*: <https://icc.illinois.gov/programs/climate-and-equitable-jobs-act-implementation-investigation>
15. E3/ICC, *Value of DERs in Illinois*: <https://www.ethree.com/wp-content/uploads/2025/01/ICC-VDER-Report-FINAL-2025-1-17.pdf>
16. ILSR, *Illinois Community Solar*: <https://ilsr.org/article/energy-democracy/illinois-community-solar-program/>
17. <<https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Value-of-Distributed-Energy-Resources>
18. <<https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/NY-Sun/value-stack-overview.pdf>
19. <<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={10580F9B-0000-CC32-B11D-5AF301DDD7E9}>
20. <<https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Dashboards-and-incentives/Community-Adder>
21. <<https://www.ascendanalytics.com/blog/vder-new-yorks-valuable-distributed-energy-generation-opportunity>

22. <<https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Value-of-Distributed-Energy-Resources/Value-Stack-Resources> 
23. ILSR, Maryland Community Solar: <https://ilsr.org/article/energy-democracy/marylands-community-solar-program/> 
24. Maryland PSC, Community Solar: <https://psc.maryland.gov/regulated-utilities/electricity/renewable-energy/community-solar-program/> 
25. Solstice, Maryland Policy: <https://site.solstice.us/policy/maryland> 
26. *Ibid.* 
27. ILSR, Maryland Community Solar: <https://ilsr.org/article/energy-democracy/marylands-community-solar-program/> 
28. CPUC, Community Solar in California: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/community-solar-in-california> 
29. CPUC, CRE Decision: <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-expands-existing-community-solar> 
30. PV magazine, June 2026: <https://www.pv-magazine.com/2026/06/15/california-doubles-down-on-unworkable-community-solar-program/> 
31. SEIA statement: <https://seia.org/news/statement-on-cpuc-community-solar-decision/> 
32. CCSA/Renewable Energy World: <https://www.renewableenergyworld.com/solar/community-solar/two-steps-forward-one-step-back-california-cant-seem-to-figure-out-community-solar/> 
33. Berkeley Goldman Resource Adequacy Primer
https://gspp.berkeley.edu/archived/files/page/Draft_Resource_Adequacy_Primer.pdf 
34. Utility Dive, AB 1813: <https://www.utilitydive.com/news/cpuc-final-decision-community-solar-program/820234/> 
35. Utility Dive, AB 1813: <https://www.utilitydive.com/news/cpuc-final-decision-community-solar-program/820234/> 
36. Solar Power World, June 2026: <https://www.solarpowerworldonline.com/2026/06/cpuc-passes-through-failed-community-solar-program-industry-advocates-say/> 
37. CPUC, Community Solar in California: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/community-solar-in-california> 
38. CPUC, 2024 ACC Documentation: <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/demand-side-management/acc-models-latest-version/updated-2024-acc-documentation-v1b.pdf> 
39. Utility Dive, AB 1813: <https://www.utilitydive.com/news/cpuc-final-decision-community-solar-program/820234/> 
40. Utility Dive, AB 1813: <https://www.utilitydive.com/news/cpuc-final-decision-community-solar-program/820234/> 
41. CA Alliance for Community Energy, ACC Analysis: <https://cacomunityenergy.org/the-avoided-cost-calculator-and-why-it-matters/> 
42. Canary Media, ACC Analysis: <https://www.canarymedia.com/articles/policy-regulation/the-avoided-cost-calculator-the-controversial-metric-at-the-center-of-californias-solar-net-metering-fight> 
43. Utility Dive, AB 1813: <https://www.utilitydive.com/news/cpuc-final-decision-community-solar-program/820234/> 
44. Aurora Energy Research/CCSA, Value of Community Solar and Storage in CAISO:
<https://communitysolaraccess.org/wp-content/uploads/the-value-of-community-solar-and-storage-in-caiso.pdf> 

45. CPUC, Scaling Up and Crossing Bounds: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-storage/2024-05-01_lumen_scaling-up-and-crossing-bounds-reportfinal.pdf 
46. Coalition for Community Solar Access and Solar Energy Industries Association, *CCSA and SEIA Joint Comments on SB 100 Draft Results Workshop*, Docket No. 23-SB-100, California Energy Commission (March 5, 2026) (TN 268961): <https://efiling.energy.ca.gov/GetDocument.aspx?tn=268961&DocumentContentId=106154> 
47. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-storage-system-survey> 
48. CCSA/Renewable Energy World: <https://www.renewableenergyworld.com/solar/community-solar/two-steps-forward-one-step-back-california-cant-seem-to-figure-out-community-solar/> 
49. Utility Dive, CA Community Solar Omission: <https://www.utilitydive.com/news/californias-omission-of-community-solar-from-distributed-energy-policies-i/618451/> 
50. Clean Coalition, ACC Comments: <https://clean-coalition.org/regulatory-filings/> 
51. Aurora Energy Research/CCSA: <https://communitysolaraccess.org/wp-content/uploads/the-value-of-community-solar-and-storage-in-caiso.pdf> 
52. Utility Dive, AB 1813: <https://www.utilitydive.com/news/cpuc-final-decision-community-solar-program/820234/> 

UCLA CCSC