



Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

2018 DGFWG: CT Policy Update

Joshua Ryor
12/10/2018



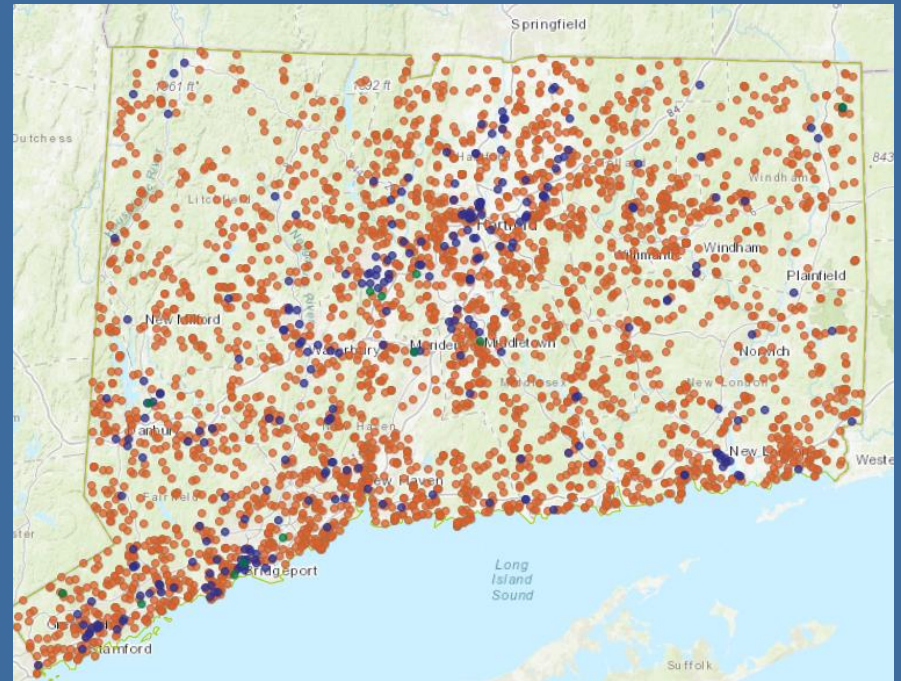
Connecticut Department of Energy and Environmental Protection

Presentation Outline

- Update on Current Policies
- Update on Forward-Looking Policies
- Connecticut DG Solar PV Projections (Methodology + MWs/year)



Image and project map from ctgreenbank.com



Update on Current Policies



Connecticut Department of Energy and Environmental Protection

Summary of Current Policies / Progress

- DEEP Small Scale Procurement
 - All projects have been approved by PURA; will be online in 2019 or 2020
- Shared Clean Energy Facility Pilot (SCEF Pilot)
 - 3.62 MW likely to come online in 2019; 1.6 MW likely in 2020
 - All future projects will go through the statewide SCEF program authorized in Public Act 18-50 (PA 18-50) (discussed later)
- Residential Solar Investment Program (RSIP)
 - Current program to end once 300 MW has been reached; Connecticut Green Bank projects RSIP to end by the end of Q3/beginning of Q4 2019
- ZREC Program
 - The auction for Year 7 of the ZREC Program for large and medium projects occurred in October/November; currently being finalized
 - Year 6 of the ZREC program for small project will be completed this year



DEEP Small Scale Procurement

- Per DEEP’s 2017 presentation to the ISO-NE DGFWG, “PURA approved the Small Scale Projects. There is only one solar project 5MW or less...” which will likely come online in 2020:

Project Name	Project Size	Location	In Service Date
GRE-15-NORTH HAVEN-CT	4.98 MW	North Haven, CT	2020

- This is the same update provided in last year’s presentation
 - 13.83 MW of DG wind projects below 5MW were also selected in this procurement (5 MW in MA, 5 MW in VT, and 3.83 MW in CT)



SCEF Pilot

- Below are the approved SCEF pilot projects, including size, location, and estimated in service date:

EDC Territory	Project Name	Project Size	Location	In Service Date
Eversource	Riverside Thompson SCEF	2 MW	Thompson, CT	2019
Eversource	Town of Bloomfield CSP	1.62 MW	Bloomfield, CT	2019
UI	USS Shelton	1.6 MW	Shelton, CT	2020

- The above in service dates are estimates based on the best available project and EDC information
- All three in service dates have been pushed by 1 year since last year's presentation
- No further projects will be approved under this pilot program (see later discussion on future statewide SCEF program)



Current RSIP

- The current RSIP, and Solar Home Renewable Energy Credit (SHREC) program, will end once the RSIP reaches 300 MW_{DC}
 - The Connecticut Green Bank (CGB) estimates 300 MW_{DC} of approved capacity will be reached by the end of Q3 / the beginning of Q4 of 2019:

RSIP Approved Capacity (i.e. not installed)	
Date	Total Capacity (MW _{DC})
As of July 25 th	215
As of Nov. 25 th	240
CGB estimate – Sept/Oct	300

- The total MWs interconnected via the RSIP is:

RSIP Completed Projects (i.e. interconnected)	
Date	Total Capacity
As of July 25 th	186 MW _{DC}
CGP Projected thru 2018	185 MW _{AC}
Pre-RSIP + RSIP thru 2018	197 MW _{AC}
See Connecticut DG Solar PV Projections	

- Last year's presentation underestimated 2018/2019 deployment



Current LREC/ZREC Program

- Auctions for Medium and Large ZREC systems occur at the same time; Year 7 bids were submitted October 7, 2018
 - Year 7 auction results are being finalized; submitted to PURA this month
 - NEW: PURA has not determined a timeline for the Year 8 auction (2019)
 - Year 8 auctions likely to occur; may be abbreviated or terminated if PURA approves the new program under Section 7 of PA 18-50 in 2019 (see Section 5 & 6 of PA 18-50)
- Small ZREC offered subsequently
 - Year 6 will conclude once the initial Year 7 auction is finalized
 - Year 7 and Year 8 will occur in 2019, and potentially 2020

ZREC Contracted Capacity (i.e. cumulative selected in auction)		
Date	Eversource Capacity (MW _{AC})	UI Capacity (MW _{AC})
As of August	-	84
As of Dec. 10 th	259.3*	No Further Data
2019 Estimates	63**	19**
ZREC In Service Capacity (i.e. cumulative interconnected)		
Date	Eversource Capacity (MW _{AC})	UI Capacity (MW _{AC})
As of August	109	23
As of Dec. 10 th	115.5	No Further Data
2019-22 Additions	90***	32.18***

*Cumulative minus terminated contracts; **Incremental, using highest MW selected in previous auctions from EDC data; ***See Projection Methodology



Update on Forward-Looking Policies



Connecticut Department of Energy and Environmental Protection

Summary of Forward-Looking Policies

- [Public Act 18-50](#), signed May 24, 2018, introduced three new programs, collectively known as CT WISE
 - Programs: Shared Clean Energy Facility Program (SCEF Program), RSIP + Net Metering Successor, and ZREC Program + Net Metering Successor
 - Section 7 (a) and (b) outline these programs and Section 7(c)(1)(A) sets MW caps, except for the RSIP successor
- Program design and implementation currently being discussed in PURA Docket No. 18-08-33
 - Final decisions likely to be issued by January 1, 2020
 - Track 1 in this Docket pertains to the ZREC successor
 - Track 3 pertains to the RSIP successor
 - Track 4 pertains to the SCEF Program
 - PURA Docket No. 18-06-15 (Procedural) preceded this docket and is included in the record of 18-08-33



Details on Forward-Looking Policies

- Shared Clean Energy Facility Program (SCEF Program)
 - DEEP leading program development that will end by July 2019
 - Program will be included in procurement plan approved by PURA in Docket No. 18-08-33; first solicitation year 2020
 - 25 MW / year cap
- RSIP + Net Metering Successor
 - Two tariff offerings at expiration of the RSIP: “Buy-All” and a netting tariff with a daily or sub-daily netting interval chosen by PURA
 - PURA will set a rate based on competitive solicitations or cost plus return; likely to start at the end of 2019 or 2020
 - Uncapped MW / year
- ZREC Program + Net Metering Successor
 - Same two tariff structures as RSIP successor; the EDCs have submitted a draft procurement plan for this program in Docket No. 18-08-33
 - Competitive auctions to set rates; first solicitation year 2020
 - 50 MW / year cap



Connecticut DG Solar PV Projections



Connecticut Department of Energy and Environmental Protection

DG Solar PV Projection Methodology

- Small Scale Procurement and SCEF Pilot
 - Assumed projects come online in year listed in previous slides
- Current RSIP
 - Approximately 84 MW_{AC} left to be installed; assumed comes online evenly between 2019 and 2020
 - Assumed RSIP concludes at end of 2019; new program starts in 2020
 - Conservative estimate based on CGB projection presented earlier
- Current ZREC (Eversource)
 - Assumed Year 1-3 MWs fixed (i.e. no further MWs)
 - Assumed remaining “selected” Year 4 MWs come online (~4 MW_{AC})
 - Assumed 53% of total “selected” Year 5-7 MWs come online (~52 MW_{AC})
 - 53% based on the attrition rate for projects in Year 1-4 for Eversource and UI
 - Assumed same number of MWs come online from Year 8 auction as Year 6
 - Spread total MWs coming online over next four years



DG Solar PV Projection Methodology (cont.)

- Current ZREC (UI)
 - Assumed 53% of total initial “selected” bid MWs in Year 1-6 come online, subtracted current in service MWs
 - No data on Year 7 auction results or Q4 2018 small ZREC; assumed UI Year 7 auction yielded 25% of Eversource’s Year 7 auction with 53% coming online
 - Used Year 4 accepted bid MWs (~19 MW_{AC}) to approximate Year 8
 - Spread total MWs coming online over next four years
- SCEF Program and ZREC Successor
 - Assumed 53% of total MW cap comes online in the year following the corresponding auction; likely MWs would be spread out over 3 years instead
- RSIP Successor
 - Assumed ~50 MW_{DC} per year based on recent RSIP years; see Appendix A
 - Assumed half of this capacity comes online in the approval year and half in the next year based on CGB analysis of current RSIP
 - Used 0.89 conversion factor to calculate MW_{AC}



CT Projected Solar PV Capacity

	Projected In Service Distributed Solar PV Capacity (incremental unless otherwise noted)								
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Small Scale Procurement	-	-	4.98 MW _{AC}	-	-	-	-	-	-
SCEF Pilot	-	3.62 MW _{AC}	1.6 MW _{AC}	-	-	-	-	-	-
Current RSIP	185 MW _{AC} *	42 MW _{AC}	42 MW _{AC}	-	-	-	-	-	-
Current ZREC (incl. 2019 est.)	-	30.42 MW _{AC}	30.42 MW _{AC}	30.42 MW _{AC}	30.42 MW _{AC}	-	-	-	-
SCEF Program	-	-	-	13.25 MW _{AC}	13.25 MW _{AC}	13.25 MW _{AC}	13.25 MW _{AC}	13.25 MW _{AC}	13.25 MW _{AC}
RSIP Successor (2020-2025)	-	-	25 MW _{DC}	50 MW _{DC}	50 MW _{DC}	50 MW _{DC}	50 MW _{DC}	50 MW _{DC}	25 MW _{DC}
ZREC Successor (2020-2025)	-	-	-	26.5 MW _{AC}	26.5 MW _{AC}	26.5 MW _{AC}	26.5 MW _{AC}	26.5 MW _{AC}	26.5 MW _{AC}
Total Yearly Incremental**	-	76.04 MW _{AC}	101.25 MW _{AC}	114.67 MW _{AC}	114.67 MW _{AC}	84.25 MW _{AC}	84.25 MW _{AC}	84.25 MW _{AC}	62 MW _{AC}
Cumulative Incremental	-	721.4 MW _{AC}							

*Total projected to be installed through 2018 (197 MW_{AC} if Pre-RSIP systems are included); **MW_{DC} converted to MW_{AC} by multiplying by 0.89



Questions?

Contact Information

Josh Ryor (Joshua.Ryor@ct.gov)

Veronica Szczerkowski (Veronica.Szczerkowski@ct.gov)

CT Department of Energy and Environmental Protection

Bureau of Energy and Technology Policy

10 Franklin Square

New Britain, CT 06051



Appendix A: CGB RSIP Data

- “For the past four years (i.e., FY 2015 through FY 2018), the Green Bank...has deployed an average of 45-50 MW of residential solar PV...” ([see Written Comments dated 7/18/18](#))

