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Written Testimony of Christopher Phelps, Program Director
Before the Connecticut General Assembly Energy and Technology Committee

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Written testimony **supporting** House Bill 5362, An Act Concerning Renewable Energy.

Senator Fonfara, Representative Nardello, and members of the Committee:

Thank you for the opportunity to offer this testimony supporting Raised House Bill 5362. Environment Connecticut is a member-supported non-profit environmental advocacy organization. We strongly support HB 5362. This legislation would implement market-based solar financing programs modeled on successful, affordable solar programs in New Jersey, California and other states. This legislation would result in the installation of over 300 megawatts of new solar power capacity in Connecticut over the next decade. The result would be enough solar electric generating capacity to meet approximately 4.5% of today's peak electric demand in Connecticut.

HB 5362 is identical to legislation (HB 6635) that was passed unanimously by the House of Representatives late in the 2009 session. The fiscal note on that legislation from the Office of Fiscal Analysis indicated **no fiscal impact** to the state.

Solar power can play an important role in Connecticut's energy, environmental, and economic future. The approximately 305 megawatts of solar power that would be built pursuant to HB 5362 in the years to come would support clean energy entrepreneurs, reduce our dependence on fossil fuels and reduce emissions of global warming pollution to help meet the requirements of the CT Global Warming Solutions Act (PA 08-98.)

Connecticut's Solar Businesses on Life Support:

In recent years, Connecticut has seen the construction of approximately 1,000 solar power systems totaling over 15 megawatts of capacity. These systems have been incentivized by the CT Clean Energy Fund's solar rebate incentive programs for small residential and large commercial-scale solar. Unfortunately, the rebate-incentive model has proven to be incapable of cost-effectively supporting sustainable growth in the solar industry.

The size of solar rebates quickly depleted available Clean Energy Fund solar rebate funding. As a result, rebates for commercial systems were suspended in 2009, leaving a long waiting list of businesses, school systems and municipalities who have been unable to proceed with solar projects. The residential programs have suffered similar problems. The CT Solar Lease program ran out of money in February of this year. Today, the only solar power incentive available in Connecticut is the residential rebate program. However, as it is currently structured, that program is unlikely to be able to be sustained over the long-term.

As a result, solar companies that previously were active in Connecticut have begun to move operations, and jobs, to states such as Massachusetts and New Jersey with active, reliable and sustainable market-based solar incentive programs.

HB 5362 Can Help Connecticut Create Jobs:

According to analysis of HB 5362, this legislation will support creation of over **1,200 new jobs** over the next decade. This analysis was conducted by the non-profit organization Vote Solar, using the National Renewable Energy Laboratories PV Jobs and Economic Impacts Model. HB 5362 can help Connecticut entrepreneurs grow clean energy businesses employing both entry-level and skilled workers in professions ranging from engineering, to electricians and construction.

HB 5362 Summary:

This legislation redesigns Connecticut's solar programs to follow successful, affordable and sustainable models currently active in New Jersey and other states. In 2007, New Jersey faced a crisis in its solar programs similar to that confronting Connecticut today. Prior to 2007, New Jersey relied upon rebate incentives to fund both small-residential and large-commercial solar installations. Between 2001 and 2007, those rebate programs resulted in the construction of 45 megawatts of solar capacity at an installed cost of \$178 million. That cost was unsustainable and incapable of affordably meeting New Jersey's long-term solar goals.

In 2007, New Jersey restructured its solar programs to move away from rebates for solar installations other than small-residential systems. Instead, the state introduced a new market-based solar financing program relying on Solar Renewable Energy Certificates (SREC) to incentivize the construction of larger commercial-scale solar systems.

Today, the New Jersey solar programs are comprised largely of a combination of residential rebates that decline over time as increasing amounts of systems are installed statewide, a large commercial-scale market-based financing SREC program that leverages private capital instead of rebates, and limited grid-connected "utility scale" solar installations.

The three main elements of New Jersey's solar programs outlined above, **modified to fit a smaller scale suitable to Connecticut's needs**, make up the heart of HB 5362.

HB 5362 Section-by-Section:

Residential Solar (Sections 1 and 2):
30 megawatts

These sections of 5362 are designed to ensure that Connecticut's residential rebate programs remain in place over the next decade. At the same time, the programs would be re-designed to be more sustainable by gradually reducing the size of the rebates (on a \$ per watt basis) as increasing amounts of solar are built over time.

The residential programs would be designed to result in the installation of 30 megawatts of systems by 2020 utilizing a “declining capacity block” mechanism to gradually ratchet-down rebate levels as increasing amounts of solar are installed through the program. The idea behind this mechanism, being utilized in numerous states today, is to incentivize the solar industry to reduce installed costs for solar, and cut the cost of solar programs to ratepayer funds (such as the Clean Energy Fund.)

Ultimately, the goal of these provisions is to support growth of the residential solar market to a point where significant rebates are no longer necessary to make solar affordable for homeowners.

Commercial Solar Market-Based Financing (Sections 3 and 4):

225 megawatts

These sections contain the heart of HB 5362. They create a market-based solar financing system utilizing SRECs issued for each megawatt hour of energy generated by a solar system. These SRECs are sold to the utilities who are required to enter into long-term contracts with developers of large commercial solar systems.

Solar system developers utilize the SREC value generated to provide a portion of the upfront capital necessary to finance large commercial-scale solar projects. Such solar projects are typically installed pursuant to “power purchase agreements.” Under such a contract, the developer essentially leases roof space to install a large solar system at a customer’s facility. (Examples might include a high school, or commercial building.) The customer agrees to purchase the power generated by that solar system, typically at a rate that is typically **lower than utility rates**.

In short, SREC market-based financing allows any owner of a large facility, (businesses, schools, municipalities, etc.,) to **cut their energy bills** by installing solar power systems **at no upfront cost**.

Analysis of State Building Suitability for Solar (Section 5):

This section directs the Office of Policy and Management and the Department of Public Works, within available funding, to assess the suitability of public facilities for solar power installations. This would ensure that the State of Connecticut is prepared to successfully **cut energy costs for state facilities** by utilizing the SREC market mechanism established in sections 3 and 4 of this bill to install solar at state facilities. (**With no cost to the state.**)

Grid-Connected, “Utility Scale” Solar (Section 6):

50 megawatts

This section creates a pilot program for installation of large, free-standing solar systems connected directly to the electric grid. (Rather than serving the electric load of specific facilities.) Such systems could be installed on brownfields, landfills, parking lots, utility lands, and other unutilized space. For example, PSEG is currently installing 40 megawatts of solar on utility poles in New Jersey and another 40 megawatts of free-standing systems on utility-owned lands.

Utility-built solar under this section is limited to one-third of the 50 megawatts total under this pilot program. This is to minimize the potential for unwanted significant ratepayer burdens from the upfront cost of such solar installations during the pilot program.

Coordinated Solar Thermal Hot Water Programs (Section 7):

This provision directs the Clean Energy Fund and Energy Efficiency Fund to coordinate on development of solar thermal incentive programs.

Incentive for Connecticut-Based Solar Manufacturing (Section 8):

This prioritizes, and creates an additional incentive for, solar installations that utilize major system components manufactured or assembled in Connecticut in order to incentivize growth of solar manufacturing to the state.

Ratepayer Protections / Cost Safety Valve (Section 9):

This section places a firm cap on the possible costs of the solar programs established in HB 5362 of less than 1%. This ensures that the **maximum annual cost** of the solar programs in this legislation would be **less than \$1** per month for the typical homeowner.

Project 150 Bidding (Section 10):

Section 10 of HB 5362 makes modifications to project 150. It allows the Clean Energy Fund to run an additional solicitation for up to 45 megawatts of renewable generation to replace projects previously approved under Project 150 but that are no longer viable. Such projects typically would be non-solar technologies such as fuel cells, wind or biomass.

Thank you for the opportunity to offer this testimony in support of HB 5362. This legislation can be an important part of Connecticut's economic recovery, helping to stimulate job growth among in the state's emerging clean energy business sector. This bill will also help cut peak electric demand, reduce our dependence on fossil fuels and reduce emissions of air and global warming pollution.

On behalf of Environment Connecticut's statewide membership, I urge you to support HB 5362, AAC Renewable Energy.

Sincerely,

Christopher Phelps
Program Director
Environment Connecticut