



SOLAR IN CT

# CT SOLAR PROGRAMS

*How Much Solar Do We Really Have?*



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# WHAT SOLAR PROGRAMS EXIST IN CONNECTICUT?

The first Connecticut solar programs were initiated with the Clean Energy Fund established in 1998. Since then, solar has grown in the state but not as robustly as in neighboring states.

Today, the CT Department of Energy and Environmental Protection (DEEP) procures grid scale renewables in order to decarbonize the state's electric grid. Additionally, CT has three tariff-based programs that provide payments for renewable electricity generation:

## **Residential Renewable Energy Solutions Program (RRES)**

Established by CT Public Act 19-35 and PURA dockets 20-07-01 and 21-08-02, RRES replaced the Residential Solar Investment Program (RSIP) and the previous net metering. The goal of the 6-year program (2022 -2027) is to annually deploy 50-60 MW of residential solar. Learn more in *Part 4 Residential Solar*.

## **Non-Residential Renewable Energy Solutions Program (NRES)**

Also established by PA 19-35 and docket 20-07-01 with further details in docket 21-08-03, NRES replaced the Low Emission Renewable Energy Credit and Zero Emission Renewable Energy Credit (LREC/ZREC) and Virtual Net Metering (VNM) programs. Unlike the residential program, this program has caps which limit the amount of commercial solar which can be added to the grid annually. Learn more in *Part 5 Non-Residential Solar*.

## **Shared Clean Energy Facility Program (SCEF)**

SCEF was developed by PURA in response to CT Public Act 18-50 and initiated to provide access to solar benefits especially for residents with low income or those unable to install systems on their property.



# MUNICIPAL UTILITY SOLAR PROGRAMS

Eversource and United Illuminating distribute the bulk of electricity to Connecticut. However, in a few towns, electricity is supplied by a municipal utility. These utilities have their own solar programs.

**Bozrah Light & Power** offers net metering but charges a fixed monthly fee along with a distribution cost recovery.

**Groton Utilities** offers net metering but charges a fixed monthly fee along with a distribution cost recovery.

**Jewett City DPU** provides an incentive for systems up to but not exceeding 15KW. Customers continue to pay their monthly share of JCDPU's fixed annual costs. Electricity exported to the grid is purchased by paying Average Locational Marginal Pricing (LMP) prices for the given month.

**Norwich Public Utilities** uses a Cost Avoided metering policy, so any excess generation is paid back to the customer monthly as a bill credit at the wholesale rate set by the New England Independent System Operator (ISO-NE).

**South Norwalk Electric and Water** in general opposes solar subsidies and offers only a small compensation of a one-time payment of \$0.487 per Watt of solar installed up to 10kW.

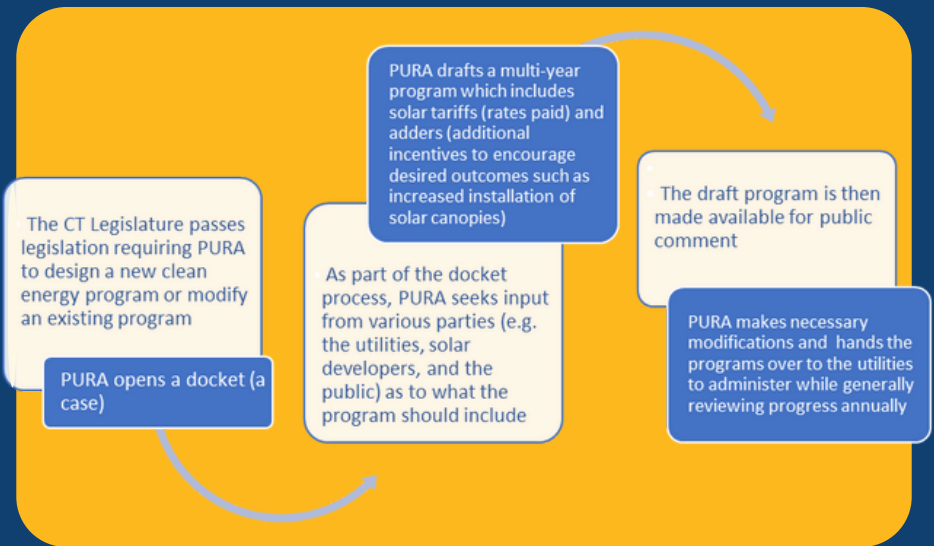
**Third Taxing District** offers a one-time incentive for solar installations up to 20kW. The panel must be purchased not leased with no third party providers. Energy is metered on a yearly basis. At the end of their solar year (Apr 1 – Mar 31), they pay a small incentive for any extra electricity sent to the grid.

**Wallingford Electric** offers net metering which is administered in concert with the Green Bank and financial incentives based on GB recommendations. Funded from the utility's share of the ISO-NE forward capacity market proceeds.

**Mohegan Tribal Utility Authority** serves only a small number of commercial customers.

# HOW ARE NEW SOLAR PROGRAMS CREATED?

The state's complex energy landscape has been shaped over the years by legislators, DEEP, the Public Utilities Regulatory Authority (PURA), the utilities, the CT Green Bank, towns, the federal government, and various other interested parties. PURA regulates the publicly traded electric utilities: Eversource and United Illuminating. It does not oversee the municipal utilities or the Mohegan Tribal Utility Authority. The following chart illustrates how PURA designs a program.



In the case of municipal utilities, they design their own programs sometimes in concert with the [CT Municipal Energy Cooperative \(CMEEC\)](#) and/or the [CT Green Bank](#).

# HOW ARE SOLAR PROGRAMS ADMINISTERED?

PURA, which is part of DEEP, designs and oversees the RRES, NRES, and SCEF programs but they are administered by Eversource and UI.

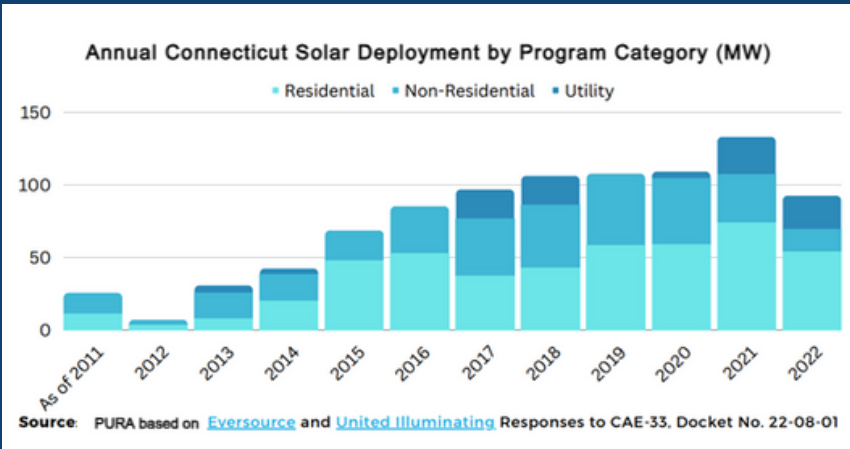
The electric utilities are responsible for maintaining the grid infrastructure namely the poles, wires, substations, and related equipment. They do not generate electricity but rather distribute it and so are referred to as electric distribution companies (EDCs).

Because solar in most cases needs to be connected to the grid, the utilities oversee this process known as interconnection. Interconnection can take a month or even years depending on the size of the project, the modifications to the grid that are needed to support the project, third party consents required, permitting, and other issues.

Grid scale projects (generally over 5 MW) may need to go through ISO New England's interconnection process.

# HOW MUCH SOLAR DOES CONNECTICUT CURRENTLY HAVE?

In 2022, Eversource and United Illuminating reported adding less than 100 MW of solar, the lowest amount of installed solar PV since 2016.

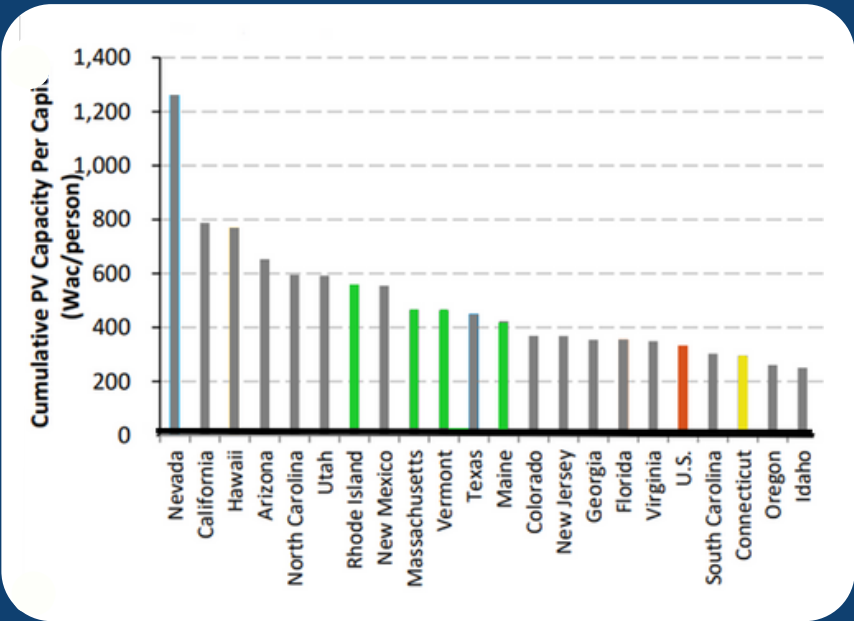


The 2023 report by the Solar Energy Industries Association (SEIA) indicates that the current installed solar capacity of CT is a little over 1200 MW, ranking the state 22nd nationally in total solar capacity.

Connecticut has a goal of decarbonizing the electric grid by 2040. Realistically, we need to add far more renewables if we are to reach this target. The most recent US Energy Information Administration [data](#) indicates that CT consumed 109,000 barrels of petroleum and 163 billion cubic feet of natural gas for electricity generation in 2021. Well over half of our electricity is powered by fossil fuels, with the next largest contributor being nuclear power.

# HOW DO WE COMPARE?

Connecticut lags behind Rhode Island, Massachusetts, Maine, and Vermont when it comes to installed solar PV. 2022 data from the National Renewable Energy Laboratory (NREL) reveals that, per capita, the state is below the national average.



At the current solar deployment rate, we will not meet our target of a decarbonized grid by 2040. If we are to reach our goal, we must drastically increase the annual amount of solar deployed in Connecticut. Grid decarbonization is an achievable goal. Other states are well on their way to proving this.

## RESOURCES

- [PURA 2022 Annual Report](#)
- [NREL Spring 2023 Solar Industry Update](#)
- [SEIA - Solar in CT](#)
- [EIA CT Electricity by Source](#)

For more information, visit [PACEcleanenergy.org](https://PACEcleanenergy.org)

