



Testimony of SunPower Corporation in Regard to

Proposed House Bill 7251 – AAC Long-Term Contracts for Certain Class I Generation Projects and Residential Solar Investment Program and Requiring a Study of the Value of Solar

Senator Needleman, Representative Arconti, Senator Formica, Representative Ferraro, and members of the Joint Committee on Energy and Technology:

My name is Robin Dutta, and I am the Director of Market Development and Policy for SunPower Corporation. SunPower is a global technology company involved in every step of the solar system supply chain. SunPower has over 7,000 employees worldwide, the world's highest efficiency solar photovoltaic panel technology, growing development of solar plus storage projects, and an extensive national dealer network mostly consisting of locally-owned small businesses. In Connecticut, SunPower has 11 local companies in our dealer network, who develop and install residential and commercial projects, representing several hundred full-time workers in Connecticut. SunPower also has an operations facility in Newington that supports our residential business.

SunPower appreciates the constructive dialogue we have had with committee leadership and its members on the urgent need to fix last year's SB9 (Public Act 18-50). However, while HB 7251 incorporates several necessary elements of an SB9 fix, it does not meet the threshold of being a solution. In its current form, SunPower must oppose HB7251 because it is inadequate to the task at hand. Section 7 of SB9 was defined by its abject hostility towards Connecticut's solar industry who focus on building customer-sited solar. This industry has over 2,100 employees in Connecticut whose livelihoods are now at risk. Please see Attachment #1 for legislative language that has been endorsed by over 40 companies and organizations active in the solar and environmental space in Connecticut. Our testimony today will focus on how HB 7251 needs to improve in order to be considered a solution to the calamity SB9 has created for Connecticut's solar industry.

A. Create a Real Pause

HB7251 includes a necessary "pause" on the dismantling of net metering for residential systems through the extension of the Residential Solar Investment Program (RSIP). Per statutory language in PA 18-50, any residential system that receives grant money from RSIP will be eligible for net metering. However, this bill creates no such pause for commercial solar systems. There is no equivalent language in PA 18-50 for LREC/ZREC program participants and bid

winners. Net metering, and the monthly netting structure for generation consumption/export, is just as crucial for commercial solar systems as for the residential ones. If this bill is allowed to move forward, the Connecticut commercial solar industry would be irreparably harmed and it would allow the barriers to customer-owned commercial solar to remain in place. It would also essentially allow SB9's effective ban on solar plus storage systems, placed behind the customer's meter, to remain in place. This means that Massachusetts and New York will continue to be the region's leaders in innovative renewable energy development. And it means that SB9 will prevent Connecticut businesses from options that could reduce their electricity bills.

B. Create a Real Re-Evaluation of CT Solar Policies

If there is agreement on the need to pause implementation of SB9's hastily considered changes to solar policy, there must also be a full re-evaluation done to consider whether SB9's end goals are in fact the best option for Connecticut. SB9 removes Connecticut energy consumers' right to self-consumption of on-site generation, removing homeowners' and businesses' right to choosing their own energy sources. Consuming energy from rooftop solar, for example, should be valued the same way that energy efficiency is valued. This is a fundamental right that SB9 has effectively made illegal, and has prevented PURA from changing course, even if presented with compelling evidence to the contrary.

1. Do not predetermine an outcome for was succeeds Net Metering 1.0. Overwhelming evidence could support Net Metering 2.0 (as in California), monthly netting periods, a longer transition to another tariff, time-of-use pricing, and/or some other option.
2. Allow a Value of Solar study, and a review of national best practices, to inform PURA's decision. Such a complicated decision should be made based on a holistic and data-driven process.

TAKEAWAY – This is complicated.

The decisions made have to be as informed as possible.

The need for investigation and process is necessary due to the lack of such to this point. SB9 was informed by DEEP's 2018 Comprehensive Energy Strategy (CES). During those stakeholder and technical meetings, DEEP staff repeatedly commented that the benefits of solar energy are irrelevant to the crafting of solar policy. Additionally, DEEP refused to investigate solar energy's benefits. A review of the final 2018 CES shows a thoroughly incomplete accounting of the environmental, economic, and grid benefits that customer-sited solar projects possess. Additionally, many of their assumptions/projections for solar costs are dubiously high (and lacking in citations). Their draft document did not attempt to account for ANY benefits from

solar. By the time SB9 reached the General Assembly, it had already marinated in its bias against customer-sited solar for two years.

The 2018 CES and SB9 espouse a dogmatic reverence for the traditional utility business model, and ignore the vast benefits that customer-sited solar can bring as part of creating a dynamic and distributed energy grid. By doing so, it leaves economic growth and a more efficient electric grid off the table. SunPower and the broad business and environmental coalition believe that a re-evaluation must bring in all credible sources. SB9 proponents appear fearful of a data-driven evaluation. That should speak volumes.

C. Extend LREC/ZREC Program by 2 Years

Commercial solar policy requires just as in-depth an investigation/review as residential solar, thus requiring a 2-year extension of their main incentive program. A one-year extension would not adequately bridge this market sector from one policy to another. A full regulatory proceeding would last far longer.

Additionally, the LREC/ZREC program has suffered from budget cuts for the last few years of their program. Legislative language attached in Attachment #1 would return funding levels for Years 9 and 10 to the Year 1 levels. It would also require multiple solicitations per year, fixing a fatal flaw of the program. By holding only one LREC/ZREC solicitation, current policy chokes down the commercial solar industry. When a solar company prepares a customer proposal, it must be based on a firm value proposition. Given how policy-dependent the solar industry currently is, that value proposition requires ZRECs and an ability to forecast them. One solicitation per year prevents sales leads from being pursued, and drives up costs due to the risks associated with auction participation. By holding multiple solicitations per year, solar companies have a more open program and don't have the binary choice between pursue a sales lead or passing on a sales lead due to an unfavorable auction date.

Finally, HB 7251 contains language lowering the LREC/ZREC price cap, but this is a solution trying to find a problem. PURA opted to not use this authority last year, following a misunderstanding of similar language in PA 18-50. There were arguments from the Public Utilities that the 64 percent price cap reduction would be applied to the preceding year, instead of the Year 1 price cap. Such an interpretation would have resulted in the freezing of the commercial solar market last year. And, considering that solar customer acquisition timelines last longer than 90 days, any change by PURA that soon before a solicitation would end contract negotiations. There would be no market stability or continuity from year to year. SunPower urges that this language be removed from the bill as proposed in our consensus bill language found in Attachment 1. It serves no purpose.

D. The Good in HB 7251

With this long a critique of what is not in HB 7251, it is important to highlight the positive steps it proposes to take to improve the Connecticut solar market. As stated above, SunPower opposes this bill in its current form because it does not go far enough to solve the problems of PA 18-50.

Extending RSIP is a crucial part of any solution that preserves Connecticut's solar jobs. With the combination of RSIP and net metering, Connecticut has fostered a moderately successful residential solar market – certainly one that compares favorably to New York and Massachusetts. It is competently administered by the CT Green Bank, and they employ national best practices and transparent communication standards to make sure the local solar industry is well aware of pending lower incentives and program rules.

SunPower is also glad to see the concept of a Value of Solar study, as such an investigation needs to help inform future solar policies. Effective public policies, in any subject area, must be informed by the wide array of potential impacts – whether they be positive, negative, possess societal costs or societal benefits. Any Value of Solar study, as stated above, should be allowed to take the necessary time. Six months is not enough, based on other states who have conducted similar analyses. The bill must then direct PURA to use such a study in creating a successor to net metering.

E. Conclusion

HB 7251 intends to preserve the over 2,100 solar jobs in the state, and SunPower applauds that intent. However, this bill requires much more work before it could accomplish that goal. PURA must be uncuffed in order to properly conduct their responsibilities, and fully investigate what other states have enacted. A cursory examination of states that have ended net metering (i.e. Nevada, Maine) have seen solar jobs practically eliminated overnight. Other states that have never enacted mandatory net metering (ie. Georgia) have never seen a customer-sited solar industry grow in the first place. Connecticut solar policy is now comparable to Georgia.

SunPower urges this committee, the legislature, and the Lamont Administration that their scope should not stop at preserving these 2,100 solar jobs, and must instead look to growing an industry ready to grow. The Baker Administration released a new solar program meant to double the Massachusetts distributed solar mandates to over 3 GW. New York's Governor Cuomo proposed a new 6 GW distributed solar goal, double the current goal. New Jersey doubled their net metering cap and policymakers are working on a new solar program to last the next decade, building off the nearly 3 GW of solar currently online. All states rely on net metering, and recognize the importance of properly valuing distributed energy that is consumed and exported to the grid. These states are home to tens of thousands of solar jobs, and with innovations into

energy storage, providing grid services, and technology costs coming down every year, the solar industry's full economic potential is ever closer to becoming a reality.

SunPower asks that Connecticut invest in the solar industry. So far, it's had an amazing rate of return. The best is yet to come.

Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads "Robin K. Dutta". The signature is written in a cursive style with a large, stylized initial 'R'.

Robin K. Dutta
Director – Market Development & Policy
SunPower Corporation
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Title

Sec. 1. Section 16-243h of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

On and after January 1, 2000, and until (1) for residential customers, the expiration of the residential solar investment program pursuant to subsection (b) of section 16-245ff, and (2) for all non-residential other customers until not covered in subdivision (1) of this section, the date the Public Utilities Regulatory Authority approves the procurement plan pursuant to subsection (a) of section 7 of this act, each electric supplier or any electric distribution company providing standard offer, transitional standard offer, standard service or back-up electric generation service, pursuant to section 16-244c, as amended by this act, shall give a credit for any electricity generated by a customer from a Class I renewable energy source or a hydropower facility that has a nameplate capacity rating of two megawatts or less for a term ending on December 31, 2039. The electric distribution company providing electric distribution services to such a customer shall make such interconnections necessary to accomplish such purpose. An electric distribution company, at the request of any residential customer served by such company and if necessary to implement the provisions of this section, shall provide for the installation of metering equipment that (A) measures electricity consumed by such customer from the facilities of the electric distribution company, (B) deducts from the measurement the amount of electricity produced by the customer and not consumed by the customer, and (C) registers, for each billing period, the net amount of electricity either (i) consumed and produced by the customer, or (ii) the net amount of electricity produced by the customer. If, in a given monthly billing period, a customer-generator supplies more electricity to the electric distribution system than the electric distribution company or electric supplier delivers to the customer-generator, the electric distribution company or electric supplier shall credit the customer-generator for the excess by reducing the customer-generator's bill for the next monthly billing period to compensate for the excess electricity from the customer-generator in the previous billing period at a rate of one kilowatt-hour for one kilowatt-hour produced. The electric distribution company or electric supplier shall carry over the credits earned from monthly billing period to monthly billing period, and the credits shall accumulate until the end of the annualized period. At the end of each annualized period, the electric distribution company or electric supplier shall compensate the customer-generator for any excess kilowatt-hours generated, at the avoided cost of wholesale power. A customer who generates electricity from a generating unit with a nameplate capacity of more than ten kilowatts of electricity pursuant to the provisions of this section shall be assessed for the competitive transition assessment, pursuant to section 16-245g and the systems benefits charge, pursuant to section 16-245l, based on the amount of electricity consumed by the customer from the facilities of the electric distribution company without netting any electricity produced by the customer. For purposes of this section, "residential customer" means a customer of a single-family dwelling or multifamily dwelling consisting of two to four units. ~~The Public Utilities Regulatory Authority shall establish a rate on a cents per kilowatt hour basis for the electric distribution company to purchase the electricity generated by a customer pursuant to this section after December 31, 2039.~~

Sec. 2. Subsection (c) of section 16-244r of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(c)(1) The aggregate procurement of renewable energy credits by electric distribution companies pursuant to this section shall (A) be eight million dollars in the first year, and (B) increase by an additional eight million dollars per year in years two to four, inclusive.

(2) After year four, the authority shall review contracts entered into pursuant to this section and if the cost of the technologies included in such contracts have been reduced, the authority shall seek to enter new contracts for the total of six years.

(3) After year six, the authority shall seek to enter new contracts for the total of **eight ten** years.

(A) The aggregate procurement of renewable energy credits by electric distribution companies pursuant to this subdivision shall (i) increase by an additional eight million dollars per year in years five to eight, inclusive, **and an additional twenty million dollars per year in years nine and ten, inclusive**, (ii) be ~~sixty-four~~ **one hundred and twenty four** million dollars in years ~~nine ten~~ to fifteen, inclusive, **and** (iii) decline by ~~eight twelve~~ million dollars per year in years sixteen to ~~twenty-three~~ **nineteen**, inclusive, **(iii) decline by eight million dollars in years twenty to twenty-two inclusive, and (iii) decline by twenty million dollars in years twenty three and twenty four, inclusive**, provided any money not allocated in any given year may roll into the next year's available funds. ~~On the date of approval of the procurement plan by the authority pursuant to subsection (a) of section 7 of this act, any money not yet allocated pursuant to this section shall expire.~~

(B) For the sixth, ~~seventh and eighth through tenth~~ year solicitations, each electric distribution company shall solicit and file with the Public Utilities Regulatory Authority for its approval one or more long-term contracts with owners or developers of Class I generation projects that: (i) Emit no pollutants and that are less than **one two** thousand kilowatts in size, located on the customer side of the revenue meter and serve the distribution system of the electric distribution company, provided such contracts do not exceed fifty per cent of the dollar amount established for years six, seven and eight under subparagraph (A) of this subdivision **and provided further that such contracts do not exceed sixteen million dollars for years nine and ten under subparagraph (A) of this subdivision**; and (ii) are less than two megawatts in size, located on the customer side of the revenue meter, serve the distribution system of the electric distribution company, and use Class I technologies that have no emissions of no more than 0.07 pounds per megawatt-hour of nitrogen oxides, 0.10 pounds per megawatt-hour of carbon monoxide, 0.02 pounds per megawatt-hour of volatile organic compounds, and one grain per one hundred standard cubic feet, provided such contracts do not exceed fifty per cent of the dollar amount established for years six, seven and eight under subparagraph (A) of this subdivision **and provided further that such contracts do not exceed four million dollars for years nine and ten under subparagraph (A) of this subdivision**. The authority may give a preference to contracts for technologies manufactured, researched or developed in the state.

(C) The electric distribution companies' approved solicitation plan shall be designed to foster a diversity of project sizes and participation among all eligible customer classes subject to cost-effectiveness considerations. For the ninth- and tenth-year solicitations, the

procurement processes shall be conducted for (1) systems up to two hundred kilowatts; (2) systems greater than two hundred but less than six hundred kilowatts; and (3) systems between six hundred and two thousand kilowatts. For the ninth- and tenth-year solicitations, the electric distribution companies shall conduct no less than two and no more than four solicitations each year.

(4) The production of a megawatt hour of electricity from a Class I renewable energy source first placed in service on or after July 1, 2011, shall create one renewable energy credit. A renewable energy credit shall have an effective life covering the year in which the credit was created and the following calendar year. The obligation to purchase renewable energy credits shall be apportioned to electric distribution companies based on their respective distribution system loads at the commencement of the procurement period, as determined by the authority. For contracts entered into in calendar year 2012, an electric distribution company shall not be required to enter into a contract that provides a payment of more than three hundred fifty dollars, per renewable energy credit in any year over the term of the contract. For contracts entered into in calendar years 2013 to 2017, inclusive, at least ninety days before each annual electric distribution company solicitation, the Public Utilities Regulatory Authority may lower the renewable energy credit price cap specified in this subsection by three to seven per cent annually, during each of the **six ten** years of the program over the term of the contract. ~~For contracts entered into in calendar year 2018, at least ninety days before the electric distribution company solicitation, the Public Utilities Regulatory Authority may lower the renewable energy credit price cap specified in this subsection by sixty four per cent, during year seven of the program over the term of the contract. For contracts entered into in calendar year 2019, at least ninety days before the electric distribution company solicitation, the Public Utilities Regulatory Authority may lower the renewable energy credit price cap specified in this subsection by sixty four per cent, during year eight of the program over the term of the contract.~~ In the course of lowering such price cap applicable to each annual solicitation, the authority shall, after notice and opportunity for public comment, consider such factors as the actual bid results from the most recent electric distribution company solicitation and reasonably foreseeable reductions in the cost of eligible technologies.

Sec. 3. Section 16-244z of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(a) (1) (A) — On or before September 1, 2018, the Public Utilities Regulatory Authority shall initiate a proceeding to establish a procurement plan for each electric distribution company pursuant to this subsection and may give a preference to technologies manufactured, researched or developed in the state, provided such procurement plan is consistent with and contributes to the requirements to reduce greenhouse gas emissions in accordance with section 22a-200a of the general statutes. Each electric distribution company shall develop such procurement plan in consultation with the Department of Energy and Environmental Protection and shall submit such procurement plan to the authority not later than sixty days after the authority initiates the proceeding pursuant to this subdivision, provided the department shall submit the program requirements pursuant to subparagraph (C) of this subdivision on or before July 1, 2019. The authority may require such electric distribution companies to conduct separate solicitations pursuant to subdivision (4) of this subsection for the resources in subparagraphs (A), (B) and (C)

of said subdivision, including separate solicitations based upon the size of such resources to allow for a diversity of selected projects.

~~(B)~~— On or before September 1, 2018, the authority shall initiate a proceeding to establish tariffs that provide for twenty-year terms of service described in subdivision (3) of this subsection for each electric distribution company pursuant to subparagraphs (A) and (B) of subdivision (2) of this subsection. In such proceeding, the authority shall establish the period of time that will be used for calculating the net amount of energy produced by a facility and not consumed, provided the authority shall assess whether to incorporate time-of-use rates or other dynamic pricing and such period of time shall be monthly, either (i) in real time, (ii) in one day, or (iii) in any fraction of a day not to exceed one day. The rate for such tariffs shall be established by the solicitation pursuant to subdivision (2) of this subsection.

~~(a)(C)~~ On or before September 1, 2018, the Department of Energy and Environmental Protection shall (i) initiate a proceeding to develop program requirements and tariff proposals for shared clean energy facilities eligible pursuant to ~~subparagraph (C) of subdivision (2)~~ **subsection (b)** of this ~~subsection~~ **section**, including, but not limited to, the requirements in ~~subdivision (6) of this subsection~~ **subsection (c) of this section**, and (ii) establish either or both of the following tariff proposals: (I) A tariff proposal that includes a price cap on a cents-per-kilowatt-hour basis for any procurement for such resources based on the procurement results of any other procurement issued pursuant to this subsection, and (II) a tariff proposal that includes a tariff rate for customers eligible under ~~subparagraph (C) of subdivision (2) of this subsection~~ **subsection (b) of this section** based on energy policy goals identified by the department in the Comprehensive Energy Strategy pursuant to section 16a-3d of the general statutes. On or before July 1, 2019, the department shall submit any such program requirements and tariff proposals to the authority for review and approval. On or before January 1, 2020, the authority shall approve or modify such program requirements and tariff proposals submitted by the department. If the authority approves two tariff proposals pursuant to this subparagraph, the authority shall determine how much of the total compensation authorized for customers eligible under this subparagraph pursuant to ~~subparagraph (A) of subdivision (1) of subsection (c)~~ **subsection (e)(1)** of this section shall be available under each tariff.

~~(b) (2)~~ Not later than July 1, 2020, and annually thereafter, each electric distribution company shall solicit and file with the Public Utilities Regulatory Authority for its approval one or more projects selected resulting from any procurement issued pursuant to ~~subdivision (1) of this subsection~~ **subsection (a) of this section** that are consistent with the tariffs approved by the authority pursuant to ~~subparagraphs (B) and (C) of subdivision (1) of this subsection~~ and that are applicable to ~~(A) customers that own or develop new generation projects on a customer's own premises that are less than two megawatts in size, serve the distribution system of the electric distribution company, are constructed after the solicitation conducted pursuant to subdivision (4) of this subsection to which the customer is responding, and use a Class I renewable energy source that either (i) uses anaerobic digestion, or (ii) has emissions of no more than 0.07 pounds per megawatt-hour of nitrogen oxides, 0.10 pounds per megawatt-hour of carbon monoxide, 0.02 pounds per megawatt-hour of volatile organic compounds and one grain per one hundred standard cubic feet, (B) customers that own or develop new generation projects on a customer's own premises that are less than two megawatts in size, serve the distribution system of the~~

electric distribution company, are constructed after the solicitation conducted pursuant to subdivision (4) of this subsection to which the customer is responding, and use a Class I renewable energy source that emits no pollutants, and (C) customers that own or develop new generation projects that are a shared clean energy facility, as defined in section 16-244x of the general statutes, and subscriptions, as defined in such section, associated with such facility, consistent with the program requirements developed pursuant to **subsection (a) of this section** subparagraph (C) of subdivision (1) of this subsection. Any project that is eligible pursuant to subparagraph (C) of this subdivision shall not be eligible pursuant to subparagraph (A) or (B) of this subdivision.

(3) — A customer that is eligible pursuant to subparagraph (A) or (B) of subdivision (2) of this subsection may elect in any such solicitation to utilize either (A) a tariff for the purchase of all energy and renewable energy certificates on a cents per kilowatt-hour basis, or (B) a tariff for the purchase of any energy produced by a facility and not consumed in the period of time established by the authority pursuant to subparagraph (B) of subdivision (1) of this subsection and all renewable energy certificates generated by such facility on a cents per kilowatt-hour basis.

(4) — Each electric distribution company shall conduct an annual solicitation or solicitations, as determined by the authority, for the purchase of energy and renewable energy certificates produced by eligible generation projects under this subsection over the duration of each applicable tariff. Generation projects eligible pursuant to subparagraphs (A) and (B) of subdivision (2) of this subsection shall be sized so as not to exceed the load at the customer's individual electric meter or a set of electric meters, when such meters are combined for billing purposes, from the electric distribution company providing service to such customer, as determined by such electric distribution company, unless such customer is a state, municipal or agricultural customer, then such generation project shall be sized so as not to exceed the load at such customer's individual electric meter or a set of electric meters at the same customer premises, when such meters are combined for billing purposes, and the load of up to five state, municipal or agricultural beneficial accounts, as defined in section 16-244u of the general statutes, identified by such state, municipal or agricultural customer, and such state, municipal or agricultural customer may include the load of up to five additional nonstate or municipal beneficial accounts, as defined in section 16-244u of the general statutes, when sizing such generation project, provided such accounts are critical facilities, as defined in subdivision (2) of subsection (a) of section 16-243y of the general statutes, and are connected to a microgrid.

(5) — The maximum selected purchase price of energy and renewable energy certificates on a cents per kilowatt-hour basis in any given solicitation shall not exceed such maximum selected purchase price for the same resources in the prior year's solicitation, unless the authority makes a determination that there are changed circumstances in any given year. For the first year solicitation issued pursuant to this subsection, the authority shall establish a cap for the selected purchase price for energy and renewable energy certificates on a cents per kilowatt-hour basis for any resources authorized under this subsection.

(c) ~~(6)~~ The program requirements for shared clean energy facilities developed pursuant to ~~subparagraph (C) of subdivision (1) of this subsection~~ **this section** shall include, but not be limited to, the following:

(A) The department shall allow cost-effective projects of various nameplate capacities that may allow for the construction of multiple projects in the service area of each electric distribution company that operates within the state.

(B) The department shall determine the billing credit for any subscriber of a shared clean energy facility that may be issued through the electric distribution companies' monthly billing systems, and establish consumer protections for subscribers and potential subscribers of such a facility, including, but not limited to, disclosures to be made when selling or reselling a subscription.

(C) Such program shall utilize one or more tariff mechanisms with the electric distribution companies for a term not to exceed twenty years, subject to approval by the Public Utilities Regulatory Authority, to pay for the purchase of any energy products and renewable energy certificates produced by any eligible shared clean energy facility, or to deliver any billing credit of any such facility.

(D) The department shall limit subscribers to (i) low-income customers, (ii) moderate-income customers, (iii) small business customers, (iv) state or municipal customers, (v) commercial customers, and (vi) residential customers. ~~who can demonstrate, pursuant to criteria determined by the department in the program requirements recommended by the department and approved by the authority, that they are unable to utilize the tariffs offered pursuant to subsection (b) of this section.~~

(E) The department shall require that (i) not less than ten per cent of the total capacity of each shared clean energy facility is sold, given or provided to low-income customers, and (ii) in addition to the requirement of clause (i) of this subparagraph, not less than ten per cent of the total capacity of each shared clean energy facility is sold, given or provided to low-income customers, moderate-income customers or low-income service organizations.

(F) The department may allow preferences to projects that serve low-income customers and shared clean energy facilities that benefit customers who reside in environmental justice communities.

(G) The department may create incentives or other financing mechanisms to encourage participation by low-income customers.

(H) The department may require that not more than fifty per cent of the total capacity of each shared clean energy facility is sold to commercial customers.

(7) For purposes of this subsection:

(A) "Environmental justice community" has the same meaning as provided in subsection (a) of section 22a-20a of the general statutes;

(B) "Low-income customer" means an in-state retail end user of an electric distribution company (i) whose income does not exceed eighty per cent of the area median income as defined by the United States Department of Housing and Urban Development, adjusted for family size, or (ii) that is an affordable housing facility as defined in section 8-39a of the general statutes;

(C) "Low-income service organization" means a for-profit or nonprofit organization that provides service or assistance to low-income individuals;

(D) "Moderate-income customer" means an in-state retail end user of an electric distribution company whose income is between eighty per cent and one hundred per cent of the area median income as defined by the United States Department of Housing and Urban Development, adjusted for family size.

~~(b) (1) On or before September 1, 2019, the authority shall initiate a proceeding to establish (A) tariffs for each electric distribution company pursuant to subdivision (2) of this subsection, (B) a rate for such tariffs, which may be based upon the results of one or more competitive solicitations issued pursuant to subsection (a) of this section, or on the average cost of installing the generation project and a reasonable rate of return that is just, reasonable and adequate, as determined by the authority, and shall be guided by the Comprehensive Energy Strategy prepared pursuant to section 16a-3d of the general statutes, and (C) the period of time that will be used for calculating the net amount of energy produced by a facility and not consumed, provided the authority shall assess whether to incorporate time of use rates or other dynamic pricing and such period of time shall be either (i) in real time, (ii) in one day, or (iii) in any fraction of a day not to exceed one day. The authority may modify such rate for new customers under this subsection based on changed circumstances and may establish an interim tariff rate prior to the expiration of the residential solar investment program pursuant to subsection (b) of section 16-245ff of the general statutes as an alternative to such program, provided any residential customer utilizing a tariff pursuant to this subsection at such customer's electric meter shall not be eligible for any incentives offered pursuant to section 16-245ff of the general statutes at the same such electric meter and any residential customer utilizing any incentives offered pursuant to section 16-245ff of the general statutes at such customer's electric meter shall not be eligible for a tariff pursuant to this subsection at the same such electric meter.~~

~~(2) — At the expiration of the residential solar investment program pursuant to subsection (b) of section 16-245ff of the general statutes, each electric distribution company shall offer the following options to residential customers for the purchase of products generated from a Class I renewable energy source that is located on a customer's own premises and has a nameplate capacity rating of twenty five kilowatts or less for a term not to exceed twenty years: (A) A tariff for the purchase of all energy and renewable energy certificates on a cents per kilowatt-hour basis; and (B) a tariff for the purchase of any energy produced and not consumed in the period of time established by the authority pursuant to subparagraph (C) of subdivision (1) of this subsection and all renewable energy certificates generated by such facility on a cents per kilowatt-hour basis. A residential customer shall select either option authorized pursuant to~~

~~subparagraph (A) or (B) of this subdivision, consistent with the requirements of this section. Such generation projects shall be sized so as not to exceed the load at the customer's individual electric meter from the electric distribution company providing service to such customer, as determined by such electric distribution company. For purposes of this section, "residential customer" means a customer of a single-family dwelling or a multifamily dwelling consisting of two to four units.~~

(d) (1) On or before January 1, 2020 the Public Utilities Regulatory Authority shall initiate a two-phase proceeding in partnership with the Connecticut Green Bank on the value of distributed generation and net metering successor program best practices. The authority and the Green Bank shall engage an independent, third-party consultant to assist with each phase of the proceeding and shall consult with other stakeholders with experience and expertise in distributed generation valuation methodologies, power systems, distributed generation systems and business models, and electric utility ratemaking. The authority and the Green Bank shall evaluate the distributed generation valuation methodologies and net metering successor programs implemented in other states to ascertain best practices and inform the proceeding. By January 1, 2022, the authority and the Green Bank shall submit to the Energy and Technology Committee of the General Assembly a full report so it may determine whether a change to the state's net metering program is warranted.

(2) The first phase of this proceeding shall (A) develop a methodology for valuing distributed generation, (B) establish a value of distributed generation resources for residential customers with a Class I renewable energy source that has a nameplate capacity rating of twenty-five kilowatts or less, and (C) establish a value, or values as deemed appropriate, of distributed generation resources with a Class I renewable energy source that have a nameplate capacity rating of greater than twenty-five kilowatts and up to five megawatts. The methodology for determining the value of distributed generation shall at minimum account for the value of (1) energy, (2) generation capacity, (3) avoided energy delivery, transmission and distribution line losses, (4) avoided distribution and transmission infrastructure upgrades, and (5) environmental benefits, including reduced greenhouse gas emissions. The time frame used to quantify the value of the components in the methodology shall be no less than twenty years. The authority may, based on known and measurable evidence of the cost or benefit of distributed generation operation, incorporate other values into the method, including credit for locally manufactured or assembled energy systems, locational factors that impact the value of distributed generation installed at different locations on the electric distribution or transmission grid, and energy storage. In developing the method for valuing distributed generation pursuant to this section, the authority shall ensure the method is consistent with published guidance from the Interstate Renewable Energy Council.

(3) The second phase of this proceeding shall identify net metering successor program best practices by evaluating other states' policies, such as time-of-use pricing. As part of this phase of the proceeding, the authority and the Green Bank shall consider the impacts of each net metering successor program, including costs and benefits for participants and

non-participants, economic development benefits, environmental benefits, and the amount of solar generating capacity deployed in furtherance of state policy objectives.

~~(e)(1)(A)~~ **(e)(1)** The aggregate total megawatts available to all customers utilizing a procurement and tariff offered by electric distribution companies pursuant to subsection (a) of this section shall be up to ~~eighty-five~~ **fifty** megawatts **per year**. ~~in year one and increase by up to an additional eighty five (85) megawatts per year in each of the years two through six of such a tariff, provided the total megawatts available to customers eligible under subparagraph (A) of subdivision (2) of subsection (a) of this section shall not exceed ten megawatts per year, the total megawatts available to customers eligible under subparagraph (B) of subdivision (2) of subsection (a) of this section shall not exceed fifty megawatts per year and the total megawatts available to customers eligible under subparagraph (C) of subdivision (2) of subsection (a) of this section shall not exceed twenty five megawatts per year.~~ The authority shall monitor the competitiveness of any procurements authorized ~~pursuant to subsection (a) of this section~~ and may adjust the annual purchase amount established in this subsection or other procurement parameters to maintain competitiveness. Any megawatts not allocated in any given year shall ~~not~~ roll into the next year's available megawatts. The obligation to purchase energy and renewable energy certificates shall be apportioned to electric distribution companies based on their respective distribution system loads, as determined by the authority.

~~(B)~~ The electric distribution companies shall offer any tariffs developed pursuant to subsection (b) of this section for six years. At the end of the tariff term pursuant to subparagraph (B) of subdivision (2) of subsection (b) of this section, residential customers that elected the option pursuant to said subparagraph shall be credited all cents per kilowatt hour charges pursuant to the tariff rate for such customer for energy produced by the Class I renewable energy source against any energy that is consumed in real time by such residential customer.

~~(C)~~ The authority shall establish tariffs for the purchase of energy on a cents per kilowatt hour basis at the expiration of any tariff terms authorized pursuant to this section.

(2) At the beginning of year six of the procurements authorized pursuant to ~~this~~ **(a) of this section**, the department, in consultation with the authority, shall assess the tariff offerings pursuant to this section and determine if such offerings are competitive compared to the cost of the technologies. The department shall report, in accordance with section 11-4a of the general statutes, the results of such determination to the General Assembly.

(3) For any procurements established pursuant to ~~this section~~ **subsection (a) of this section**, the authority shall examine how to incorporate the following energy system benefits into the rate established for any such tariff: (A) Energy storage systems that provide electric distribution benefits, (B) location of a facility on the distribution system, (C) time-of-use rates or other dynamic pricing, and (D) other energy policy benefits identified in the Comprehensive Energy Strategy prepared pursuant to section 16a-3d of the general statutes.

~~(f)(e)~~ In accordance with subsection (h) of section 16-245a of the general statutes, as amended by this act, the authority shall determine which of the following two options is in the best interest of ratepayers and shall direct each electric distribution company to either (1) retire the renewable

energy certificates it purchases pursuant to subsections (a) ~~and (b)~~ of this section on behalf of all ratepayers to satisfy the obligations of all electric suppliers and electric distribution companies providing standard service or supplier of last resort service pursuant to section 16-245a of the general statutes, as amended by this act, or (2) sell such renewable energy certificates into the New England Power Pool Generation information system renewable energy credit market. The authority shall establish procedures for the retirement of such renewable energy certificates. Any net revenues from the sale of products purchased in accordance with this section shall be credited to customers through a nonbypassable fully reconciling component of electric rates for all customers of the electric distribution company. The purchase of renewable energy certificates **Notwithstanding any other provision in the general statutes, all attributes of Class I renewable energy sources, including capacity and other system attributes, except renewable energy certificates purchased by electric distribution companies pursuant to this section, shall remain with the system owner.**

(e) The costs incurred by an electric distribution company pursuant to this section shall be recovered on a timely basis through a nonbypassable fully reconciling component of electric rates for all customers of the electric distribution company. Any net revenues from the sale of products purchased in accordance with any tariff offered pursuant to this section shall be credited to customers through the same fully reconciling rate component for all customers of such electric

Sec. 4. Subsection (b) of section 16-245ff of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(b) The Connecticut Green Bank, established pursuant to section 16-245n, shall structure and implement a residential solar investment program established pursuant to this section that shall support the deployment of not more than ~~three~~ **four** hundred megawatts of new residential solar photovoltaic installations located in this state on or before (1) December 31, 2022, or (2) the deployment of ~~three~~ **four** hundred megawatts of residential solar photovoltaic installation, in the aggregate, whichever occurs sooner, provided the bank shall not approve direct financial incentives under this section for more than one hundred megawatts of new qualifying residential solar photovoltaic systems, in the aggregate, between July 2, 2015, and April 1, 2016. The procurement and cost of such program shall be determined by the bank in accordance with this section.

Sec. 5. Section 16-244u(e) of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

~~(e) (1) On or before October 1, 2013, the Public Utilities Regulatory Authority shall conduct a proceeding to develop the administrative processes and program specifications, including, but not limited to, a cap of ten million dollars per year apportioned to each electric distribution company based on consumer load, for credits provided to beneficial accounts pursuant to subsection (b) of this section and payments made pursuant to subsection (c) of this section, provided the municipal, state and agricultural customer hosts, each in the aggregate, and the designated beneficial accounts of such customer hosts, shall receive not more than forty per cent of the dollar amount established pursuant to this subdivision.~~

(2) In addition to the provisions of subdivision (1) of this subsection, the authority shall authorize six million dollars per year for municipal customer hosts, apportioned to each electric distribution company based on consumer load, for credits provided to beneficial accounts pursuant to subsection (b) of this section and payments made pursuant to subsection (c) of this section where such municipal customer hosts have: (A) Submitted an interconnection application to an electric distribution company on or before April 13, 2016, and (B) submitted a virtual net metering application to an electric distribution company on or before April 13, 2016.

(3) In addition to the provisions of subdivisions (1) and (2) of this subsection, the authority shall authorize, apportioned to each electric distribution company based on consumer load for credits provided to beneficial accounts pursuant to subsection (b) of this section and payments made pursuant to subsection (c) of this section three million dollars per year for agricultural customer hosts, provided each agricultural customer host utilizes a virtual net metering facility that is an anaerobic digestion Class I renewable energy source and not less than fifty per cent of the dollar amount for such agricultural customer hosts established under this subparagraph is utilized by anaerobic digestion facilities located on dairy farms that complement such farms' nutrient management plans, as certified by the Department of Agriculture, and that have a goal of utilizing one hundred per cent of the manure generated on such farm.

Sec. 6. Section 16-245a(h) of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*)

(h) The authority shall establish procedures for the disposition of renewable energy certificates purchased pursuant to ~~section 7 of this act~~ **section 16-244z of the general statutes, as amended by this act**, which may include procedures for selling renewable energy certificates consistent with section 16-244z of the general statutes or, if renewable energy certificates procured pursuant to ~~section 7 of this act~~ **section 16-244z of the general statutes, as amended by this act**, are retired and never used for compliance in any other jurisdiction, reductions to the percentage of the total output or services of an electric supplier or an electric distribution company generated from Class I renewable energy sources required pursuant to subsection (a) of this section. Any such reduction shall be based on the energy production that the authority forecasts will be procured pursuant to subsections (a) and (b) of ~~section 7 of this act~~ **section 16-244z of the general statutes, as amended by this act**. The authority shall determine any such reduction of an annual renewable portfolio standard not later than one year prior to the effective date of such annual renewable portfolio standard. An electric distribution company shall not be responsible for any administrative or other costs or expenses associated with any difference between the number of renewable energy certificates planned to be retired pursuant to the authority's reduction and the actual number of renewable energy certificates retired.

February 15, 2019

The Energy and Technology Committee
Legislative Office Building, Room 3900
Hartford, CT 06106

Dear Energy and Technology Committee Leaders,

The undersigned organizations and businesses strongly support the enclosed legislative proposal to address the near-term crisis facing Connecticut's solar industry, which employs more than 2,100 people. These jobs are in jeopardy without legislative action this session.

Last year's Senate Bill 9 (now PA 18-50) locked in the termination of "net metering," which will occur in October, if not sooner. Net metering is a critical clean energy policy offered in 38 states that provides electric bill credits to solar owners who send clean power to the grid.¹ With less than seven months before net metering expires, no successor program is in place for either the residential or commercial solar industries. We are now facing a cliff in the sustained, orderly development of solar energy in Connecticut.

There is consensus among PURA stakeholders that the process to replace net metering has been rushed, and that the new programs will not be ready in time. Merely providing PURA more time is not sufficient because the successor programs required by PA 18-50 are overly complicated, expensive to implement and have killed solar jobs in other states, including Maine, Utah, Arizona and Hawaii.²

Instead of rushing to implement harmful policies, we feel the state legislature should pause implementation of the new programs and continue Connecticut's status quo solar policies (net metering, RSIP, ZREC, etc.). During this time, Connecticut should do what dozens of other states have done: collect data from a value of solar study and use it to determine whether new programs are warranted.

The enclosed legislative proposal accomplishes these critical goals. We greatly appreciate your consideration of this language and respectfully encourage the committee to advance it to a public hearing.

Sincerely,

¹ <http://www.dsireusa.org/resources/detailed-summary-maps/>

² <https://www.thesolarfoundation.org/solar-jobs-by-state-2018/>

1. Acadia Center	Hartford, CT
2. Allco Renewable Energy	New York, NY
3. Coalition for Community Solar Access	Boston, MA
4. Clean Water Action	East Berlin, CT
5. CMC Energy Services	Yalesville, CT
6. Connecticut Citizen Action Group	Hartford, CT
7. Connecticut Conference of Municipalities	New Haven, CT
8. Connecticut Fund for the Environment	New Haven, CT
9. CT League of Conservation Voters	Hartford, CT
10. CT Roundtable on Climate and Jobs	Hartford, CT
11. C-TEC Solar	Bloomfield, CT
12. Earthlight Technologies	Ellington, CT
13. EcoSmart Home Services	East Berlin, CT
14. Environment Connecticut	Hartford, CT
15. EnterSolar	New York, NY
16. Fight the Hike	New Haven, CT
17. Greenskies Renewable Energy	Middletown, CT
18. JD Solar Solutions	Glastonbury, CT
19. Litchfield Hills Solar	Litchfield, CT
20. Lodestar Energy	Avon, CT
21. MSL Group, Inc.	Milford, CT
22. New Haven Energy Task Force	New Haven, CT
23. NHS New Haven	New Haven, CT
24. Northeast Clean Energy Council	Boston, MA
25. Northeast Smart Energy	Ridgefield, CT
26. Operation Fuel	Hartford, CT
27. People's Action for Clean Energy	West Simsbury, CT
28. Pine Gate Renewables	Asheville, NC
29. PosiGen	Bridgeport, CT

30. PurePoint Energy	Norwalk, CT
31. Renewable Energy & Efficiency Business Association	West Hartford, CT
32. SHR Energy	Weston, CT
33. Sierra Club	Hartford, CT
34. 64Solar	Port Chester, NY
35. Solar Connecticut	Haddam, CT
36. Solar Energy Industries Association	Washington, DC
37. Sol Systems	Washington, DC
38. Star Power	Southport, CT
39. Sunlight Solar Energy	New Haven, CT
40. SunPower	Newington, CT
41. Sunrun	Hartford, CT
42. The Nature Conservancy	New Haven, CT
43. Trinity Solar	Stratford, CT
44. Verogy	Hartford, CT
45. Vivint Solar	North Haven, CT