



MassSolar

SolarIsWorking.org

How Solar Energy Benefits Communities Across the Commonwealth

Legislative Briefing

January 14, 2016

Who is MassSolar?

MassSolar is Working, Inc. is a collaboration of Massachusetts solar businesses, solar owners, environmental advocates, community organizations and motivated citizens. We are dedicated to:

- Supporting the continued growth of the Massachusetts solar economy;
- Modernizing the electricity grid;
- Maximizing the potential of solar as a solution to climate change; and
- Ensuring that everyone has fair and equitable access to affordable solar power.

Some of our affiliated organizations and companies:



Solar is working for Massachusetts

Solar is delivering a range of economic, environmental and social benefits to Massachusetts communities and ratepayers

- **\$1** invested in solar yields **\$2.20 to \$2.70** in benefits *(Source: Net Metering and Solar Task Force)*
- Solar supports almost **15,000 jobs**
- **36,000+** solar systems installed
- Solar provides long-term stable, predictable energy costs for Massachusetts businesses, protecting jobs



Solar is working for low income communities



Oscar Romero House, New Bedford
12 units of affordable housing

- Community Action for Better Housing owned, pays electricity bills to keep costs affordable for low income tenants
- Annual electricity bill \$5,500, jumped 28% last winter
- Rooftop not suitable for solar
- With off-site solar subscription, saving \$1,200 a year, electricity costs now stable



Solar is working for cities and towns

Lexington's 1.1 MW Solar Rooftop Project 5 Schools and Town Library

- **\$5.6 million** savings over 25 years
- **\$800,000** in health benefits
- **1.3 million kWh** insulated from winter energy price spikes
- Provides **15%** municipal electricity demand, enough to power 175 homes



Community shared solar (CSS) allows everyone access to solar

300 kW locally owned community solar in Pioneer Valley

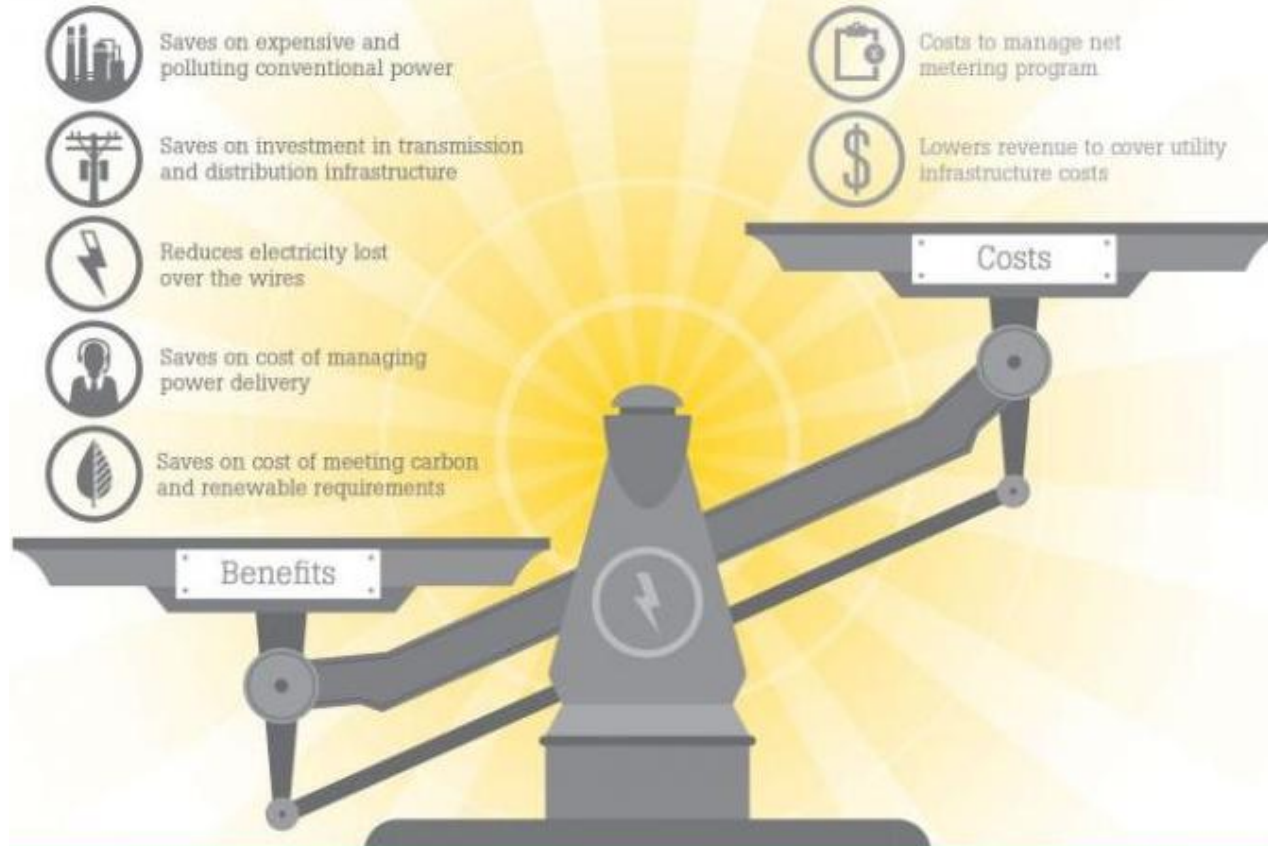


- 8 in 10 residents in Massachusetts cannot put solar on their roof
- Local residents own a share of the system and receive ALL tax credit benefits
- Participants expected to save \$600,000 on electricity bills over 20 years



Solar benefits *all* ratepayers, not just those with solar

Net metering benefits solar and non-solar customers alike.



The Commonwealth at-large receives a total of \$10.2 billion in net benefits from solar compared to net costs of \$4.5 billion (*Source: NMSTF [report](#), pg 195*)

Before diving in: Solar policy mini-primer

Net metering

- Net metering credits compensate solar owners for every kWh electricity delivered to grid; **NOT** a subsidy
- Payment in the form of a credit on a utility electricity account
- Net metering “capped” by statute for projects over a certain size
- *Accounting mechanism administered by the Department of Public Utilities*

Solar Incentive

- Compensates solar for environmental and societal benefits
- Designed to manage the growth of solar to 1600 MW; limited capacity remaining
- 1 MWh of solar electricity equals 1 SREC. Value of SREC depends on SREC factor.
- Payment as cash (i.e. taxable income), if the SREC is sold to another party
- *SREC II administered by the Department of Energy Resources*

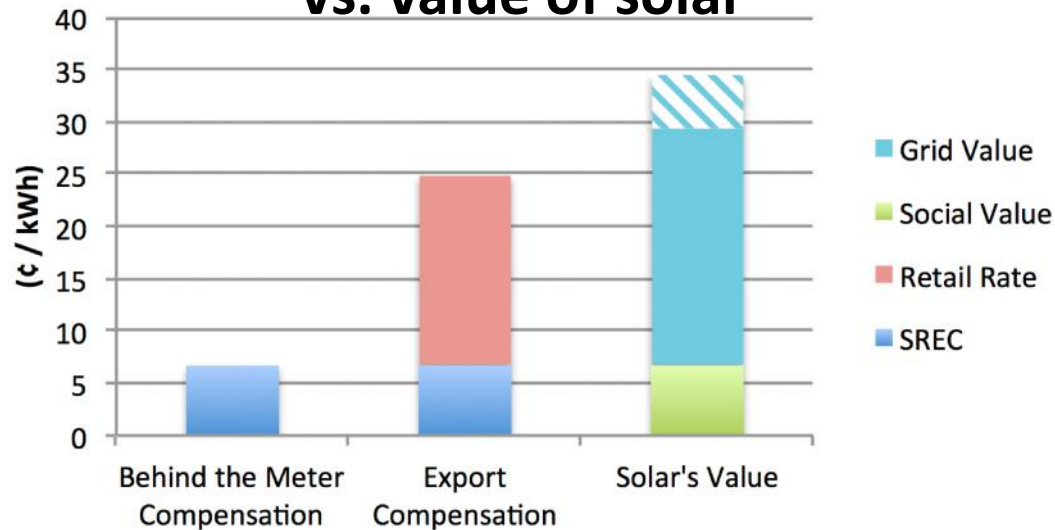
What are we really paying for solar?

Governor Baker claims that solar receives 43 ¢/kWh

In reality, solar owners receive between 7-25 ¢/kWh, depending on system type and utility rate class



What we're paying for solar vs. value of solar



Current SREC II compensation is 7 ¢/ kWh averaged over expected life of system

Onsite consumption receives zero net metering credits

Exported power receives retail net meter credits ~18 ¢/ kWh

Value of solar is 29-34 ¢/kWh including societal values of 6.7 ¢/kWh

Solar policy reform on the table

Why?

- Net metering caps stalling solar across more than half of Massachusetts (*Note: small solar exempted from caps*)
- Over \$400 million of projects on hold
- Legislation addressing caps includes other solar policy changes.
 - Downing amendment (S. 1973), Gov.'s bill (H. 3724), Nov. House bill (H. 3854), Nov. Senate bill (S. 2058)
 - Proposed policy reforms have significant impacts on low income, community solar, and municipal solar projects



Caps have been hit in National Grid & Unitil territories

There have been four solar bills in recent session, focusing on several policy elements

<i>Policy element</i>	Downing amendment S.1973	Governor's bill H.3724	Nov. House bill H.3854	Nov. Senate bill S.2058
<i>When introduced:</i>	<i>End of July</i>	<i>August</i>	<i>Just before Thanksgiving</i>	<i>Last day of Fall session</i>
Net metering caps	<p>The largest differences exist in these three areas. We will go over these today</p>			
Net metering (NM) credit value				
Minimum bill				
Solar incentive program				
Grandfathering				

Impact on low income, community solar, and municipal solar projects

<i>Policy element</i>	Downing amendment S.1973	Governor's bill H.3724	Nov. House bill H.3854	Nov. Senate bill S.2058
Net metering caps	Lifts caps to 1600 MW, then eliminates caps completely	2% cap increase, public and private projects		

Low income, community solar and municipal solar stalled

2% cap increase solves nothing. These caps **will be hit again 3-6 months after being raised.**

- 1% cap increase equals **51 MW** in National Grid territory.
 - **52 MW**: Public project net metering waiting list
 - **85 MW**: Private project net metering waiting list



Old Colony affordable housing solar project in Boston

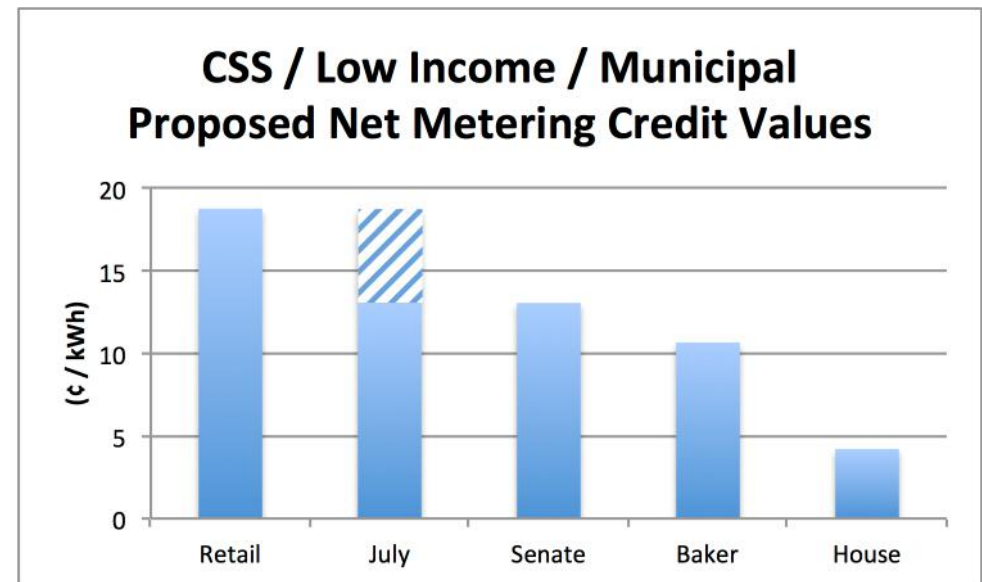
Impact on low income, community and municipal solar projects

<i>Policy element</i>	Downing amendment S.1973	Governor's bill H.3724	Nov. House bill H.3854	Nov. Senate bill S.2058
Net metering (NM) credit value	<u>Small Solar: Retail rate</u>			
	"Retail lite": DPU "may" adjust distribution charge for solar exporting more than 1/3 electricity	<u>Muni, Low Income, CSS: Basic service</u> <u>All others: Wholesale</u>	<u>All others: Wholesale</u>	<u>Muni, Low Income, CSS: Retail lite</u> <u>All others: Basic service</u>

Fair compensation for net metering is critical

Proposed legislation arbitrarily cuts net metering credit values 20%-75%

- NO consideration of solar's benefits
- NO consideration of project economic viability
- Proposals exacerbate access issues for low income, renters and those without sunny rooftops
- Rolls solar policy back to pre-2008, before Global Warming Solutions Act enacted



Cuts to net metering credits kills projects

Low income



Oscar Romero House

Current savings: \$1,200/yr
Gov. bill savings: \$500/yr*
House bill savings: **-\$2,500/yr**

Municipal



Lexington

Current savings: \$73,000/yr
Gov. bill savings: **-\$31,000/yr**
House bill savings: **-\$116,000/yr**

Community shared



Pioneer Valley

Current savings: \$30,000/yr
Gov. bill savings: \$5,900/yr
House bill savings: **-25,680/yr**

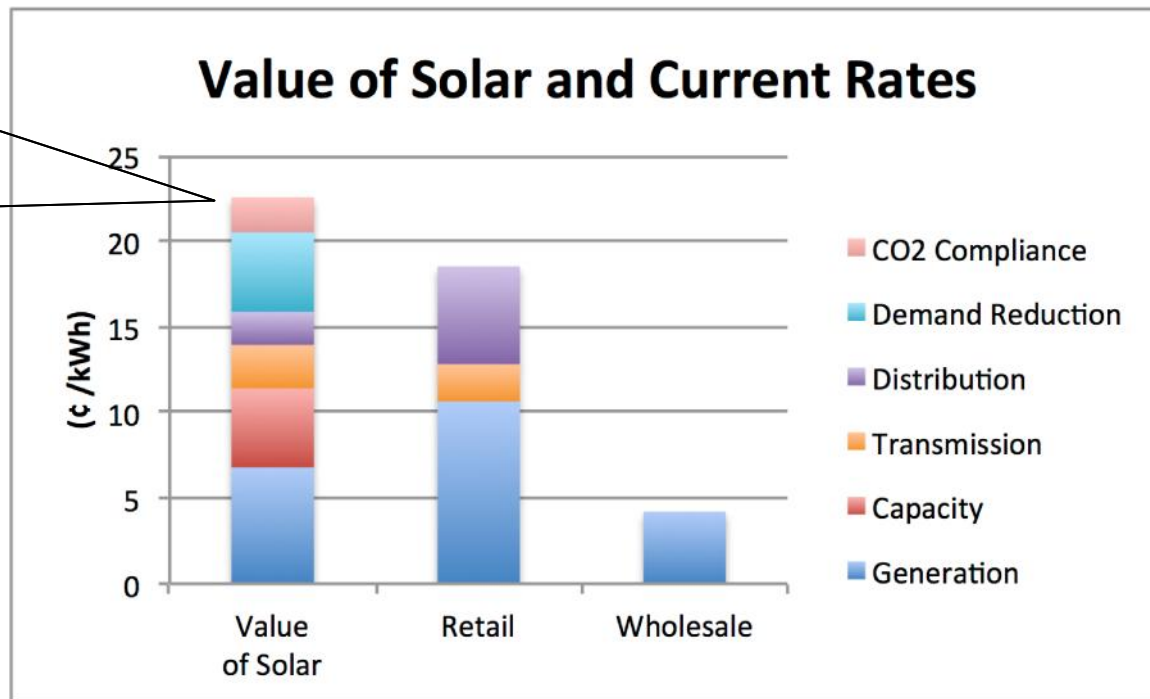
Note: Assumes current SREC II incentives, which won't be available post-1600 MW

Wholesale isn't fair payment for solar

Paying solar wholesale rates means paying solar **LESS THAN** wholesale generators, e.g. natural gas plants, who earn additional revenue from other payments

Studies show solar electricity is worth **MORE THAN** wholesale and retail rates

Acadia Center study shows the value of solar to the grid ranges from 22-28 cents/kWh



Offsetting net metering credits with higher incentives is not cost-effective policy

Net metering credits are non-taxable credits, incentives (i.e. SRECs) are taxable cash payments

- Large cash payments can create tax problems and undermine opportunity for solar to lower electricity bills
- Most new affordable housing developments CANNOT accept cash payments
- Could force solar owners to “sell” incentive (i.e. renewable energy attributes) in order to finance system

Every \$1 cut in net metering credits requires more than a \$1 increase in incentive levels

- This approach doesn't save ratepayers money!

BEST APPROACH:

Maintain current net metering rates and have DOER reduce incentives

Impact on low income, community, and municipal solar projects

<i>Policy element</i>	Downing amendment S.1973	Governor's bill H.3724	Nov. House bill H.3854	Nov. Senate bill S.2058
Minimum bill	None		Yes	None

Minimum bills

Language in House bill focuses on “fixed costs”, which will result in highest possible minimum bill

- Could mean \$360 in annual minimum bills (\$30/month) for residential solar customers; much higher bills for everyone else
- Low income, municipal and CSS disproportionately impacted because they serve multiple customers and multiple meters
- Limited grandfathering for existing projects through 2020
 - Undermine existing investments and jeopardizes financing

Cuts to net metering credits AND minimum bills will prevent most new solar projects from moving forward- EVEN RESIDENTIAL SOLAR PROJECTS.

Crafting good solar policy: Lowering costs while maintaining benefits



Crafting good solar policy

1. Consider benefits of solar as well as the costs

- Net Metering and Solar Task Force report shows every \$1 invested in solar yields \$2.20-\$2.70 in benefits
- Solar [benefits ALL ratepayers](#) by lowering energy supply prices, diversifies our energy portfolio, avoiding need for investment in new infrastructure, generating power more efficiently, avoiding air pollution
- Solar creates jobs, builds healthier communities and expands tax bases
- Solar programs involve NO risk to ratepayers, i.e. solar only gets paid when it works, and encourages private capital to invest in new local generation, which is badly needed

Crafting good solar policy

2. Avoid arbitrary cuts to net metering credits and minimum bills

- Conduct a value of solar study to inform compensation rates or establish a mechanism for solar to pay for use of the grid.
- Maintain current net metering framework. Address cost concerns by adjusting incentive levels.
 - NOTE: Post 1600 MW, new solar projects would receive lower cost renewable energy credits by default
- Consider solar costs relative to other energy options on the table, e.g. transmission lines to Canada and new gas pipelines.

Crafting good solar policy

3. Eliminate net metering caps

- Net metering caps have been raised by the legislature 4 times since 2008
- A sustainable, stable solar market needs cannot be created while caps constrain growth and create a stop-and-start dynamic in the market
- Fair compensation for solar plus a mechanism for solar to pay for use of the grid renders net metering caps unnecessary

GROWING OUR SOLAR-POWERED ECONOMY

Questions?

