June 17, 2022

California Energy Commission
Docket Unit, MS-4
715 P Street
Sacramento, CA 95814

Re: Docket No. 22-OII-01, Comments on Order Instituting Informational Proceeding

I. Introduction

The California Solar and Storage Association, Advanced Energy Economy, California Energy Storage Alliance, Enel X, Sunnova, Sunrun, AutoGrid, and PowerFlex (collectively, the Joint DER Parties) commend the California Energy Commission's (CEC) leadership in initiating the Order Instituting Informational Proceeding on Distributed Energy Resources in California's Energy Future. The Joint DER Parties represent a broad array of companies and organizations across the distributed energy resource (DER) space, including but not limited to distributed solar and energy storage developers, microgrid developers, energy efficiency and demand response providers, electric vehicle charging hardware and software providers, DER aggregators, and other technology solution providers at the grid edge. As companies and trade associations with extensive experience operating in California and engaging with the CEC, the Joint DER Parties appreciate the opportunity to provide their perspective on this critical topic.

As the CEC acknowledges in the Order Instituting Informational Proceeding (OIIP), distributed energy resources play a fundamental role in achieving California's renewable energy goals and supporting the decarbonization of transportation and building sectors.[1] This finding is reaffirmed by the CEC's 2021 Integrated Energy Policy Report (IEPR), the 2021 SB 100 Joint Agency Report, the California Public Utilities Commission's (CPUC) DER Action Plan 2.0, and many other reports, decisions, and materials adopted by the CEC and its sister agencies. The Joint DER Parties believe that this proceeding can be an important venue for increased collaboration between the CEC, CPUC, and the California Independent System Operator (CAISO) on interagency DER issues and for developing clear, actionable recommendations that optimize the benefits DERs can provide. In support of these overarching goals, the Joint DER Parties make the following recommendations and observations to guide the development of this proceeding:

- In examining DERs today, the proceeding should acknowledge that DER programs, rates, and incentives are at an inflection point.
- Exploration of DER future scenarios in this proceeding should begin with recognition of the multiple values of different kinds of DERs and their ability to serve as grid balancing resources.
- Near-term uncertainty across key factors determining DER adoption poses challenges in accurately forecasting and encouraging growth. Predictability of, and access to, grid-facing value streams and market opportunities is key to ensuring DER growth.
- The proceeding should include robust exploration of a future DER vision and policy support to achieve it.
- California agencies and stakeholders must work together to prioritize DERs for California's energy future.

II. Comments

A. In examining DERs today, the proceeding should acknowledge that DER programs, rates, and incentives are at an inflection point.

In the June 1 kickoff workshop, CEC staff proposed that this proceeding examine four topic areas, the first of which is DERs today: the role and status of DERs under existing state policy. From the outset, it is important for the CEC to recognize that California has arrived at a critical juncture in its overarching DER policy. How the state proceeds will not only determine its long-term DER growth trajectory, but also whether it achieves its broader energy and climate goals in a cost-effective, reliable, and equitable manner.

At the core of this inflection point in California's DER policy is the recognition that legacy incentives for DERs are either nearly exhausted or facing a substantial overhaul. Most notably,

[1] OIIP, p. 2. Available at https://efiling.energy.ca.gov/GetDocument.aspx?tn=242276&DocumentContentId=75777.

the proposed decision issued in December 2021 in the CPUC's proceeding on the future of net energy metering (NEM) proposed to tie export compensation to avoid cost calculator values while introducing substantial fixed charges—unprecedented across the US—on NEM customers of major investor-owned utilities in the state.[2] Although the CPUC has yet to adopt a final decision in this proceeding, the proposed decision's abrupt departure from the existing NEM paradigm has generated significant business and regulatory uncertainty that may ultimately inhibit the adoption of behind-the-meter (BTM) DERs that provide demonstrable grid, customer, and environmental benefits. Additionally, funding for the CPUC's long-standing Self-Generation Incentive Program (SGIP), which has been instrumental for supporting adoption of energy storage and other distributed generation technologies, is nearly exhausted. While recent state budget proposals have suggested that SGIP funds, or comparable incentives for BTM resources used for reliability or resiliency, may be replenished in the near term, this uncertainty creates material business challenges for companies seeking to support the deployment of distributed energy storage and for customers seeking to adopt these technologies. The Joint DER Parties acknowledge that the CEC does not have the authority to unilaterally determine the outcome of these incentive programs; however, it is important to recognize this context as the CEC begins to make recommendations to refine and improve DER policy for the benefit of the grid, utility customers, and state public policy goals.

At the same time, beneficial electrification technologies, such as electric vehicle supply equipment (EVSE), heat pumps, and electric appliances, are beginning to proliferate in part as a result of CEC and CPUC technology incentives. These DERs and the load flexibility they enable are not only critical for achieving California's broader climate goals; they can also put downward pressure on electricity rates for all utility customers by spreading the recovery of fixed utility costs over a larger amount of electricity sales during off-peak periods.[3] However, recent increases in utility electricity rates threaten to slow the adoption of these technologies. To ensure that beneficial electrification technologies become grid assets and not grid liabilities, it is important for the CEC, CPUC, and CAISO to recognize and appropriately incentivize the load flexibility enabled by transportation electrification (TE) and building electrification (BE) while ensuring a seamless DER customer experience.

DERs also have significant potential to defer or avoid traditional distribution system upgrades. However, the state's current Distribution Investment Deferral Framework (DIDF) has largely failed to procure DERs as non-wires alternatives (NWAs). This challenge is partially attributable to the specificity of highly local circuit or substation targets in NWA solicitations, diversity of grid needs that NWAs would be expected to cover, short lead times for procurement and deployment, and DER incrementality issues, which, in isolation or in combination, make it difficult for DER providers to stand up a responsive, cost-effective

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[2] Proposed Decision Revising Net Energy Metering Tariff and Subtariffs. CPUC, R.20-08-020. Issued December 13, 2021.

[3] Draft Transportation Electrification Framework—Energy Division Staff Proposal, p. 110. CPUC, R.18-12-006. Issued February 2020. https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M326/K281/326281940.PDF

resource.[4] The Joint DER Parties understand that one of the objectives of the CPUC's High DER Future proceeding (R.21-06-017) is to improve utilities' distribution planning processes and better understand how DERs can be integrated into these processes to meet grid needs.[5] While the Joint DER Parties are supportive of continued efforts to realize the distribution deferral value of DERs, it is critical that the CEC and its sister agencies affirm that DERs participating in NWAs are eligible to provide other grid and customer services and to receive other technology incentives, provided that the resource is not being compensated twice for providing the same service. These grid services will become increasingly important as TE and BE increase electric load, and advancing distribution deferral opportunities for DERs will play an important role in this proceeding. For instance, EVSE capable of adaptive load management and paired with PV/storage could significantly reduce the need for distribution grid upgrades following from transportation electrification.

Beyond the value that DERs can provide to the distribution system, DERs are at a critical inflection point in their participation in CAISO wholesale markets and the CPUC's Resource Adequacy (RA) program. Federal Energy Regulatory Commission (FERC) Order No. 2222 directs CAISO and other wholesale market operators to allow DER aggregations to access wholesale markets and provide all the services they are technically capable of providing. CAISO has a market participation model—the DER Provider (DERP) model—that nominally enables DER aggregations to participate in wholesale markets, and CAISO has primarily relied on the DERP model in its pending compliance filing before FERC.[6] However, the DERP model is virtually unused by DER aggregators, chiefly because it does not allow for eligible resources to participate in the CPUC's RA program; the CPUC has yet to approve a qualifying capacity methodology for BTM DER resources that recognizes the RA benefits of export-capable DERs and has repeatedly rejected stakeholder proposals to more comprehensively integrate DERs into the RA program.[7] This dynamic results in a serious disconnect between California's DER policy goals and the CAISO wholesale market, inhibits the overall purpose and intent of Order No. 2222, unduly limits the tools at CAISO's disposal to maintain and enhance grid reliability, prevents commercialization of a resource that is well suited to provide local RA to load-serving entities like community choice aggregators, stymies beneficial competition among resources

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[4] The new Partnership Pilot approved in CPUC proceeding R.14-10-003 may improve prospects for the procurement of NWAs to meet grid needs, but it is too early to determine whether the pilot design will be successful.

[5] Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future. CPUC, R.21-06-017. Issued July 2, 2021. https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M390/K664/390664433.PDF

[6] CAISO, Tariff Amendment to Comply with Order No. 2222, July 13, 2021, http://www.caiso.com/Documents/Jul19-2021-TariffAmendmentoComplywithFERCOrderNo2222-ER21-2455.pdf.

[7] Proposed Decision Adopting Local Capacity Obligations for 2023-2025, Flexible Capacity Obligations for 2023, and Reform Track Framework. CPUC, R.21-10-002. Issued May 20, 2022. https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M478/K084/478084163.PDF.

providing valuable wholesale market services, limits customer opportunities to reduce their energy bills via the provision of these services, and curtails the development of innovative third-party business models to deploy DERs in a manner that addresses grid needs. Fortunately, these adverse outcomes are avoidable with improved collaboration between CEC, CPUC, and CAISO on issues related to DER participation in Resource Adequacy. The Joint DER Parties maintain that this foundational issue will be important to address in the context of this and other related proceedings.

Relatedly, new or forthcoming rate design proposals also have significant implications for DER adoption and the grid services DERs can provide. While many customers are defaulted onto time-of-use (TOU) rates today, the CPUC has indicated a near-term focus on increasingly time-varying and dynamic rates that pass through CAISO wholesale market prices and other grid-facing price, GHG, or operational signals to customers. More specifically, the CPUC has expressed interest in enhancing the load flexibility of DERs through a universal, unified, dynamic, economic ("UNIDE") rate design and transactive energy framework proposal that may enable load-shifting and export-capable BTM DERs to provide capacity services as a load-modifying resource—as opposed to a supply-side, market-integrated resource—by shifting the allocation and collection of previously fixed generation capacity costs in rates into more granular, time-varying volumetric rate components (along with moving to dynamic recovery of marginal energy and distribution costs).[8] While the Joint DER Parties assert that these concepts may help unlock additional grid value that DERs can provide, customer participation and comprehension of these new rates will likely pose challenges that stakeholders will need to consider. It remains to be seen whether the UNIDE approach will find mass acceptance and have a substantial impact on DER market participation.

Regardless of the pathway used (i.e., supply-side or load-modifying), the Joint DER Parties wish to reinforce the need to fundamentally recognize and value the reliability contributions that exporting BTM DERs can provide. Not only would this recognition and valuation better optimize the use of existing DERs; it would incentivize the design and deployment of new DERs and aggregations that can simultaneously meet both site host customer needs and grid needs through the provision of multiple services, as discussed further below in Section II.E. This fundamental shift in California's approach to DER policy will be critical for the attainment of its near-term and long-term policy objectives, and the Joint DER Parties encourage the CEC to examine this issue further in the instant proceeding.

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[8] The CPUC's DER Action Plan 2.0 expresses an intent to open a proceeding in spring 2022 on load flexibility to further refine this concept, although it does not appear that the CPUC has initiated this proceeding yet. Final Draft, CPUC Distributed Energy Resources Action Plan, April 21, 2022, p. 8, https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M467/K470/467470758.PDF.

B. Exploration of DER future scenarios in this proceeding should begin with recognition of the multiple values of different kinds of DERs and their ability to serve as grid balancing resources.

In examining DER future scenarios through this proceeding, the CEC hopes to address questions such as what additional potential values DERs offer that are not reflected in existing state policies, and how much DER growth could occur if policies were designed to achieve their potential value. As discussed above, existing state policies have not enabled the full realization of DER values. The CEC's work is thus critical and timely.

When embarking on this work, the CEC, other agencies, and stakeholders must be mindful that there are different kinds of DERs and it does a disservice to view them through a single lens. Some DERs are only consumers of energy and can increase energy demand and load on grid infrastructure, though flexible and smart management of these assets will enable them to be integrated into the grid without triggering infrastructure upgrades. Other DERs are "bi-directional" or "grid interactive" and can either generate or store energy that can be dispatched to serve grid needs. Specifically, solar photovoltaics (PV) and other clean power generators, which meet their greatest potential when combined with storage (either physically paired, or located near storage to allow clean energy to be stored and used locally when most needed), can help with integrating consuming DERs into the grid system and can serve as grid resources in their own right, with multiple benefits of offering dispatchable, flexible, local energy. Generating DERs disrupt the traditional division between demand and supply side and call for new approaches to energy planning, forecasting, and policy making.

With these new technologies offering multiple values, it will be key to avoid siloed approaches. While past practice at the CEC and other agencies has drawn a division between supply analysis and demand analysis, it is important not to think of generating or bi-directional DERs solely as demand. Doing so will place artificial limits on a technology with as yet untapped capabilities. Exploration of their values must embrace their supply-like characteristics while accounting for their location—in nearly all cases—on the distribution grid.

In drawing this distinction between generating or bi-directional DERs and other technologies, the Joint DER Parties do not seek to create new silos. All DERs share characteristics in which much of their value inheres: they are local and ubiquitous, they can act on a standalone basis or in combination through aggregations, and they provide ways to meet needs of customers and the grid simultaneously through co-optimization. At the same time, the work of this proceeding must not lose sight of the distinction between generating or bi-directional DERs and other DERs.

While recognizing this distinction, however, it is equally important to recognize the synergy between these different types of DERs. California faces a significant challenge in integrating transportation and building electrification technologies onto the grid, including the new DERs themselves, through equipment upgrades at the property level (such as higher capacity electrical equipment) and buildout of grid infrastructure. Without proper planning and measures to enhance and capture the beneficial flexibility of DERs, these upgrades could

potentially lead to significant cost increases. Increasing distributed PV and storage is a key solution to this concern, reducing loading and congestion on the grid, as well as dynamically responding to grid conditions through advanced inverter services, virtual power plants, and islandable microgrids. The value of distributed generation is great enough in a future with high DER penetration that this moment calls for a re-examination of the 100+-year-old concept of the one-way grid.

The concept of balancing is central to this re-examination and should play a larger role in future analysis and planning for meeting distribution grid needs. Both distribution system capacity needs and Resource Adequacy capacity needs can be met through balancing and matching supply and load to each other, as opposed to the traditional approach of matching dispatchable, centralized supply to inflexible load. The dynamism of DERs will enable their integration into the grid while smoothing demand curves and avoiding peak-time stress on grid infrastructure. This also provides an opportunity to reconsider bulk supply and grid needs under DER future scenarios, as envisioned in the CEC's June 1 workshop.

C. Near-term uncertainty across key factors determining DER adoption poses challenges in accurately forecasting and encouraging growth.

In examining DER future scenarios, it may be difficult to accurately forecast DER growth, given the uncertainty around the various factors in the present policy and market landscape, as discussed above in Section II.A. These challenges also highlight the need for a robust examination of policy frameworks to better enable DERs to participate in markets, serve customer and grid needs, and improve system resiliency and reliability.

Customer adoption of DERs ultimately hinges on the ability of DER product and service providers to develop and communicate a compelling value proposition for adoption by customers and communities (inclusive of economic, environmental, and societal benefits); enable seamless participation by customers; and stand up a sustainable business model around providing these products and services to customers. Predictability of, and access to, grid-facing value streams and market opportunities is key to ensuring DER growth. Bankable or financeable capacity payments or other revenue guarantees, premised on the capacity services that dispatchable DERs are readily capable of providing, are critical for the competitive market to develop new products and services. As one example, the Emergency Load Reduction Program (ELRP) might attract incremental response from existing or otherwise incentivized resources, but on its own it will likely not result in the deployment of significant new resources, because the program by and large does not include a predictable, capacity-based value stream.[9]

[9] We caveat this statement by recognizing that some ELRP groups (e.g., Groups A.4 and A.5) entail guaranteed minimum dispatch hours across a delivery season, providing a basic level of revenue certainty that somewhat addresses the bankability challenge. However, in the opposite direction, ELRP is a limited-term pilot, creating longer-term uncertainty.

D. The expansion and exploration of DER growth scenarios is an important element of examining DER future scenarios.

CEC staff's June 1 workshop presentation stated that one goal of the proceeding is to develop a process to construct DER growth scenarios for use in IEPR forecasting; SB 100 planning; and other CPUC, CAISO, and interagency planning processes. There is a need to better incorporate DERs in resource planning, with calls for exploring new approaches to forecasting and more extensive use of scenarios to explore pathways to achieve state climate and equity goals.

1. Existing Forecasting Issues

The Joint DER Parties believe that by improving existing DER growth forecasting methods, the CEC can help reduce barriers that DERs currently face in terms of market access and providing grid and ratepayer value. Improvements in forecasting will ensure that emergent supply-side and load-modifying capacity pathways for DERs are adequately supported.

The Joint DER Parties have identified various issues or questions regarding CEC forecasting methods, both through regulatory engagements and through selling aggregated DERs as RA products to load-serving entities (LSEs). First, it is unclear how DER aggregations that sign supply-side RA contracts with LSEs are implicitly considered in, or baked into, a ten-year, statewide DER adoption forecast as part of the IEPR that is then disaggregated to the LSE level, and how those DER aggregations can be backed out and considered "fully incremental" to the forecast used to set LSE RA obligations.

Second, to serve as a load-modifying capacity resource under the current IEPR forecasting methodology, DERs are required to demonstrably provide a four-hour response during the monthly coincident peak in year 0 in order to reduce an LSE's RA obligation in year 1. This essentially requires DERs to cycle in a similar fashion on a daily basis as if on a TOU timer, rendering the DER essentially a "permanent load shift" resource and resulting in dramatically reduced potential for providing multiple use application value.

Under the proposed UNIDE construct, which has been loosely floated as a load-modifying capacity product, grid exports from DERs would be compensated at the time-specific price of energy plus capacity, with the latter calculated on a scarcity pricing curve. Similarly, real-time pricing proposals across various PG&E dockets[10] have yielded a stipulation for the allocation and collection of Marginal Generation Capacity Costs (MGCCs)—effectively, an approximation of granular, time-specific Resource Adequacy capacity costs incurred by PG&E—that would load collection of MGCCs into the top 20% of net load hours plus a Flex Alert adder, per a sigmoidal curve.[11] In either instance, loading collection of capacity costs (and thus incentivizing

[10] A.19-11-019 (General Rate Case Phase 2) and A.20-10-011 (Day-Ahead Hourly RTP tariff for Commercial EV customers).

[11] PG&E, et al., Motion to Submit Stipulation on Marginal Generation Capacity Costs, April 23, 2022. https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M471/K485/471485737.PDF.

DER response) during the hours of highest grid stress would likely skip over the monthly coincident peak in several months. If these methods (scarcity pricing curves or the MGCC stipulation) are retained, and if the intent is for participating resources to provide load-modifying capacity to reduce an LSE's future year RA forecast, it is likely that the IEPR methodology for counting load-modifying DERs would need to be re-examined.

2. Future DER Forecasting and Scenario Modeling

The Joint DER Parties believe there is a need to improve on existing DER growth forecasting methods as part of the statewide IEPR forecast, including projections of buildout needed to achieve policy goals. Improved methods of forecasting and studying policy scenarios is equally important for other planning purposes, notably including the SB 100 Joint Agency Report.

For purposes of the 2021 SB 100 Joint Agency Report, the agencies interpreted "zero-carbon resources" as Renewables Portfolio Standard (RPS) eligible resources and resources that do not generate greenhouse gas emissions onsite.[12] While recognizing that customer-sited solar is zero-carbon generation, the agencies excluded this DER type as an SB 100 eligible resource, and modeling did not include customer-sited solar among potential resources to be selected to meet SB 100 targets.[13] Future work in developing scenarios through this proceeding should reconsider the decisions that led to the exclusion of customer-sited solar in scenario modeling, and should include distributed solar paired with storage as zero-carbon resources that can meet SB 100 goals.

Resource optimization models are powerful tools that can shape understandings of future scenarios and policy decisions. Existing modeling platforms in use by California energy agencies have not shown an ability to fully account for benefits of DERs. This proceeding should broadly investigate and evaluate modeling platforms that better capture various kinds of benefits, including societal benefits, indirect cost benefits, and environmental benefits.

Best-practice modeling for DER forecasts and scenarios should analyze the system in small geographic and time increments. This granularity allows for identification of resources that can meet local and short-term needs. Without this capability, models will not adequately account for DERs' ability to serve targeted purposes.

High-level explanation can be found on slide 3 at https://resourceinsight.com/wp-content/uploads/2022/05/Six-Lessons-PGE-RTP-Rate-RII-04042022.pdf.

[12] SB 100 Joint Agency Report: Achieving 100 Percent Clean Electricity in California: An Initial Assessment, March 2021, p. 54, available at https://www.energy.ca.gov/publications/2021/2021-sb-100-joint-agency-report-achieving-100-percent-clean-electricity.

[13] *Ibid.*, p. 80 fn. 110, p. 75.

E. The proceeding should include robust exploration of a future DER vision and policy support to achieve it.

The Joint DER Parties are heartened by the CEC's recognition of DERs' value. As associations and businesses that are thoroughly familiar with the benefits these resources provide, as well as their vast untapped potential, we appreciate acknowledgement such as this statement in the OIIP: "California has embraced the adoption of DER as an important strategy to meet its commitments to increase renewable energy and zero-carbon resources and support transportation and building electrification."[14] This statement promises strong policy support for DERs in our state. In practice, the policy support has not always been as strong as needed to fully tap the potential of this key resource. Simply put, California will not reach its decarbonization goals without DERs, and it will not deploy enough DERs to reach those goals without a concerted and holistic effort to develop new policy frameworks and overcome past and present impediments.

Equity must also be front and center. Efforts to increase growth in DER adoption should integrally include increasing access to DERs for residents of disadvantaged communities, low-income households, and vulnerable populations. Different communities will benefit from different approaches, and genuine, long-term engagement with community stakeholders is a fundamental need in this proceeding. Many issues must be considered, including cost and other barriers to access DER technologies, and other structural barriers like those identified in the CEC's SB 350 Low-Income Barriers Study.[15] Technical assistance is an important element that this proceeding should focus attention on. Additionally, hosting capacity for communities needs to be addressed. Environmental justice communities need public investment to enable greater equity in their energy production and usage.

Microgrids, virtual power plant aggregations, and other benefits of DER grid participation should be central to this conversation. While current microgrid deployments revolve around critical infrastructure (e.g., universities, fire stations, and hospitals), greater focus should be given to the potential of residential community microgrids. DERs not only provide capability for residents to generate, store, and provide value to the grid, but they also provide resiliency when grid outages occur. These outages are happening at ever-increasing frequency, with public safety power shutoffs (PSPS) impacting millions of California residents each year. Enabling developers to provide microgrids to residential communities increases resiliency for these residents.

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[14] OIIP, p. 1.

[15] Scavo, Jordan, Suzanne Korosec, Esteban Guerrero, Bill Pennington, and Pamela Doughman. 2016. Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-income Customers and Small Business Contracting Opportunities in Disadvantaged Communities. California Energy Commission. Publication Number: CEC-300-2016-009-CMF, p. 2. https://efiling.energy.ca.gov/getdocument.aspx?tn=214830.

Beyond microgrids, DERs provide great benefit to the grid through NWA, peak-load shaving, aggregation of DER fleets into virtual power plants, and decreased rates to ratepayers through eliminating or reducing the need for system modifications, as noted above. Smart and supportive policy making will allow DERs to achieve their potential value.

The CEC should consider adopting—or encourage the CPUC to adopt—policy measures to foster the growth of DERs. Incentives for BTM storage are particularly important at this stage, as high costs continue to inhibit market uptake. Funding is needed to achieve market transformation and reduce costs to enable the broad adoption that is necessary. The CEC should remove barriers to DER value stacking that are within its jurisdiction, and it should work with other agencies to remove other barriers, such as limitations on capacity credit for exported energy.

New technologies, new capabilities, and the continued evolution of the resource require an evolution of access and grid service pathways. For example, improving supply-side and load-modifying capacity pathways for exporting BTM DERs should support sizing batteries to provide demand charge management or customer resiliency, while also leaving enough charge in the battery to discharge—including for export—during a market award, a reliability event, or high-priced hours. Developers and some consumers may size assets to take advantage of grid opportunities. Enabling and encouraging such decisions by improving participation pathways is wise policy, as it can make the grid more flexible and stronger organically.

DER technologies also offer a solution to concerns about curtailment of renewable energy. Storage technologies can absorb overproduction to avoid curtailment or export to other states at a loss. This could dramatically reduce the cost of charging, creating a valuable incentive for uptake of EV charging, electric water and space heating DERs, and energy storage systems.

The CEC's work in this proceeding should also be mindful of other considerations that influence DER deployment and growth, including the following.

- Customers require access and ownership of their BTM DER data and the ability to provide this data to third-party product and service providers to fully capitalize on their investments. Without the ability and ownership to share their data, customers will be limited to utility overreach and discretion.
- Development of settlement methodologies and submetering protocols should allow for separation of the utility meter capacity calculations to a resource-specific approach. This would allow for settlement of DER market activities based on direct metering of the asset, rather than the whole customer site, enabling hybrid resources to be better managed and accounted for.
- Appropriate compensation for dispatch of DERs is necessary to incentivize customer contributions to grid services. For example, the agencies should consider the valuation for provisions of multiple grid services by DERs, evolving rate structures for both imports and exports, including the development of dynamic import/export rates, and compensation for capacity services and wholesale market participation.

F. California agencies and stakeholders must work together to prioritize DERs for California's energy future.

The CEC envisions this informational proceeding as an opportunity to collaborate and coordinate with other agencies, particularly the CPUC and CAISO, who participated in the June 1 workshop. The Joint DER Parties agree that this coordination is necessary, and believe that coordination with the California Air Resources Board (CARB) should also be top of mind in this proceeding. We also wish to note the equal importance of full participation of DER providers and other stakeholders, including community-based organizations and customers. A particular effort must be made to ensure full engagement of environmental and social justice community actors.

With respect to agency coordination, the Joint DER Parties note that the CPUC's High DER Future proceeding is a natural analogue to this proceeding. The two proceedings, however, have different focuses, and the agencies will need to keep in mind that these different focuses could lead to different decision-making outcomes if coordination and alignment are not foremost in the agencies' minds. In particular, the CPUC's High DER Future proceeding is more focused on preparing grid architecture for an influx of new load from higher DER penetration including EVs, and ensuring sufficient distribution capacity. The CEC's DER OIIP focuses on improving DER options for energy users so they can adapt load to system conditions through flexible technology, and on deploying clean energy technology innovations to accelerate the transition to a zero-carbon grid while improving grid reliability and resiliency.[16] While the topics are related, the approaches and perspectives may not be entirely aligned.

The CEC should maintain its focus on achieving GHG reduction goals, while incorporating understanding of the CPUC's focus. The CPUC should conduct the work of its High DER Future proceeding with full attention on the goal of achieving GHG reduction goals, and should draw on learnings from this proceeding regarding the myriad ways that DERs can help achieve those goals—and recognize that DERs are fundamental and necessary to achieving those goals.

The CARB should also pay close attention to the learnings of this proceeding. The approach of the current CARB Scoping Plan emphasizes future carbon capture technology in lieu of currently available clean distributed energy resources.

Looking more broadly at agency action in energy and decarbonization policy, there appears to be a lack of a central unifying entity or effort to reconcile the approaches of the CPUC, CARB, CAISO, and CEC. Energy policy and market rules should be developed holistically, to avoid inconsistent and counterproductive policy directions. This dynamic is perfectly encapsulated by the CPUC's consideration of reducing NEM compensation and imposing new fees on customer PV and storage, following the CEC's recent adoption of Title 24 requirements for solar and storage on new construction. Policy measures should be designed to all align in the direction of meeting state policy goals.

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[16] OIIP, p. 1.

III. Conclusion

California currently faces great energy reliability challenges, and state energy agencies are working hard to bolster reliability and avoid power outages. Rather than turning back to fossil fuel resources, California needs to move as quickly as possible toward a clean energy future. All agencies and stakeholders should work together toward the goal of reducing greenhouse gas emissions and achieving a zero-carbon energy system. Our efforts should go toward creating resilient communities and a sustainable clean energy system. DERs must be a part of that vision, and the Joint DER Parties look forward to taking part in the work to make that vision a reality.

Sincerely,
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