



December 2018 Photovoltaic (PV) Survey Results

*Distributed Generation Forecast
Working Group*

Joseph Roberts

LOAD FORECASTING, SYSTEM PLANNING



Determining Total PV Installed Through December 2018

- ISO requested distribution owners to provide the total nameplate of all individual PV projects (in MW_{AC}) that is already installed and operational within their respective service territories as of December 31, 2018
 - PV projects include FCM, EOR, and BTM PV projects that are $< 5 MW_{AC}$ in nameplate capacity
- The following Distribution Owners responded:

CT	CL&P, CMEEC, UI
ME	CMP, Emera Maine
MA	Braintree, Chicopee, Reading, National Grid, NSTAR, Shrewsbury, Unitil, WMECO
NH	Liberty, NHEC, PSNH, Unitil
RI	National Grid
VT	Burlington, GMP, Stowe, VEC, VPPSA, WEC

- Thank you to all respondents for providing timely information
- Based on respondent submittals, installed and operational PV resource totals by state and distribution owner are listed on the next slides

December 2018 Year-To-Date PV Installed Capacity

State-by-State

The table below reflects statewide aggregated PV data provided to ISO by regional Distribution Owners. The values represent installed nameplate as of 12/31/18.

State	Installed Capacity (MW _{AC})	No. of Installations
Massachusetts*	1,871.27	90,720
Connecticut	464.34	35,889
Vermont*	306.30	11,864
New Hampshire	83.84	8,231
Rhode Island	116.66	5,993
Maine	41.40	4,309
New England	2,883.81	157,006

* Includes values based on MA SREC data or VT SPEED data

December 2018 Year-to-Date Installed PV by Distribution Owner

State	Utility	Installed Capacity (MW _{AC})	No. of Installations
CT	Connecticut Light & Power	353.86	26,827
	Connecticut Municipal Electric Energy Co-op	13.43	7
	United Illuminating	97.05	9,055
	Total	464.34	35,889
MA	Braintree Electric Light Department	4.36	27
	Chicopee Electric Light	13.11	30
	Unitil (FG&E)	24.55	1,647
	National Grid	986.80	46,583
	NSTAR	524.74	31,016
	Reading Municipal Lighting Plant	7.68	138
	Shrewsbury Electric & Cable Operations	6.44	81
	SREC I	54.21	589
	SREC II	78.76	1,649
	Western Massachusetts Electric Company	170.61	8,960
	Total	1,871.27	90,720
ME	Central Maine Power	36.12	3,623
	Emera	5.28	686
	Total	41.40	4,309

December 2018 Year-to-Date Installed PV by Distribution Owner

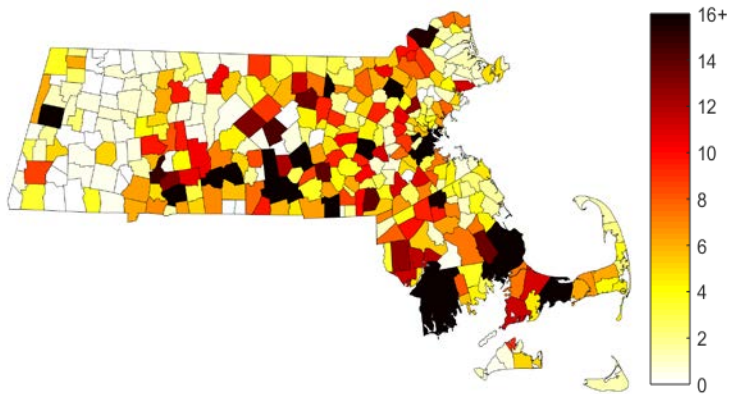
State	Utility	Installed Capacity (MW _{AC})	No. of Installations
NH	Liberty Utilities	3.89	411
	New Hampshire Electric Co-op	10.16	1,008
	Public Service of New Hampshire	60.86	5,978
	Unitil (UES)	8.92	834
	Total	83.84	8,231
RI	National Grid	116.66	5,993
	Total	116.66	5,993
VT	Burlington Electric Department	6.58	253
	Green Mountain Power	253.99	9,294
	Stowe Electric Department	2.41	80
	Vermont Electric Co-op	27.38	1,230
	Vermont Public Power Supply Authority	10.37	535
	VT Other Municipals	0.10	1
	Washington Electric Co-op	5.46	471
	Total	306.30	11,864
New England		2,883.81	157,006



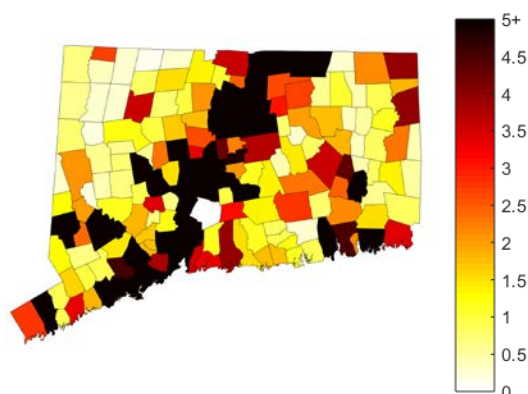
Installed PV Capacity as of December 2018

State Heat Maps

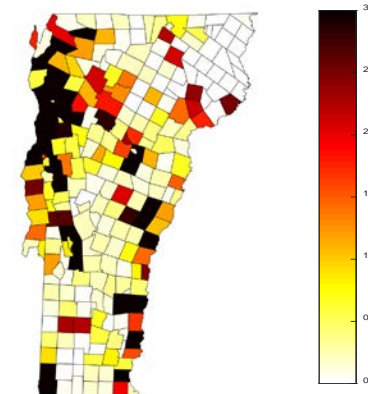
Massachusetts



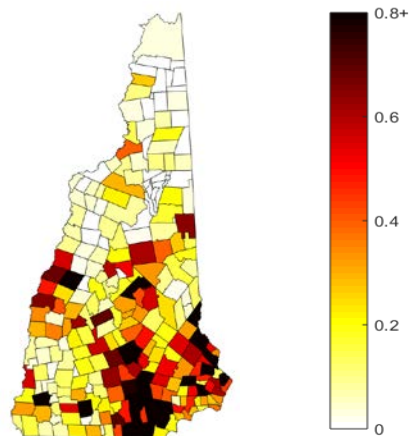
Connecticut



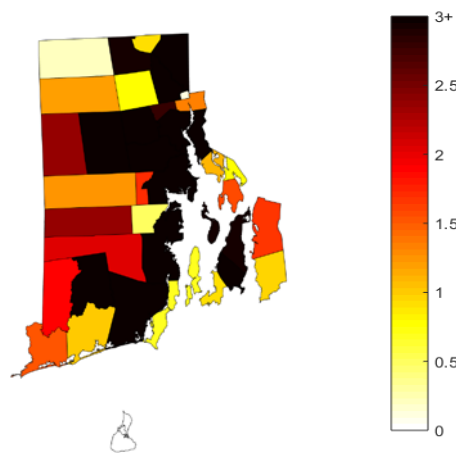
Vermont



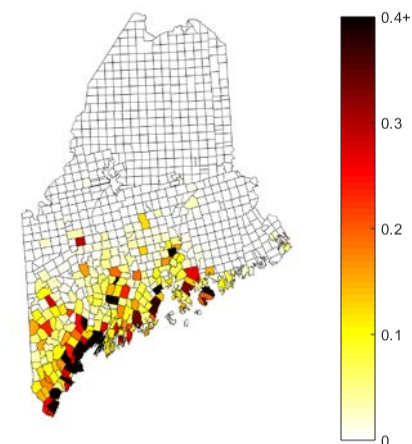
New Hampshire



Rhode Island



Maine



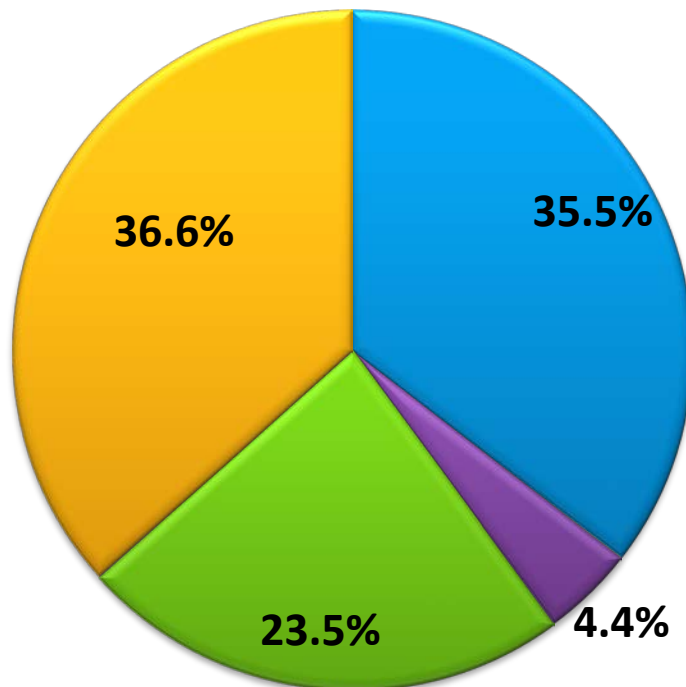
Note: Legend to the right of each state plot shows color scale of nameplate megawatts per town

Installed PV Capacity as of December 2018

ISO-NE by Size Class

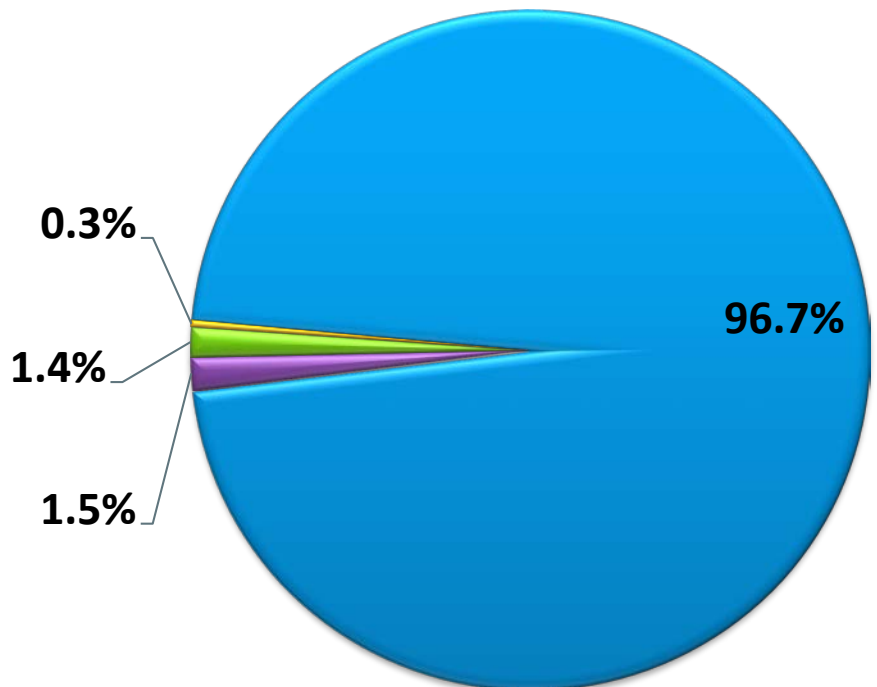
Installed Capacity (MW_{AC})

Total = 2,884 MW_{AC}



Number of Sites

Total = 157,006



■ <25kW ■ 25kW-<100kW ■ 100kW-<1000kW ■ >=1000kW

Questions

