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REPLY COMMENTS OF SOLAR ENERGY INDUSTRIES ASSOCIATION ON STAFF PAPER ON PROCUREMENT PROGRAM

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REPLY COMMENTS OF SOLAR ENERGY INDUSTRIES ASSOCIATION ON STAFF PAPER ON PROCUREMENT PROGRAM

The Solar Energy Industries Association ("SEIA") presents the following reply comments in response to the opening comments of other parties on the paper titled "Reliable and Clean Power Procurement Program: Staff Options Paper" ("Staff Paper").[1] The Staff Paper presents options for how the Commission should regulate the future procurement of new clean energy resources by load-serving entities ("LSEs") in California. SEIA's member companies include developers of new solar and storage projects; as a result, SEIA has a strong interest in the development of a robust, effective, timely, and streamlined procurement program that can meet California's ambitious clean energy goals.

I. INTRODUCTION

SEIA notes widespread agreement among the parties that it is important for California to develop a permanent program of clean resource procurement, replacing the "just in time," *ad hoc* procurement that has characterized the last few years. There is also little interest in programs that are based on entirely new paradigms, such as the use of Standardized Fixed-Price Forward Contracts ("SFPFCs") that is one of the options presented in the Staff Paper. Many parties join SEIA in proposing a procurement program that is closely integrated with both the existing Resource Adequacy ("RA") program and with the Integrated Resource Planning ("IRP") planning process.

[1] These comments are submitted in accordance with the Administrative Law Judge's *Ruling Seeking Comments on Staff Paper on Procurement Program and Potential Near-Term Actions to Encourage Additional Procurement* ("Ruling"), issued on September 8, 2022. The due date for these comments was extended in a separate October 7, 2022 ruling in this docket.

II. PROGRAM OBJECTIVES

The Staff Paper includes a comprehensive list of 14 important objectives for a new procurement program. SEIA's opening comments supports these objectives, and proposed adding another objective that emphasizes the importance of procurement to meet location-specific local reliability needs:

15. Enable and prioritize long-term procurement to meet local reliability requirements and to allow the retirement of local fossil resources.

SEIA also agrees with the recommendation of the Sierra Club and the California Environmental Justice Alliance ("Sierra/CEJA") to add an objective "*to integrate demand-side resources*."[2] We have commented in the past in this docket on the failure of the demand forecast used in the IRP to reflect accurately the actual and expected growth of distributed storage resources, both behind-the-meter ("BTM") and wholesale in-front-of-the-meter.[3] LSEs also have the ability to take actions to procure additional energy efficiency, demand response, and distributed generation resources, building on the experience gained in the recent emergency actions developed through R. 20-11-003. The Staff Paper is focused almost exclusively on supply-side resources. We agree with Sierra and CEJA that the Commission's procurement program should include and require the increased development of the following demand-side resources:[4]

1. Community solar and storage;
2. Targeted energy efficiency procurement in coordination with R.13-11-005;
3. Increased strategic deployment of thermal storage;
4. Enhancements to the emergency residential demand response and virtual power plant programs; and
5. Development of BTM vehicle-to-grid and BTM storage-to-grid programs.

An LSE's compliance report should include discussions of the LSE's activities and actions in each of the above areas.

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[2] Sierra / CEJA comments, at p. 6.

[3] See *Comments of Solar Energy Industries Association and Large-Scale Solar Association in response to the Administrative Law Judge's Ruling Seeking Comments on Load Forecasts and GHG Targets*, submitted in this docket on May 16, 2022, at pp. 1-6.

[4] Sierra / CEJA comments, at pp. 36-37.

III. LONG-LEAD-TIME RESOURCES

Since the outset of California's Renewable Portfolio Standard ("RPS"), the state has relied on the competitive procurement of new renewable generation and the selection of winning projects using least cost, best fit principles. The California Wind Energy Association ("CalWEA") proposes a major departure from these longstanding practices and principles, for the procurement of offshore wind resources. CalWEA not only wants one of the IOUs to act as the central procurement entity ("CPE") to procure offshore wind on behalf of all LSEs; CalWEA also proposes that the procurement be done on a cost-plus basis, rather than through competitive bids. This would apply to the entire 1.7 GW of offshore wind by 2032 that it is shown in the current PSP. CalWEA argues that such favorable treatment for this specific resource is necessary if this new resource is to be developed – CalWEA admits that "it is expected that costs for offshore wind projects may exceed those of more traditional renewables projects" and argues that there may be limited competition among the three developers who have obtained offshore leases from the federal government along the central coast.[5]

SEIA recognizes that there may be reasons of market and infrastructure development to spread among all LSEs the costs of small, pilot offshore wind projects, such as the ones CalWEA discusses on pages 18-19 of its comments. However offshore wind is not a nascent industry – it is well developed in Europe, and many East Coast states are more advanced in offshore wind development than California.[6] East Coast states generally are using competitive solicitations to procure offshore wind.[7] CalWEA fails to provide any examples of other U.S states that have adopted the cost-plus pricing mechanism that it proposes for offshore wind in California. CalWEA asserts that "[b]ecause of the uncertainties and long-lead times associated with offshore wind project development, it is not practical to expect that project developers could lock in prices at the time of contract execution," yet offshore wind developers on the East Coast have

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[5] See CalWEA comments, at pp. 15-18.

[6] See the Department of Energy's *Offshore Wind Market Report: 2022 Edition* ("DOE 2022 Report"). at https://www.energy.gov/sites/default/files/2022-08/offshore_wind_market_report_2022.pdf.

[7] See, for example, the state of New York's competitive solicitation process for offshore wind, at https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/NY-Offshore-Wind-Projects.

committed to fixed prices in the 24 power purchase contracts for offshore wind signed as of May 31, 2022.[8]

Moreover, there are other options for long-lead-time ("LLT") clean resources, such as out-of-state ("OOS") wind on new transmission, geothermal, biomass, and even the Diablo Canyon extension or carbon capture at existing gas plants. SEIA observes that the PSP's selection of 1.7 GW of offshore wind by 2032 assumed that offshore wind would be competitive on a cost basis with these alternative resources by that date. If offshore wind will not be competitive by that time, as CalWEA appears to concede, then the alternative resources should be developed first, instead of offshore wind. Beyond the initial small pilot projects, offshore wind needs to compete on a least-cost, best-fit basis with these other options that provide similar attributes, particularly given the likelihood that offshore wind development will need major, costly transmission additions.

Finally, CalWEA undermines its case for procurement of offshore wind on a cost-plus basis by citing Southern California Edison's ("SCE") individual IRP that includes significant offshore wind, as well as other studies touting how inexpensive offshore wind will be.[9] If these resource plans and studies are accurate, and if a large and sophisticated IOU like SCE is actively planning to procure offshore wind, then there is no reason for the state to approve CalWEA's extraordinary request for a single CPE and cost-plus pricing for offshore wind. SEIA notes that SCE itself does not ask for special treatment for offshore wind, and SCE's comments emphasize that the adopted procurement program must be technology neutral.[10]

American Clean Power-California ("ACP-CA") makes a proposal that also would not be technology-neutral. ACP-CA proposes that the CPUC require LSEs to procure between 80% and 100% of the long-lead-time resources shown in the PSP through 2035; again, this would be

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[8] CalWEA comments, at p. 16. See DOE 2022 Report, at Table 11, showing U.S. Offshore Wind Offtake Agreements as of May 31, 2022. There are two utility-owned offshore wind projects under development, which perhaps are the closest to the cost-plus model that CalWEA favors.

[9] See CalWEA comments, at pp. 5-6 and footnotes 7-9.

[10] See SCE comments, at p. 7: "SCE agrees that a technology neutral approach should be used in the IRP procurement program. While there could be some need for resource-specific procurement in limited circumstances, the objectives for the IRP procurement program should include technology neutrality and directing the procurement as broadly as possible, leaving LSEs and the market to determine what specific resources can be procured at the least cost to meet the identified need."

the specific 2035 MWs of offshore wind, geothermal, OOS wind on new transmission, and long-duration storage in the PSP, totaling 15.5 GW by 2035. If LSEs do not procure their allocated shares of each of these types of LLT resources, a CPE would do backstop procurement for them.[11] This is not "technology neutral," and fails to recognize that each of the LLT generation resources can be substitutes for each other.

The Natural Resources Defense Council and Union of Concerned Scientists ("NRDC/UCS") have a similar proposal, but appear to lump all LLT resources together as what they call "non-incremental" resources. NRDC and UCS do not explain why LLT resources are "non-incremental" when, presumably, RESOLVE selected them for the PSP on a competitive basis because they had the lowest incremental costs for the attributes they provide. The NRDC/UCS proposal is technology neutral among the group of LLT resources, but still favors these LLT resources by assuring that, collectively, a minimum amount of these resources are procured regardless of cost. If necessary, NRDC/UCS would have a CPE procure the required minimum amounts of these LLT resources.[12]

Similar issues of whether LSEs would be able to procure sufficient LLT resources arose with respect to the 2,000 MW of LLT resources (1,000 MW of long-duration storage and 1,000 of clean baseload generation [minimum 80% capacity factor]) adopted in the Mid-Term Reliability ("MTR") procurement order. In that order (D. 21-06-035), the Commission declined to order a CPE to conduct backstop procurement for these LLT resources, but ordered LSEs to make a filing on February 1, 2023 to report their progress on contracting for LLT resources, after which the CPUC may order backstop procurement or extend the deadline to procure these resources.[13] SEIA supports the sensible recommendation of the California Public Advocates ("CalPA") to wait until after these reports are received before the CPUC orders the broader use of a CPE for LLT resources beyond those in the MTR tranche.[14] If LSEs collectively are making adequate progress in procuring LLT resources under the tighter time frames of the MTR

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[11] See ACP-CA comments, at pp. 9-11 and Appendix 1: "The LLT resources would be technology specific and proportioned based on a load-share basis to LSEs."

[12] See NRDC/UCS comments, at pp. 6-7.

[13] See D. 21-06-035, at pp. 35-38.

[14] See CalPA comments, at p. 8: "If LSEs are successful in self-provision for their long-lead-time D.21-06-035 resources, then central procurement for similar future resources may be unnecessary."

program, then there is no need to use a CPE for the further acquisition of LLT resources. If there has not been adequate progress, the Commission should assess the state of the market, seek further comments from parties, and then determine whether the use of a CPE is the best option going forward, At this time, SEIA continues to support the existing policy that LSEs should individually or collectively self-provide to meet all procurement needs, including for LLT resources, without an automatic default to backstop procurement for any type of resource.

IV. RESOURCE DIVERSITY

CalWEA asserts that there is a market failure in that LSEs are procuring mostly solar and storage resources and that, without Commission intervention to mandate procurement of other resources, LSEs will not procure the mix of resources included in the current PSP.[15] SEIA observes that the state has had an immediate and acute need for new resources in recent years, and thus the shorter lead times, broad range of feasible sites, and granular sizes of solar and storage projects have been major benefits in terms of increasing the state's clean energy and capacity as quickly as possible. Further, as discussed above, it remains to be seen whether or not LSEs will procure the LLT resources included in the MTR procurement on a timely basis. The Commission's MTR order directing the procurement of 2,000 MWs of LLT resources was issued just 18 months ago, so it is not surprising that new long-lead-time resources are not yet under contract or online.

CalWEA also asserts that the PSP and prior IRPs have failed to consider fully the risk-reduction benefits of resource diversity, and thus the current PSP represents the minimum amount of resource diversity that may be warranted.[16] CalWEA points to what they believe to be the risks of too heavy a reliance on solar and storage. However, there are risks for any type of resource. For example, CalWEA cites the supply chain issues that presently face solar and storage.[17] Offshore wind is not immune to such issues, which are also appearing among already-contracted offshore wind projects on the East Coast.[18] Further, offshore wind faces risks from

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15 See CalWEA comments, at pp. 3-5.

16 *Id*., at p. 5.

17 *Id*.

18 See Utility Dive, *Avangrid asks regulators to dismiss 1.2-GW Commonwealth offshore wind contracts, says it plans to rebid project*, December 19, 2022, available at https://www.utilitydive.com/news/avangrid-commonwealth-offshore-wind-contracts-PPAs-

shortages of the highly specialized ships and port facilities needed to build and maintain offshore wind facilities; these are risks that on-shore technologies will not encounter.[19] CalWEA argues that solar output can be curtailed due to wildfire smoke,[20] without acknowledging that temperatures and electric demand also drop when smoke prevents solar radiation from reaching the earth's surface. This effect can more than offset the loss of solar generation.[21] There are also significant risks from wind generation: California's wind resources performed poorly, far below their RA capacity values, during the peak gross load hours of the recent September 2022 heat wave.[22] Any consideration of "risk-reduction benefits" in IRP planning must consider the full range of risks for all types of generation resources.

SEIA supports the development of a PSP that is diverse in both geography and technology. Resource diversity may be a concept that can be used to manage risk and cost to obtain the desired reliability and GHG reduction goals. However, diversity *per se* is not an IRP goal. The IRP goals are (1) least-cost, (2) meeting reliability needs, and (3) achieving the state's

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DPU/639063/: "The Commonwealth project cannot be financed and built under the current PPAs, according to Avangrid. 'Among other factors, the prolonged war in Ukraine has unsettled markets and increased costs for many products, inflation has been persistent, interest rates have increased in a manner unprecedented in recent times, commodity prices have risen sharply and supply shortages and supply-chain constraints once thought to be temporary remain pervasive,' Commonwealth Wind said."

[19] See DOE 2022 Report, at p. 37: "[o]ne of the key logistical challenges for installing fixed-bottom offshore wind turbines in the United States is the uncertainty regarding the availability of Jones-Act-compliant wind turbine installation vessels," also p. 40: "the development and timing of port infrastructure could also become a significant bottleneck for the industry."

[20] See CalWEA comments, at p. 5, footnote 7.

[21] For example, the presentation cited in CalWEA's footnote 7 shows, at Slide 15, a significant reduction in CAISO solar output from September 7-11, 2020 due to wildfire smoke. We compared this five-day period to the five days immediately prior: although solar generation fell by 2,600 aMW on September 7-11 compared to the prior five days, electric demand on these days dropped by even more, by 2,900 aMW over the daylight hours of solar production. Thus, contrary to CalWEA's assertion, this loss of solar production due to wildfire smoke did not present an additional reliability risk.

[22] The CAISO's report on the September 2022 heat wave observes that wind underperformed its RA values on the gross load peak hours of September 6 and 7 by 67% and 71%, respectively, while solar exceeded its RA values in these hours. Wind did exceed its RA values during the net load peak hours on these days, but of course it is the presence of solar on the CAISO system that has pushed the net load peak hours further into the evening when wind generation typically is higher, and that will be used to charge the storage that is becoming a critical peaking resource for the state. See http://www.caiso.com/Documents/SummerMarketPerformanceReportforSeptember2022.pdf, at p. 143. Such portfolio benefits and complex synergies between wind and solar generation, and the emerging storage resources, show why the Commission should give little credence to CalWEA's assertions that there is too much solar and storage in the state's resource mix.

clean energy and GHG reduction targets, and the IRP modeling with RESOLVE produces an optimal portfolio to reach those goals. In meeting these IRP goals, a diverse portfolio will emerge over time as system needs change. This is already happening, as the current PSP includes significant amounts of diverse LLT resources, including offshore wind, in the 2030-2035 time frame. We respectfully disagree with CalWEA that the LSEs are incapable of recognizing the possible benefits of resource diversity, or of procuring significant amounts of LLT resources as planned in the PSP. CalWEA's remedy for its already-presumed LSE failure is for the Commission to declare that the offshore wind in the PSP will be procured at almost any cost, and that ratepayers must commit to significant costs for offshore wind even if it fails to deliver power.[23] This is a recipe for a procurement disaster that saddles the state's ratepayers with stranded costs that they cannot afford.

SEIA does not agree with CalWEA's assertion that a more diverse portfolio has intrinsic value *per se,* Nonetheless, to the extent that CalWEA and other parties can justify and quantify their assertion that the IRP's portfolio selection and optimization need to include additional metrics such as "diversity," "risk reduction," or "strategic benefits," we do not oppose the consideration of those metrics in future IRP cycles. But that showing has yet to be made, and until it has been made, there is neither reason nor record on which the Commission should mandate the procurement of specific resources on the basis of unsubstantiated risk reduction or resource diversity benefits. We urge the Commission to reject the LLT procurement proposals of CalWEA, ACP-CA, and NRDC/UDC and to affirm that California will procure its future clean resources on a competitive, technology-neutral basis following well-established least-cost, best-fit principles.

V. MASS-BASED GHG GOALS VS. A CLEAN ENERGY STANDARD

A central fault line in the opening comments is whether the procurement program should assess progress toward and compliance with GHG reduction goals using (1) an hourly, mass-based accounting of GHG emissions or (2) a clean energy standard ("CES") that tracks the MWh of GHG-free energy production. Among the IOUs, SCE supports mass-based GHG goals;

[23] See CalWEA comments, at p. 17, discussing what CalWEA characterizes as the necessary "breakage fee" for which ratepayers would be on the hook if an offshore project is cancelled due to excessive costs or delays.

Pacific Gas & Electric ("PG&E") prefers a CES. Turning to environmental advocates, Sierra/CEJA support a mass-based approach; NRDC/UCS want a CES.[24]

SEIA continues to support a procurement program that assesses progress toward GHG goals using hourly, mass-based accounting. Our primary reason is that mass-based accounting measures directly the goal that the state is trying to achieve – reductions in GHG emissions. California will need to assess in detail the GHG emissions from the electric sector even if the procurement program uses a CES; in this regard we disagree with the parties who argue that a CES will be simpler. It is complicated to convert a GHG reduction goal into a CES, or to estimate how the GHG emission reductions from a MWh of clean energy production will change over time. This complexity can undermine public confidence in a CES – as happened when community choice aggregators formed in California due to widespread concerns that the state's RPS program (a CES) was not moving fast enough to reduce GHG emissions.

Even more important, GHG emissions vary significantly by the month of the year and the hour of the day, depending on which resources are on the margin. The relative GHG emissions of various resources cannot be assessed and compared unless there is an hourly accounting. This is particularly true of dispatchable resources, and is critical for storage resources that both consume and produce electricity at varying times. This important temporal variation in GHG emissions can be lost in a CES that is based only on annual MWh of clean electricity production.

We also see value in measuring GHG emissions from the electric sector both in the future (for planning in IRPs) and in the recent past (for showing compliance with GHG goals in the procurement program). Ensuring that both forward and backward calculations of GHG emissions are consistent and accurate will help the Commission and other state policymakers to have the most accurate and complete picture of the progress toward California's emission reduction goals. There are already tools available – the RESOLVE and SERVM models and the simpler Clean System Power ("CSP") emissions calculator – to make these calculations. A CES also can be difficult to evaluate – as CalPA observes,[25] there have been issues with assessing compliance with the RPS on a timely basis, which does not even tell you whether progress

[24] SCE comments, at p. 22; PG&E comments, at pp. 10-12; Sierra/CEJA comments, at pp. 20-26; and NRDC/UCS comments, at p. 11.

[25] See CalPA comments, at pp. 16-17.

toward GHG goals has occurred. SEIA recognizes that there will be complexities with either an hourly mass-based accounting or with a CES – on balance, we believe that the time and resources are best spent measuring directly what we are trying to reduce: GHG emissions.

VI. USING RESOURCE ADEQUACY'S SLICE OF DAY FRAMEWORK

SEIA is pleased that many parties joined us in supporting the use of the Resource Adequacy program's Slice of Day ("SOD") framework to assess the reliability of LSEs' long-term procurement plans.[26] LSEs will be using SOD to show compliance with RA requirements for the coming year. In our opinion, it will be an important simplification for LSEs to be able to use the same framework to show that their long-term procurement plans also will result in a reliable electric system. This will remove the need for the IRP staff to continue to calculate effective load carrying capacities (ELCCs) or to resolve complex debates about which of the several "flavors" of ELCC analysis should be employed. Finally, the 24-hourly SOD framework will show, with much greater transparency than ELCC metrics, whether reliability needs are changing across the hours of the day.

The Independent Energy Producers (IEP) propose a multi-year RA program that would link to the procurement framework.[27] However, IEP would use ELCC metrics for the procurement program, and IEP does not discuss how the slice-of-day RA framework would be reconciled with an ELCC-based procurement program. Although we agree with IEP that an extension of the RA program to multiple years may make sense in the future, it would be important to use the slice-of-day RA framework in all years. We also caution that the SOD reforms to RA are still under development and have not been tested. The appropriate time to consider the IEP proposal will be once the SOD framework is in place and working; further, the appropriate place to review the IEP proposal will be in the RA docket, not here.

VII. THE IMPORTANCE OF LOCATIONAL PROCUREMENT

SEIA's opening comments stressed the importance of a program element that addresses long-term procurement to meet local reliability needs. This should focus on smaller-scale wholesale clean generation and storage projects located in or near load centers, such as projects

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[26] This was Option 3 in Section 8 of the Staff Paper. See, for example, the comments of PG&E, SCE, Sierra/CEJA, and CalWEA.

[27] IEP Comments, at p. 11.

developed for the community solar program that the Commission will be reviewing in 2023. Distributed, wholesale resources located in or near load centers may be competitive with larger-scale plants when their costs are modeled accurately and the benefits of their location are considered. In addition, the new Inflation Reduction Act provides enhanced incentives for siting new clean resources in load centers that are disadvantaged communities ("DACs"). SEIA appreciates the extensive information in CalPA's comments showing the substantial, and growing, deficiencies in local capacity resources.[28] CalPA makes the provocative comment that new standalone storage charged from retained local generation – which SEIA presumes would often be gas-fired – may be the best and most environmentally-beneficial means to meet increasing local reliability needs. CalPA reasons that the air quality benefits of increased power use in buildings and transportation will be greater than the increased air emissions from the retained local gas-fired generation.[29] Obviously, the best solution from an environmental perspective is to use new, clean local generation to charge the storage, and to displace or retire the gas plants. SEIA challenges CalPA's apparent assumption that the new local solar generation needed to charge storage cannot be sited in the built environment in local reliability areas. There is a substantial potential for new, wholesale, distributed, cost-effective solar-paired-with-storage in local reliability areas, if the full locational and environmental benefits of these resources are properly credited. We urge the Commission to prioritize this issue in the upcoming IRP cycle.

VIII. CONCLUSION

SEIA appreciates the Commission's consideration of these reply comments on the design issues for a permanent procurement program.

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[28] CalPA comments at pp. 21-28.

[29] CalPA comments at pp. 28-30: "The most cost-effective pathway to minimizing local criteria pollutants, accommodating the increasing LCRs that will come with transportation and building electrification, and saturating LCR areas with storage resources through the busbar mapping process may be to retain local generation resources."

Respectfully submitted this 9th day of January, 2023, at San Francisco, California.

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