

H. 676 -- Net Metering

House Energy & Technology
Committee

February 28, 2018

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Green Mountain Power



Net Metering – The Beginning

- ▶ Allowed customers to produce their own renewable electricity, generally rooftop
- ▶ Power produced went directly into the home or business
- ▶ Excess electricity was sent to the electric grid \and “stored”
- ▶ If electricity produced was greater than what was used in a month the customers received a kilowatt hour credit towards their future bill
- ▶ If customer used more electricity than what they generated, they billed for their “net” energy use

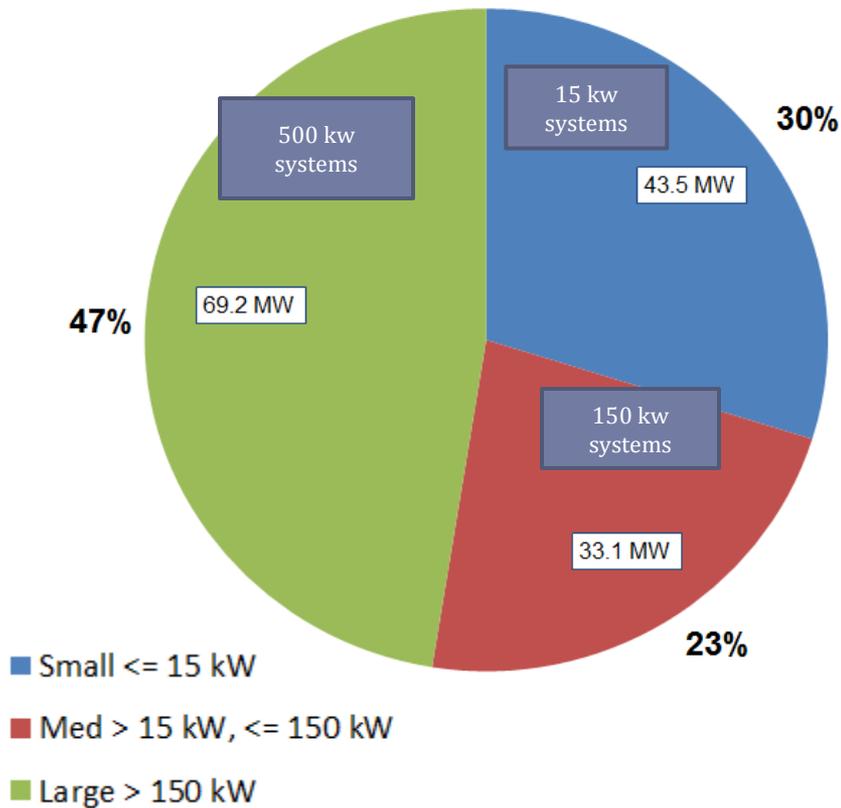


Success of Net Metering & Solar Program

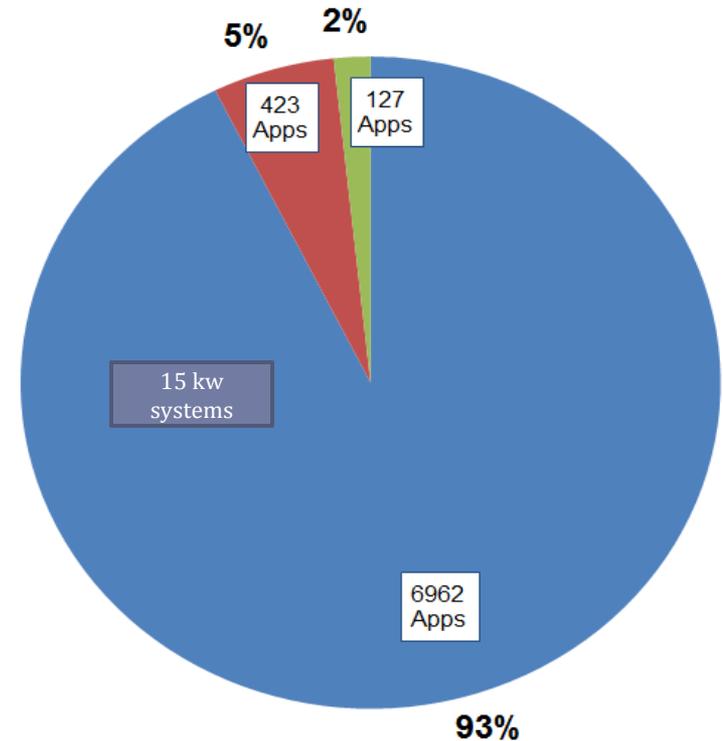
- ✓ 1,300% increase since 2013 in just Net Metering – 184 MW (26% of Peak Load)
- ✓ Total all Solar = 317 MW (46% of Peak Load)
 - GMP Average Daily Load = 475 MW
 - GMP Peak Load = 715 MW (1/14/17)
- ✓ The penetration of distributed solar capacity is second only to Hawaii
- ✓ 70% of the capacity are systems larger than 150 kw

Net Metering 1.0 - Capacity and Volume

NM 1.0 Application Capacity

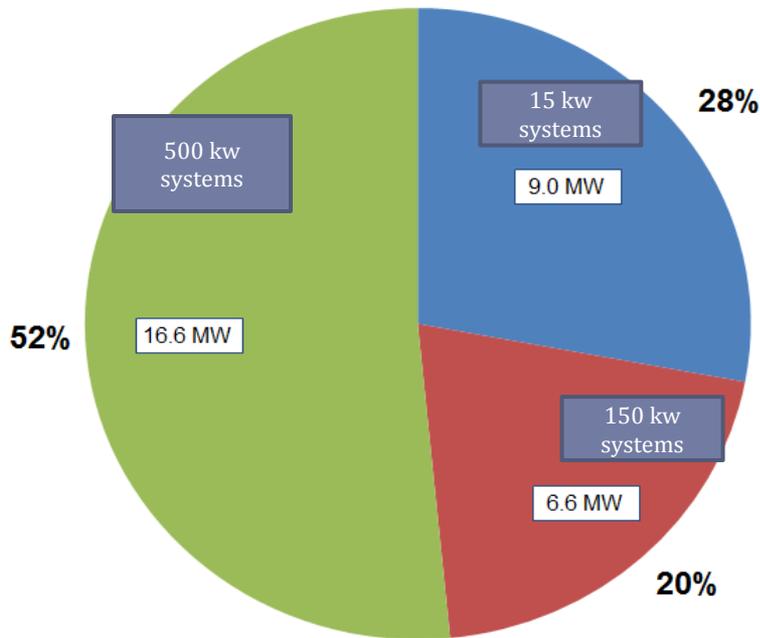


NM 1.0 Application Count

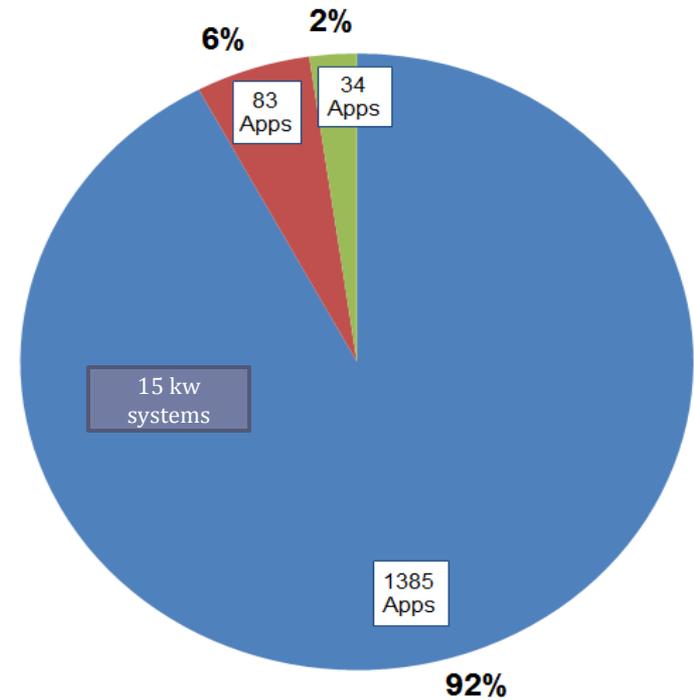


Net Meter 2.0 – Capacity vs Applications

NM 2.0 Application Capacity



NM 2.0 Application Count



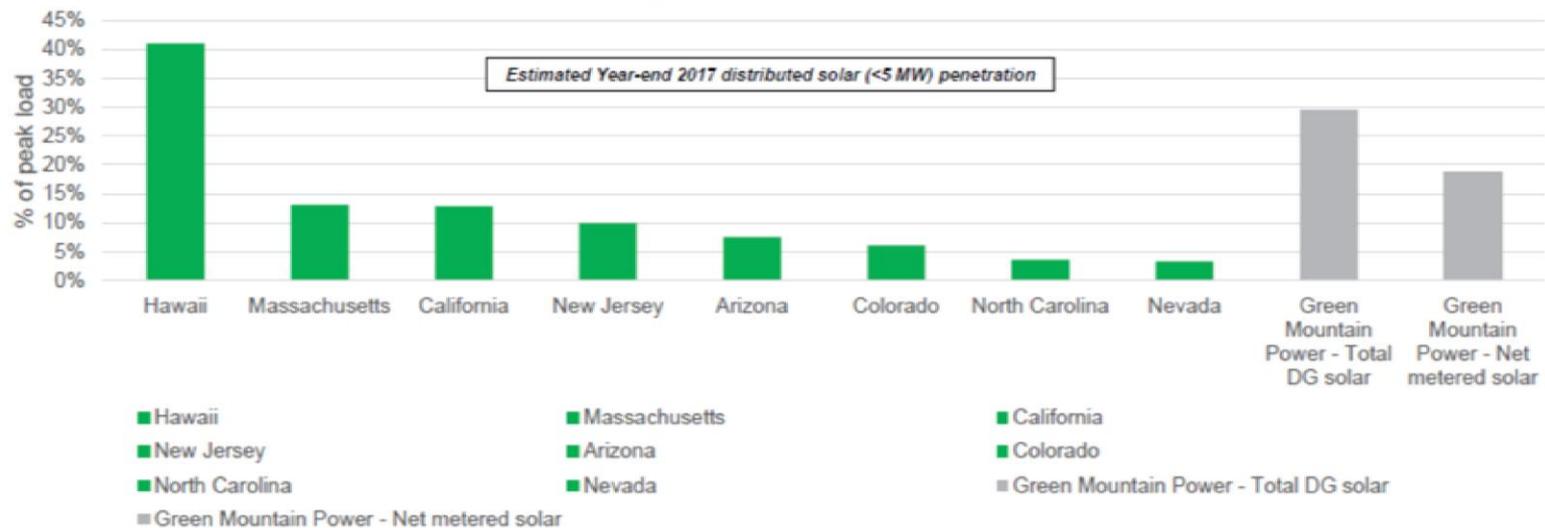
- Small <= 15 kW
- Med > 15 kW, <= 150 kW
- Large > 150 kW

Solar - Vermont Second Only to Hawaii

February 2018

Status of distributed solar as percent of peak load (2017)

Estimated distributed solar capacity as percent of peak load for select states



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Net Metering 1.0 & 2.0

■ Small <= 15 kW

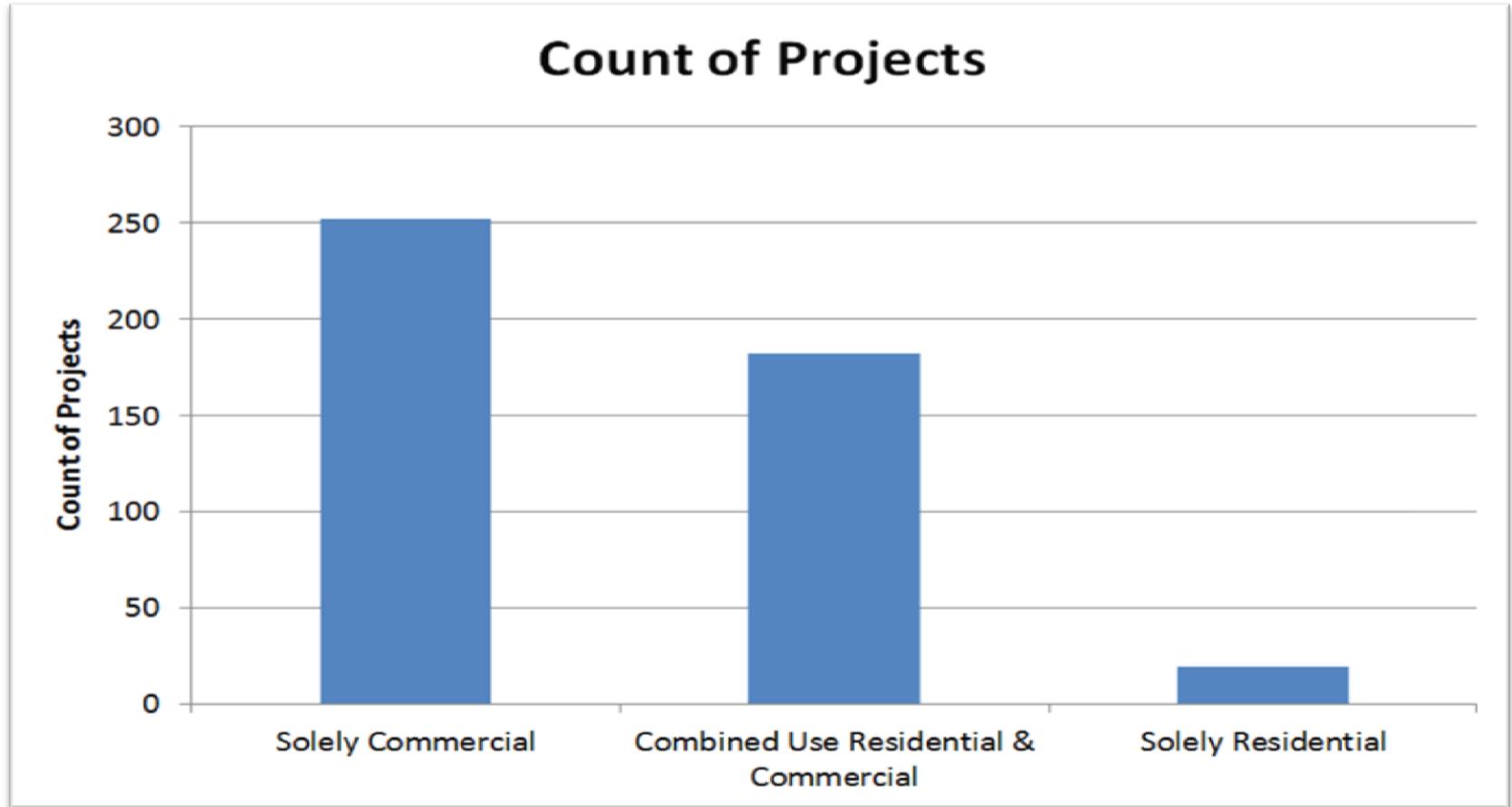
■ Med > 15 kW, <= 150 kW

■ Large > 150 kW

GMP Net Metering as of 2/23/2018

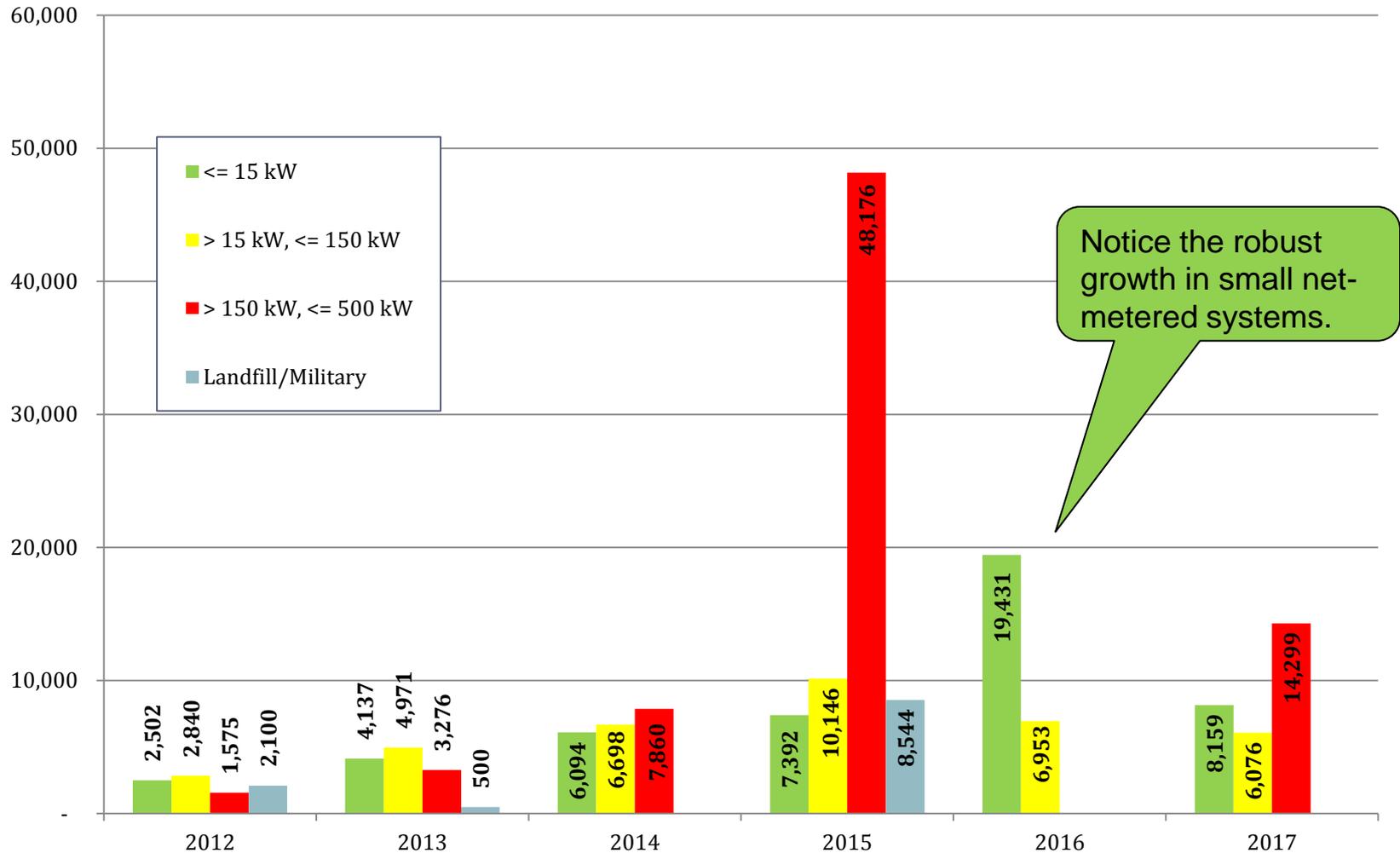
| Size | Status | Solar NM 1.0 | | Solar NM 2.0 | | Non Solar NM | | NM Total | |
|----------------|----------|--------------|------------------|--------------|------------------|--------------|------------------|----------|------------------|
| | | Count | AC Capacity (MW) | Count | AC Capacity (MW) | Count | AC Capacity (MW) | Count | AC Capacity (MW) |
| Small | Active | 6358 | 38.6 | 1043 | 6.5 | 86 | 0.5 | 7487 | 45.6 |
| | Proposed | 605 | 4.9 | 371 | 2.6 | 4 | 0 | 980 | 7.5 |
| Medium | Active | 414 | 32.2 | 34 | 2.1 | 16 | 1.5 | 464 | 35.8 |
| | Proposed | 10 | 1 | 56 | 5.4 | 1 | 0.1 | 67 | 6.5 |
| Large | Active | 113 | 58.4 | 2 | 1 | 11 | 3.7 | 126 | 63.1 |
| | Proposed | 14 | 10.8 | 32 | 15.6 | 0 | 0 | 46 | 26.4 |
| Total Active | | 6885 | 129.2 | 1079 | 9.6 | 113 | 5.7 | 8077 | 144.5 |
| Total Proposed | | 629 | 16.7 | 459 | 23.6 | 5 | 0.1 | 1093 | 40.4 |
| Combined Total | | 7514 | 145.9 | 1538 | 33.2 | 118 | 5.8 | 9170 | 184.9 |

Off Takers of Group Net Metering Projects “Community Solar”



453 Project >15 kw: 250 only Commercial, 182 both, 19 only residential

Accepted Net Metering in Kilowatts / Year



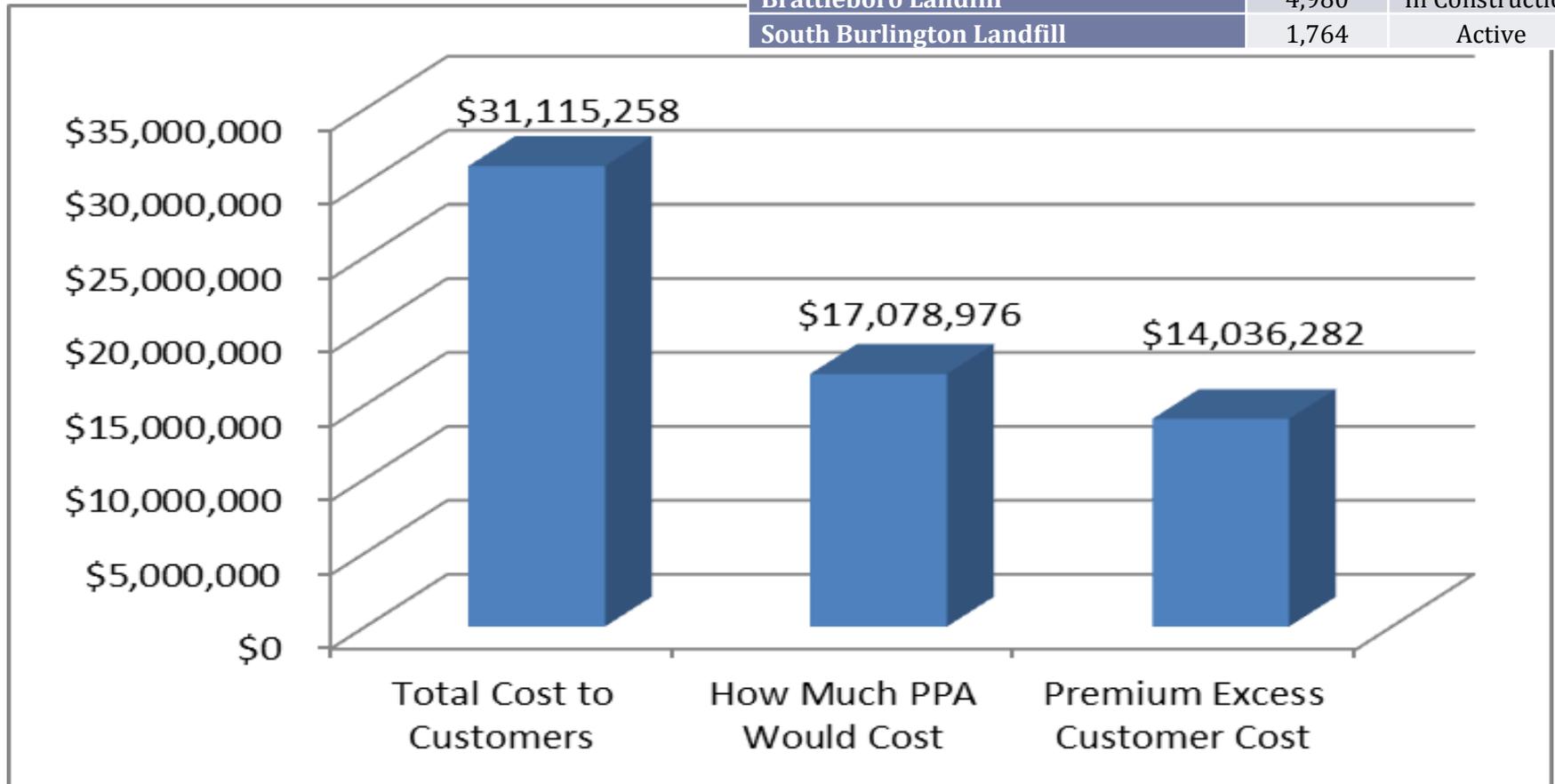
Cost & Growth of Solar

- ✓ Growth remains robust with 32.2 additional MW (= 4.6% of cap.)
- ✓ More solar has diminishing value – peak has moved to evening
- ✓ Customer cost impact for 2018 around **\$24 million**

2014: Act 99 Net Meter Changes

- ▶ Increased cap from 4% to 15%
- ▶ Allowed 5 MW solar net metering

| Project (12/4/17) | Size (kW) | Status |
|---|-----------|-----------------|
| Vermont Air National Guard (S Burlington) | 2,100 | Active |
| National Guard Westminster | 1,793 | Active |
| Brattleboro Landfill | 4,980 | In Construction |
| South Burlington Landfill | 1,764 | Active |



H.676

- ▶ Changes the PUC rules including the definition of “Preferred Site”
- ▶ Makes permitting easier – shifts responsibility to utility
- ▶ Increases cost shift to non-participating customers



H.676

- ▶ Act 99 Resulted in Board Rule 5.100 – Effective 7/1/2017
 - ▶ PUC charged to support program growth while minimizing cost shift
- ▶ Program changes need to be holistic and not shift costs to non participating customers.
- ▶ Parties can petition the PUC in the process currently underway
- ▶ Ideas to achieve balance between growth and cost include:
 - ▶ Allow Net Metering up to 150 kw
 - ▶ Create an annual pacing mechanism
 - ▶ Require that the host site be an off-taker of the power