



# LOCAL VERMONT SOLAR

*A Critical Economic and  
Environmental Asset*

# Vermont Solar Company



# Our Approach

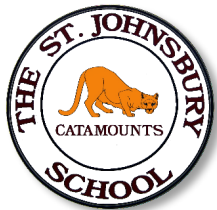


- *Helping Vermonters meet our clean energy commitments*
- *Working with communities to integrate renewable energy*
- *Enabling Vermonters to choose local green energy*

# Solar for Vermont Schools and Towns



NEWBURY ELEMENTARY SCHOOL



# Supporting the Local Economy



# MOST ENERGY DOLLARS FLOW OUT OF VERMONT

*We Are Moving in the Wrong Direction!*



- *Vermont spends over \$3,000,000,000 annually on energy.*
- *90% of Vermont's energy (1/3 electricity, 1/3 transportation, and 1/3 heating) is imported from out-of-state and out-of-country.*
- *2/3's of Vermont's electricity is imported from out-of-state.*
- *Local Solar keeps Income at home by generating our own power!*

# Net Metering Benefits

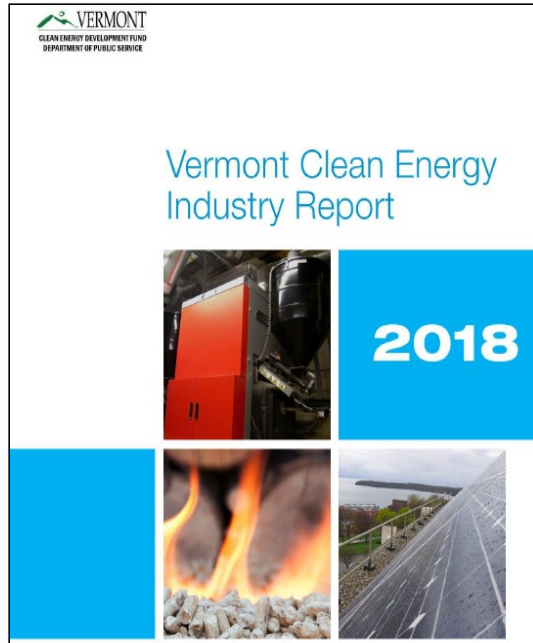
Value Beyond Carbon Reduction	Renewable Options			Typical of 500kW NM Project for School
	Out of State/Country Renewables	Utility Scale RE	Net Metered	
Local Property Tax	X	✓	✓	\$150,937 (Lifetime Payments)
VT Education Tax	X	✓	✓	\$54,000 (Lifetime Payments)
Customer Choice	X	X	✓	\$670,833 (Lifetime savings)
"Vermont Scale"	X	X	✓	Local and RPC Approval
Federal Tax Dollars Leveraged into Vermont	X	✓	✓	\$750,000 Leveraged Federal Dollars
Sustained Economic Development in VT	X	Mixed	✓	11 FTE for Year and \$2M in Economic Activity
Recognized New Renewable Generation	Varies	✓	✓	Y1-10 RECs @ 1c Adder Y11-25 RECs @ 0c Adder

# Factors Affecting Vermonter Solar Adoption

	NM 1.0 2014	NM 2.0 2017	NM 3.0 2018	NM 4.0 2019
500 kW Cap	No	Yes	Yes	HB 423
Federal ITC	30%	30%	30%	26%
Interest Rates	Low	Low	Medium	Medium
Panel and Materials Tariffs	No	No	Yes	Yes
NM Customer Self Generation Compensation	Base	-30%	-41%	-46%
Interconnection Costs Grid Modernization	Base	+300% - +800%	+450% - +1200%	Interconnection /Grid Rule Update
Permitting Complexity	20 pages	200 pages	200 pages+	HB 366
Permitting Time	2-6 months	4-12 months	6-18+ months	HB 366



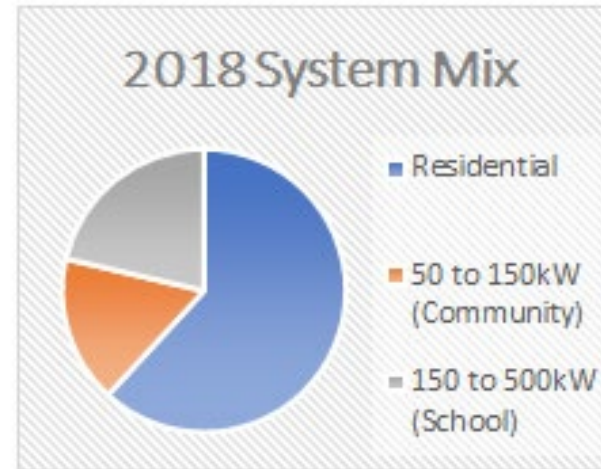
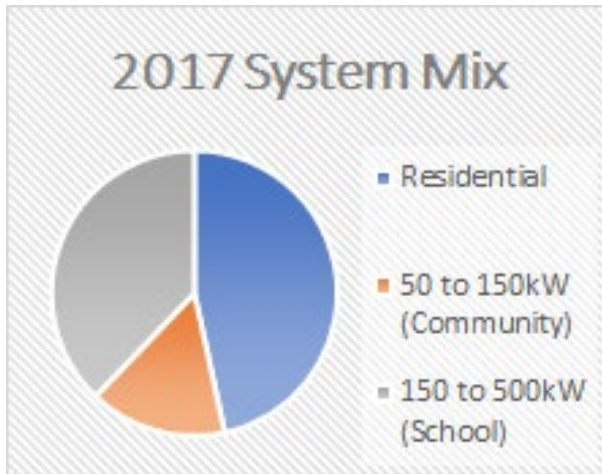
# VERMONT CLEAN ENERGY INDUSTRY REPORT



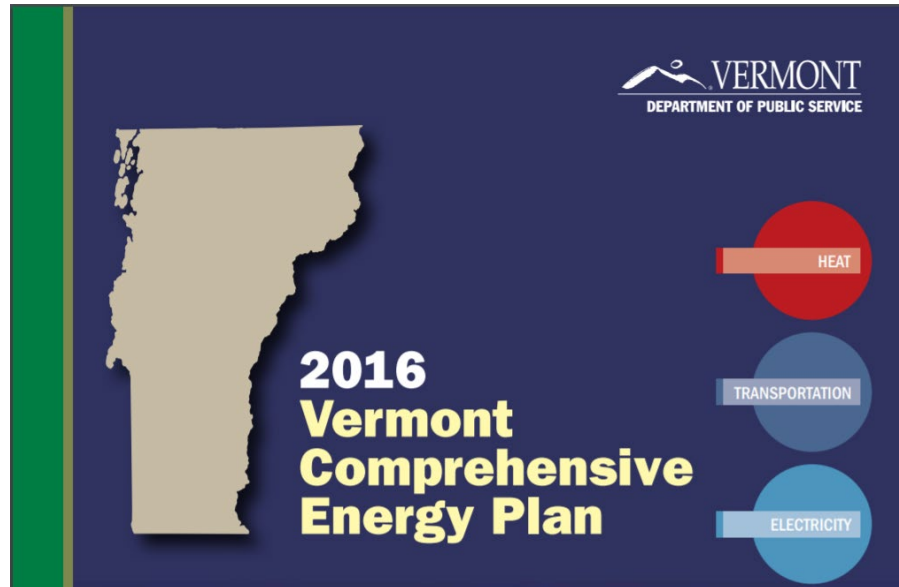
- *“The state is home to approximately **18,800** clean energy workers.” [The nation’s 3<sup>rd</sup> highest per capita.]*
  - *“Clean energy jobs in Vermont provide higher median hourly earnings—about **\$26.71**—compared to the state’s overall median wage of \$21.33. In fact, this is well above Vermont’s living wage for two adults, one working with one child of \$23.10.”*
  - *“[S]olar jobs do remain the largest segment of Vermont’s renewable energy workforce, accounting for just over a third of total renewable energy workers”*
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- *“For the first time since the Vermont Clean Energy Industry Report’s inception in 2013, the state’s clean energy economy exhibited a decline in employment, driven largely by losses in the solar industry. ... In Vermont, the shedding of [230] solar jobs came alongside a decline in solar installations over the same period of about 9%.”*

# IMPACT OF NET METERING ADJUSTMENTS

	Time Period				% Change
	7/3/17 to 3/25/18 (CPG requests in kW)	Current % Approved	7/3/18 to 3/25/19 (CPG requests in kW)	Current % Approved	
<b>Residential</b>	13,245		10,131		<b>-24%</b>
<b>50 to 150kW</b>	4,431		2,749		<b>-38%</b>
<b>150 to 500kW</b>	10,750	<b>86%</b>	3,500	<b>34%</b>	<b>-67%</b>



# VT Renewable Commitments



- 1,500 MW to 2,250 MW required by 2050
- Next 12 Years have dramatic long term impact
- 78 MW / year for next 12 years = ½ goal

# PUC FINDINGS ON RATE INCREASES

- **DPS testimony states that purchased power and transmission costs are NOT key drivers**

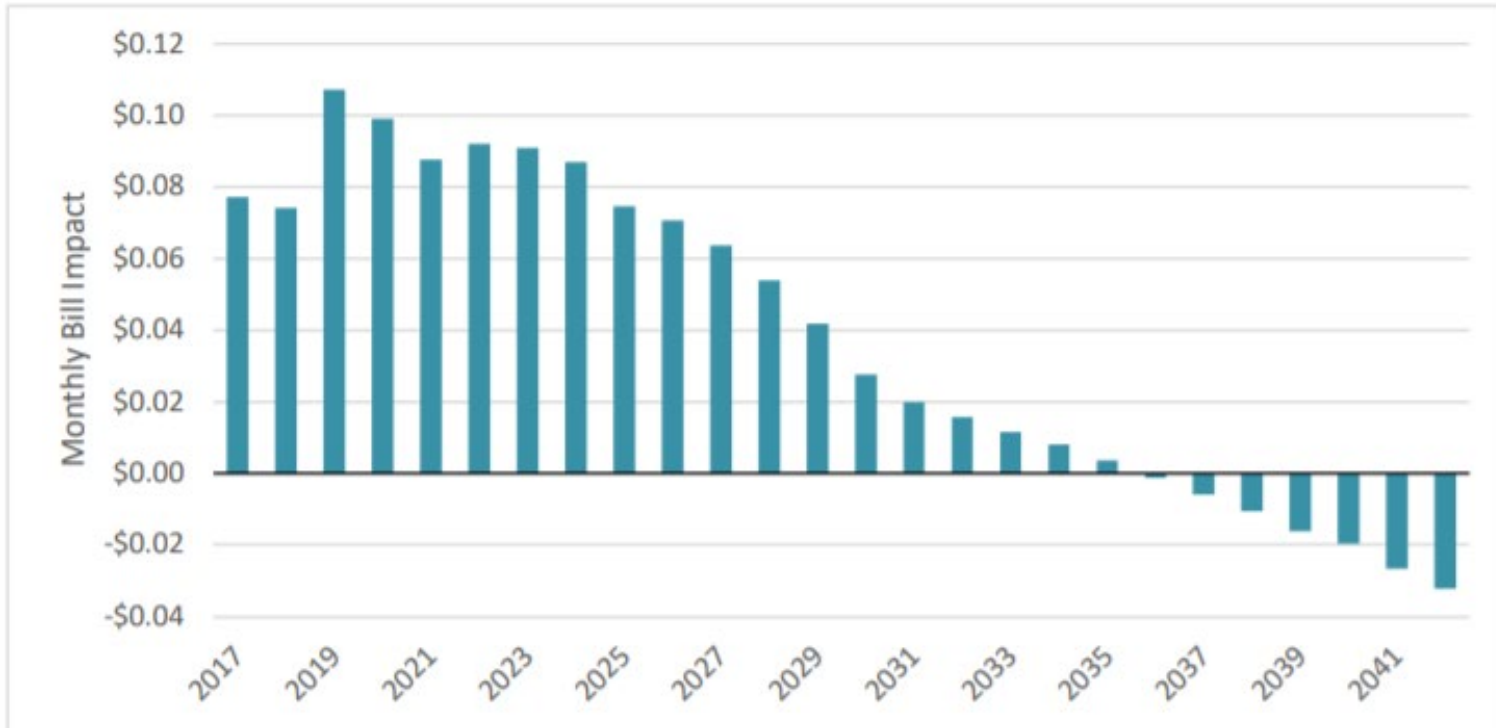
*“Over the period, Purchased Power Costs, over which GMP has some limited control, have declined by \$33.4 million. ... Net Transmission costs have remained relatively stable with a \$2.8 million decline. However, these cost reductions, which total \$49.2 million, have been more than offset by a \$60.2 million increase in rate base (capital and investment) related costs, over which GMP has significant control.”*

*Source: Case 18-0974-TF, DPS Direct Testimony of Brian E. Winn. August 10, 2018 at 11.*

- **In addition, Net-Metering is a Small Fraction of the State’s Load**
  - In its recent Rate Case, GMP reported that “total [customer self-supply] production (the vast majority of which is solar PV)” was 125,000 MWh for the test year, compared to its total load of 4,400,000 MWh.
  - Thus, customer self-supply through net-metering represented only 3% of the total GMP electric load.

*Soure: Case No. 18-0974-TF, GMP Rate Case, GMP Direct Testimony of Douglas Smith, April 13, 2018, at 7, 18.*

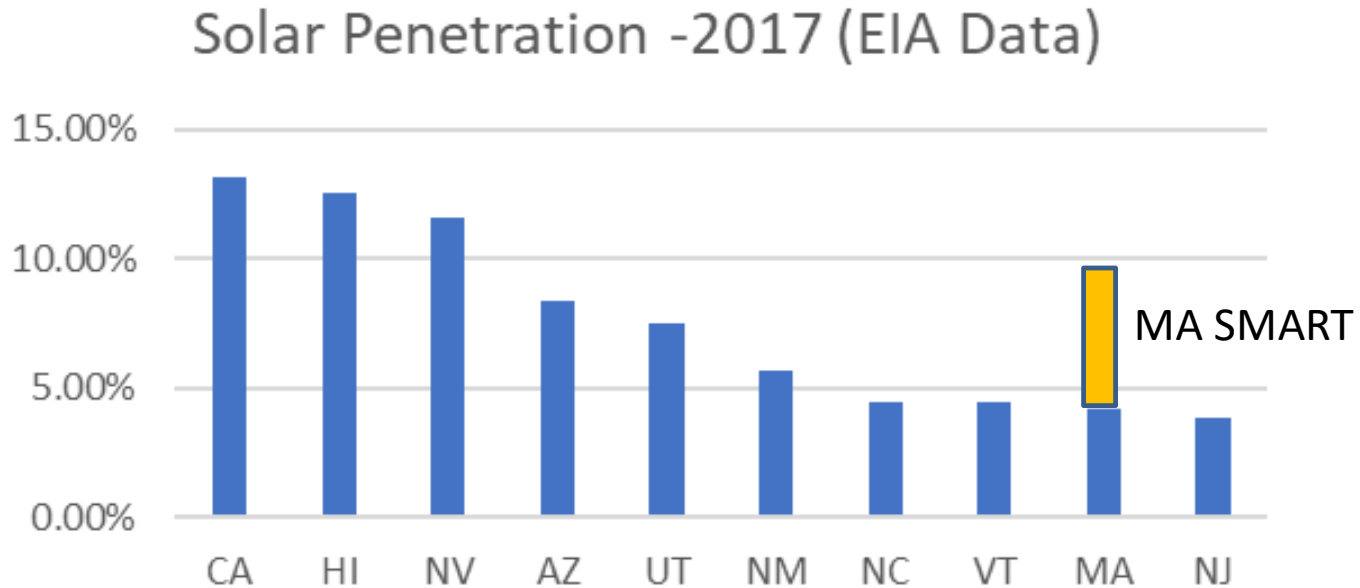
# Net Metering Rate Impacts



Average monthly residential bill impacts from NEM 2.0 over study period

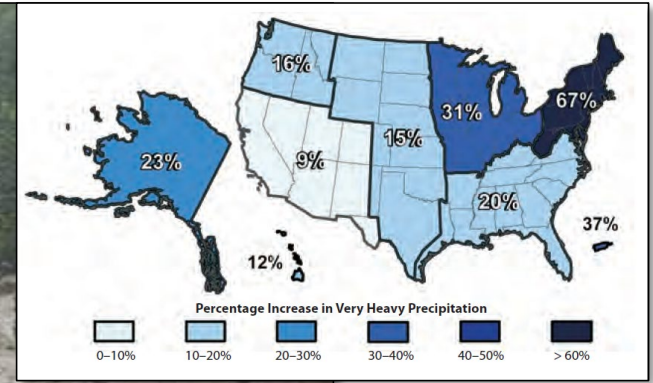
Source: Net Metering in Vermont An Assessment of NEM 2.0 and Recommended Adjustments, Synapse, March 15, 2018 as part of PUC Case No. 18-0086-INV Biennial Update of Net Metering

# VERMONT FALLING BEHIND

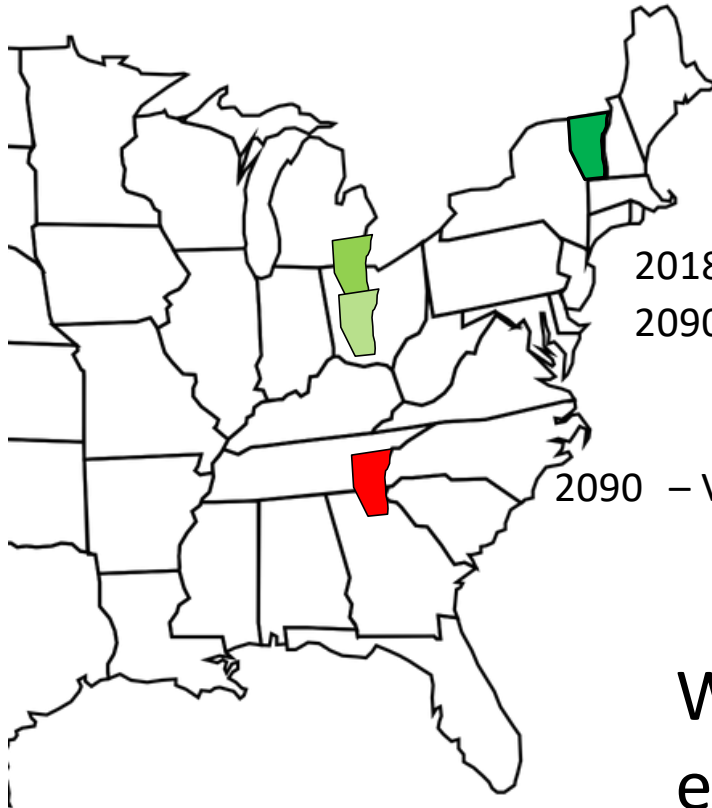


- Both Vermont and Massachusetts currently supply about 4.5% of their total electric load with in-state solar (ignoring REC sales)
- The MA SMART Program is projected to double the amount of solar in MA in the next few years

# Vermont Climate Change



# WHAT WILL BE OUR ENVIRONMENTAL LEGACY?



Baseline Reference– VT's climate in 1960

2018 – VT's climate is now like northern Ohio in 1960

2090 – VT's climate with fast action will be like southern Ohio

2090 – VT's climate with slow/little action will be like Tennessee/Georgia

Will we say we did  
everything we could have?



# VERMONT'S CLEAN ENERGY FUTURE



Source: Vermont Climate Action Commission 2018 Final Report at 2, 5-6.

- **Our schools, towns, businesses and citizens empowered** to choose resilient Local Solar via Net-Metering. **HB 423** directly supports this.
- Local Solar powering a **sustainable, vibrant, and well-paying clean energy economy.**
- Vermonters **partnering with utilities to meet our climate commitments** while ushering in an efficient, distributed modern energy grid.



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