Unleashing the Potential of Commercial and Community Solar in CT

CT League of Conservation Voters Environmental Summit
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Coalition for Sensible Solar Regulation

Connecticut Roundtable on Climate and Jobs
IREJN Interreligious Eco-Justice Network
Connecticut Solar & Storage Association Local Power = Local Jobs
Efficiency For All
CTGBC U.S. Green Building Council Connecticut Chapter
Lodestar Energy
CFI Zero Carbon Footprint
SOS Save Our State Out of many, One
CommonSenseFund
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350CT.org
Sierra Club Connecticut
EVClubOfCT
The Nature Conservancy Connecticut
PACE People's Action for Clean Energy
Sustainable Westport
Windsor Climate Action
Sustainable Fairfield
Portland Clean Energy
Eastern Connecticut Green Action Think Globally Act Locally
The Jonah Center For Earth and Art
Branford clean energy

Commercial and Community solar is being held back by outdated regulations

- These constraints include:
  - Program caps on renewable programs, including 50 MW for commercial (up to 2 MW), 25 MW for Shared Clean Energy Facilities (SCEF) and 10 MW for low-emission projects.[1] **We propose doubling these limits.**
  - A limit of the size of an array to local electric load.[2] **We propose removing this limit.**
- As a result
  - A large number of proposed commercial solar and SCEF projects get stranded
  - Municipal and state virtual net metering programs are over-subscribed
  - Projects are sized below their potential
  - Connecticut cannot reach its interim clean energy goals without relying on out-of-state sources and extending Millstone
  - Opportunities are missed to benefit distressed communities and vulnerable populations
  - Emphasis shifts toward larger, grid-scale projects, leading to
    - increasing siting conflicts
    - loss of control and profits to out-of-state developers
  - Electric grid is dependent on larger, centralized resources and is therefore less resilient

*N.B. the focus here is **commercial** and **community** solar, NOT residential or utility-scale.*

Sources:

[1] Specified in Section (c) (1) (A) of Conn. Gen. Stat. § 16-244z4

[2] Specified in Section (4) of Conn. Gen. Stat. § 16-244z

Benefits of increasing caps far outweigh the cost

	Commercial	SCEF
1. Program Cost (per kWH)	17.1 ¢[1]	11.8 ¢[2]
2. Avoided Energy Costs (per kWH) [3]	9.0 ¢	9.0 ¢
3. Net Program Cost (per kWH)	8.1 ¢	2.8 ¢
4. Proposed Cap Increase		
a. Megawatts	50	25
b. Gigawatt-Hours[4]	74.5	37.2
5. Cost of Cap Increase		
a. Total	$6.0 million	$0.9 million
b. per kWH[5]	0.021 ¢	0.003 ¢
c. per Month for Avg. Ratepayer[6]	15 ¢	2 ¢

The benefits are far greater and include: greater energy equity, avoided emissions, cleaner air, better health, green jobs and economic development, tax revenue more resilient grid, preservation of farmland and forests, energy independence.

Sources:

[1] Comprises 7.1 cents for RECs and 10 cents for net metering (IRP, p. 87)
[2] Comprises 9.3 cents avg. accepted Year 2 SCEF bid plus 2.5 cents customer credits
[3] Electric system benefits of solar, from Value of DER Study
[4] Based on a capacity factor of 17%
[5] Based on total state usage of 28.8 TWH (IRP, p. 19)
6 Based on average monthly usage of 700 kWH

Expanding community and commercial solar will yield many benefits to Connecticut

- Advantages of Commercial Solar:
  - An economic opportunity for the state
    - Lower electric costs and generates revenues for CT businesses
    - Produces local, well-paying jobs
  - Siting considerations
    - Reduces the need for solar on farmland and forests
    - Faces fewer siting challenges, so it can be deployed quickly
  - Is necessary for CT to reach its clean energy goals
  - Is an effective tool to advance energy equity:
    - Preferences are given to distressed communities
    - SCEF can lower energy costs for vulnerable populations
  - Increases resilience of the grid by reducing reliance on large, centralized and out-of-state sources
    - Especially when paired with storage and/or as part of a microgrid
- We need to put solar where there is room
  - PACE estimates CT has 7.1 GW of potential rooftop commercial solar
  - This potential cannot be realized by limiting each project to local load
  - CT businesses of all sizes could benefit from the revenue by generating electricity on their own premises

Photo Credit: Asante Energy

Solar canopies can play a big role in meeting our energy needs

- PACE estimates that CT could site 7 gigawatts of commercial solar on 8,400 canopies across the state.
- These could produce 37% of current electricity needs.
- Canopies have unique advantages:
  - Protected parking
  - Reduces need for solar on farms and forests
  - Can prioritize underserved populations
  - Located close to load
  - Ideal for pairing with storage and EV charging
- Additional incentives for canopies could unleash this potential
  - Canopy projects cost more than rooftop
  - Neighboring states offer tariff adders for canopies

We are proposing a 6 cent per kWH adder for solar canopy projects