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Statement of the Connecticut Clean Energy Fund regarding Raised Bill 5788 An Act Establishing a Solar Roof Program

The Connecticut Clean Energy Fund (CCEF) supports the intent of Raised Bill 5788 to foster Solar PV installations throughout the state. Under the CCEF's successful Solar Photovoltaic (PV) Rebate Program, rebates are offered through designated participating installers for Connecticut residents, nonprofits and governmental organizations that install solar PV systems of 10 kW or less on their homes or at their facilities. CCEF's mission is to "promote, develop, and invest in clean energy sources for the benefit of Connecticut ratepayers". According to our 2008-2010 Comprehensive Plan, our goal under the Solar PV Rebate Program is to achieve over 5.8 MWAC of installed capacity (over \$30 million in rebates, about 1,430 systems).

At the present levels of incentives, at the end of February 2008, 449 installations were completed or are underway, totaling over 2.3MW of installed capacity and over \$9.8 million in rebates reserved/paid. Two hundred thirty eight out of the 449 installations were completed in 2007 alone.

We would like to emphasize that the 10,000 Solar Roofs' goal proposed under Raised Bill 5788, at present prices, would translate into an investment of around \$460 million and would require an incentive level of about half of that amount (\$230 million in rebates) for solar PV technology alone. Incentives may have to be increased beyond present levels to encourage such a dramatic increase in the adoption rate, in which case, the total incentive level would be even higher.

We applaud the intent of this legislation to promote solar installations and to create a robust renewable energy market in Connecticut. However, we would like to recommend a more comprehensive approach to renewable energy systems and conservation/load management technologies. We have concerns that over-stimulating the market for PV could discourage cost reduction, as Germany has experienced with its PV feed-in tariff. We would like to suggest that funds be allocated to the most cost-effective solar technologies, such as solar thermal systems which displace fossil-fuel consumption, as well as electrically-heated domestic hot water (DHW). At present, no funding is available for solar programs that displace fossil fuels for either DHW or for space heating as neither natural gas nor oil company customers pay into CCEF. Funding for such programs would greatly expand the market for that technology at relatively modest incentive levels, because the technology is less expensive. In addition, the total cost for a typical solar hot water residential installation is about 25% of the cost of a typical PV installation, making it affordable to a much wider range of households. If we assume PV installations continue at the expected level (about 1,000 new installations of all sizes based on our comprehensive plan), we would have to install about 9,000 solar hot water systems to achieve our goal of 10,000 solar roofs. A very rough estimate of solar thermal rebate support for 9,000 residential systems, including all fuel types, is \$22,500,000 to \$27,000,000 based on a per-system incentive of \$2,500 to \$3,000.

CCEF is currently creating a pilot solar thermal program for displacement of electric hot water heaters. In the next few months, we will have a more definitive analysis of the economics of solar thermal systems and the impact on reduction of electric usage. We would be happy to share this analysis with this committee.