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SEIA Comments to CEC Solar PV, Storage, and Heat Pump Baseline Workshop

Please find attached comments from the Solar Energy Industries Association as to the December 8, 2022 Commission Workshop regarding the 2022 Energy Code Pre-Rulemaking process.

Additional submitted attachment is included below.

December 24, 2020

California Energy Commission
Sacramento, CA

Subject: 19-BSTD-03, 2022 Energy Code Pre-Rulemaking

Chair Hochshild, Commissioners and Commission Staff:

Thank you for the opportunity to submit comments regarding the CECs October 6th Workshop on Electrification, Photovoltaic and Energy Storage topics for the Pre-Rulemaking process for the 2022 Building Energy Efficiency Standards (BEES). We appreciate the openness of the CEC towards public, stakeholder, and industry input through these workshops.

SEIA fully supports the Commission's stated course of development of the 2022 BEES to meet California's decarbonization goals and submit the following comments for consideration.

EXPANDING PRESCRIPTIVE PV REQUIREMENT

We strongly support expanding the prescriptive PV requirement to additional commercial and nonresidential occupancies such as multifamily, office, schools, hospitals, and others, including mixed-use residential and commercial buildings. As seen in the case of the residential prescriptive PV requirement, California is leading the nation in driving assertively towards a diversified, renewable energy-based economy and setting a leadership example for others to emulate.

By installing PV during a building's original construction in the specific occupancies, building owners, developers and occupants will enjoy the reduced cost of installation and reduced monthly energy bills beyond implementing only energy efficiency measures, as well as increased energy management that includes less exposure to future price increases.

We look forward to the continued discussions and development of the specific language regarding the technical aspects of requiring solar on the buildings in focus.

EXCEPTIONS TO RESIDENTIAL PRESCRIPTIVE PV REQUIREMENT

We appreciate the Commission's efforts to clarify and consolidate the existing list of exceptions to 2019 BEES Section 150.1(c)14. Given that this section in the 2019 BEES includes similar terms and dual usage of terms that may have been confusing to interpret, we agree with simplifying the language to aid implementation and enforcement.

We have appreciated the careful consideration that Commission staff has given regarding additional study and diligent effort needed to develop appropriate treatment of the prescriptive PV requirement in areas with very high snow load. We acknowledge that Commission staff has spent considerable time and effort studying these important issues, and has very reasonably determined there is no singular snow load threshold that should serve as an exemption threshold for all regions of California, or for all roof slopes or other physical conditions of installation. We will strive to work with staff and the petitioners to develop information and resources needed for design guidance.

EXEMPTION BASED ON SMALL PV SYSTEM SIZE, INCLUDING ADU's

SEIA understands the cost-effectiveness issues with very small PV systems. A portion of the installed cost of a PV system is the soft costs, and a portion of soft costs are fixed costs such as customer acquisition and permitting & inspections. As PV system size becomes smaller, the soft costs become a larger percentage of overall cost to be offset by power production.

We support the Commission's efforts to simplify the exemption criteria yet continue to believe the threshold of 1.9 kW PV system size stated during the December 8th workshop is still too large, and respectfully request that further consideration be given to further reduce this lower. PV systems of 1.5 kW can still be cost-effective. We continue to believe a complete exemption from the prescriptive PV requirement should be based on a calculation of demand for the proposed residence, rather than using the prescriptive formulas for a mixed-fuel home.

COMMUNITY SHARED SOLAR AND STORAGE

SEIA fully supports community solar and believes putting sensible limits on the size, location and market share of community solar projects avoids the unintended consequence of undercutting the significant progress the homebuilding industry has made in establishing on-site residential solar as a standard feature of new California homes. SEIA was encouraged by the modifications to Section 10-115 proposed during the workshop, and believe the Commission is taking positive steps to better define the community solar compliance pathway.

As the Commission considers its revisions, it is imperative that the Commission preserve the ability of customers to opt out of a community solar program and install solar onsite if they choose to do so. The California Energy Commission can continue to build upon the success of the New Solar Homes Partnership, which facilitated billions of dollars of clean-energy investment over the past decade and ensure onsite solar that makes California homeowners an integral part of the state's energy solution. We appreciate that there are future discussions that can help explore to come to workable solutions for all solar applications.

EXPANDED COMPLIANCE CREDIT FOR PV AND BATTERY STORAGE

SEIA appreciates the Commission's continued emphasis on grid integration and grid compatibility. As energy efficiency envelope measures are "max'd out," some of those efficiency measures will land somewhere on a curve of diminishing returns. No matter what is done with envelope measures, they influence only two energy end uses – space heating and space cooling. As we heard during the 2019 BEES development cycle, we recognize that space heating and space cooling have been reduced to an extent that other end uses (such as lighting loads, plug loads, miscellaneous loads) are now often larger than space heating and space cooling combined for certain occupancies and in certain climate zones.

Efficiency measures become *less cost-effective* as they move along the curve of diminishing returns. Generation from PV becomes *more cost-effective* with larger PV system size, owing to better returns as the soft cost (including some fixed cost such as permitting and inspection) becomes a smaller percentage of overall PV system cost. We encourage the Commission to study these curves simultaneously to arrive at the optimized intersection of the cost curves.

We believe that an optimized wholistic view of all systems and components should result in increased compliance credit for PV systems installed with battery storage systems.

SOLAR DOMESTIC WATER HEATING

SEIA supports continuation of the prescriptive solar thermal domestic water heating requirement for multifamily. For high-density housing such as multifamily and hotel/motel, domestic hot water demand as one energy end use is a larger percentage of overall demand than for other occupancies. We encourage the Commission to consider these and other hot-water intensive occupancies for continuation of compliance credit for solar thermal systems in these occupancy classes that can provide multiple benefits to owners, customers, and the entire solar industry.

RESIDENTIAL STORAGE-READY REQUIREMENTS

We strongly support the Commission's efforts to establish mandatory measure requirements for residential storage readiness. We look forward to further discussion of this topic and

development of final language for the 2022 BEES. We look forward to working with CEC staff, manufacturers, and other stakeholders to resolve some of these challenges.

CONCLUSION

SEIA remains very grateful and supportive of efforts by the State of California and staff of the California Energy Commission to contribute to statewide carbon-reduction goals by focusing on the built environment and solar's integral role in those goals. We believe it is possible to find a cost-effectiveness balance with full and wholistic integration of renewable energy generation & storage, EV charging, electrification, and energy efficiency measures, powered by sunlight.

Thank you for consideration of our comments.

Sincerely,

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