

# Project Revenues

- Revenues (green)
  - Tax Credits
  - SREC Proceeds
  - Electricity Savings

Owner Name				
Solar System Project	40	kw system	Cost per KWT	
			4200	
Cost	\$168,000			
Less tax credit	\$50,400	30% of cost		
Net Cost	\$117,600			
		Loan Rate	loan term - months	Monthly Cost
		4.25%	84	(Revenue)
Monthly Loan Pmnts	\$1,621	Farm Credit East		\$1,621
Total of payments	\$136,165.69		45	
SREC Proceeds (yrs)		(\$12,825)	SREC*	
7	(\$89,775)	Min. \$300/SREC)	annual	(\$1,069)
		\$285	10 years total	
Net costs	\$46,391		*SREC: Solar Renewable Energy Credit	
Less:				
Electricity savings		45,427	kwh production	
\$6,360	(\$44,519)	0.14	price/kwh	(\$530)
(per year)			Solar System Production	
		3.12	kwh production/day-average	
Net costs	\$1,872	124.8	total (x system kw)/day	
		45,427	kwh/year	
Deprec expense	(\$29,400)	25.00%	tax rate	
Net costs	(\$27,528)	(\$3,932.57)	per year cost	\$22

# Massachusetts Clean Energy Center

# Never Been a Better Time for Solar

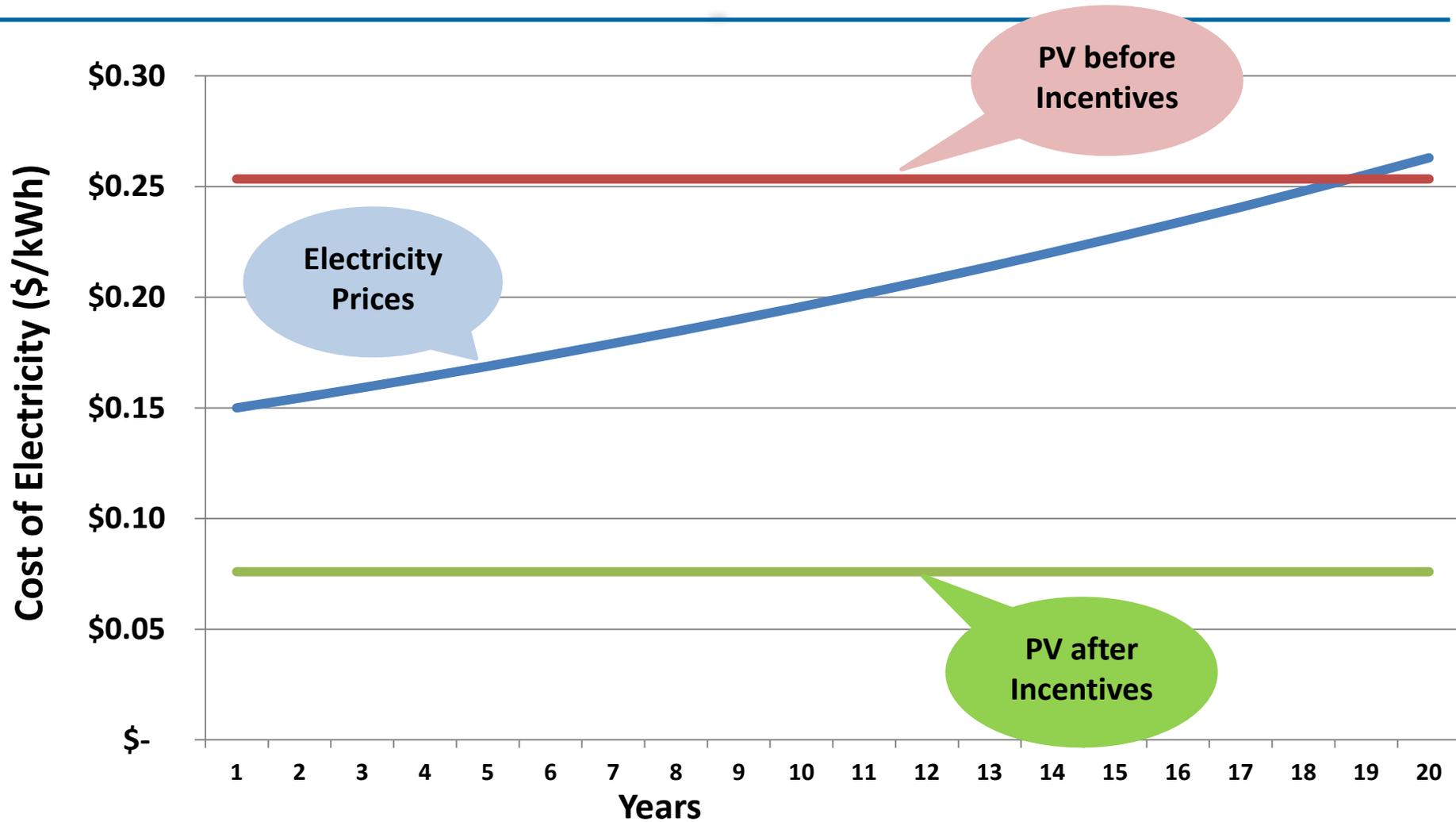
**High electricity prices + Reduced Solar PV Costs +  
Numerous Incentives = Economical solar projects**

Incentives
Low/No money down options
Tax Incentives
Rebates from MassCEC
SREC Sales
Net Metering



[www.house-power.com/blog/wp-content/uploads/2009/12/iStock\\_000009001180XSmall.jpg](http://www.house-power.com/blog/wp-content/uploads/2009/12/iStock_000009001180XSmall.jpg)

# Levelized Cost of Solar PV



# Ownership Models

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- Outright purchase
- Power Purchase Agreement (PPA)
- Lease

Referred to  
as 3<sup>rd</sup> Party  
Ownership



# Tax Incentives in Massachusetts

<b>Tax Incentives</b>	<b>Value</b>	<b>Eligible Project Owners</b>
<b>Investment Tax Credit (ITC)</b>	30% Installed Cost	Commercial Only
<b>Accelerated Depreciation (MACRS)</b>	5 year schedule with 50% bonus depreciation	Commercial Only
<b>Equipment Sales Tax Exemption</b>	100% Exemption	Commercial & Residential
<b>Property Tax Exemption</b>	100% Exemption for 20 years (if applicable)	Commercial & Residential
<b>Residential Renewable Energy Tax Credit</b>	30% Installed Cost	Residential Only
<b>Income Tax Credit</b>	15% Installed Cost up to \$1,000	Residential Only

# MassCEC Rebates

- Any eligible PV system  $\leq$  15kW, rebate paid on first 5kW
- Rebate ranges from \$2,000 to \$4,250 for 5kW system
- Average rebate covers  $\sim$ 7% of installed cost

Block 13 Rebate Levels (\$ per watt (DC @ STC))	
Base Incentive	\$0.40
PLUS:	
Massachusetts Company Component Adder	\$0.05
Moderate Home Value Adder <u>OR</u> Moderate Income Adder $\leq$ 120% of MA median income (only residential projects eligible)	\$0.40
Natural Disaster Relief Adder	\$1.00

Go to [www.MassCEC.com/solar](http://www.MassCEC.com/solar) to learn more.

# MassCEC Rebates (cont.)

## Moderate Home Value Adder Criteria

County	Property Value
Berkshire, Franklin, Hampden, and Hampshire	≤ \$300,000
Bristol, Suffolk, Worcester	≤ \$350,000
Barnstable, Duke, Essex, Middlesex, Nantucket, Norfolk, and Plymouth	≤ \$400,000

## Moderate Income Adder Criteria

Income Category	Income Levels
Individual Income	≤ \$75,810*
Domestic Unit Income	≤ \$95,420*

\* 120% of median household income as determined by the US Census Bureau

# MassCEC Rebates (cont.)

- Minimum Technical Requirements
  - Equipment must meet certain standards
  - Required warranties
    - Panels have 20 year warranties
    - Inverters have 10 year warranties
    - 5 year workmanship warranty
  - 80% of optimal system production
- Insurance
  - Incumbent on host customer to verify Installer insurance
- Tax Questions
  - MassCEC will issue 1099s to all System Owners
  - Consult tax advisor with any questions about rebate taxability or other incentives



# Assumptions: Simple Solar Ownership Model

Assumptions	
Size:	5 kW (5,000 watts)
Panel Degradation:	1% Annually
Electricity Price:	\$0.15/kWh
Electricity Price Escalator:	3% Annually
Life of System:	20 years
SREC Value:	\$285.00
Timeline for SREC Sales:	10 years
Income Tax Rate:	28%
Discount Rate:	7.5%

\* Assumes qualification for the base rebate incentive and is eligible for federal and state tax incentives.

*Disclaimer: This financial analysis is only an estimate. Actual installed costs, savings, and revenues are subject to change and will be specific to individual projects.*

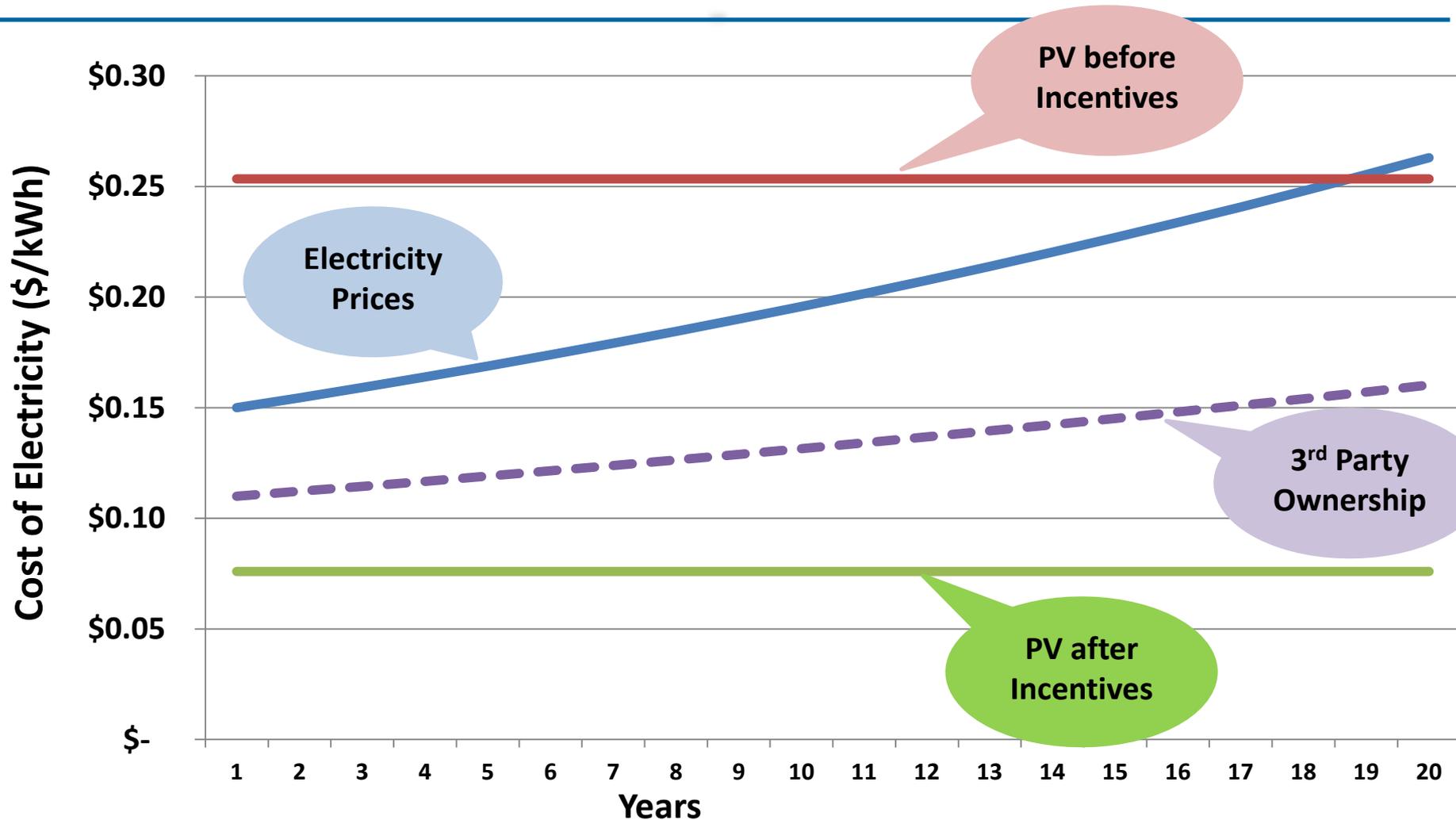
# Simple Solar Ownership Model

	State Average Price	Final Solarize Price*
Dollar Per Watt Cost	\$ 5.00	\$ 3.91
Total Installation Cost	\$ 25,000.00	\$ 19,550.00
CSII Rebate (base of \$0.40/watt)	<u>\$ (2,000.00)</u>	<u>\$ (2,000.00)</u>
<b>Total Upfront Cost</b>	<b>\$ 23,000.00</b>	<b>\$ 17,550.00</b>
Federal Tax Credit (30% of cost)	\$ (6,900.00)	\$ (5,265.00)
MA Tax Credit	<u>\$ (1,000.00)</u>	<u>\$ (1,000.00)</u>
<b>Total After Tax Credits</b>	<b>\$ 15,100.00</b>	<b>\$ 11,285.00</b>
NPV SREC Income (over 10 yrs)	\$ (7,714.24)	\$ (7,714.24)
NPV Electricity Savings (over 20 yrs)	<u>\$ (10,073.75)</u>	<u>\$ (10,073.75)</u>
<b>Net Project Cost</b>	<b>\$ (2,687.99)</b>	<b>\$ (6,502.99)</b>
<b>Payback after rebate &amp; tax credits</b>	<b>7-8 years</b>	<b>5-6 years</b>

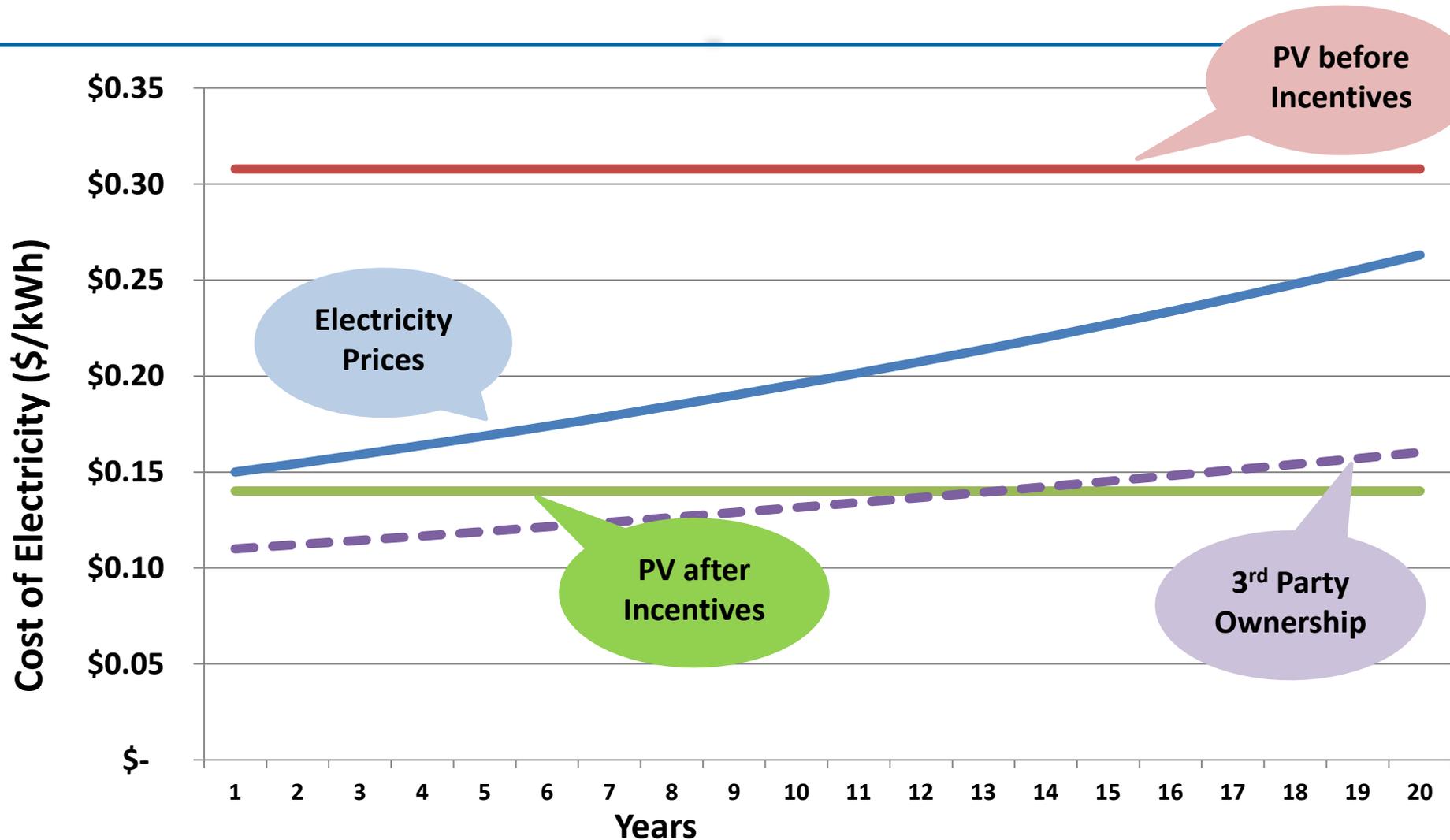
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*\* Does not include price adders that may apply.*

# Levelized Cost of Solar PV (w/o Financing)

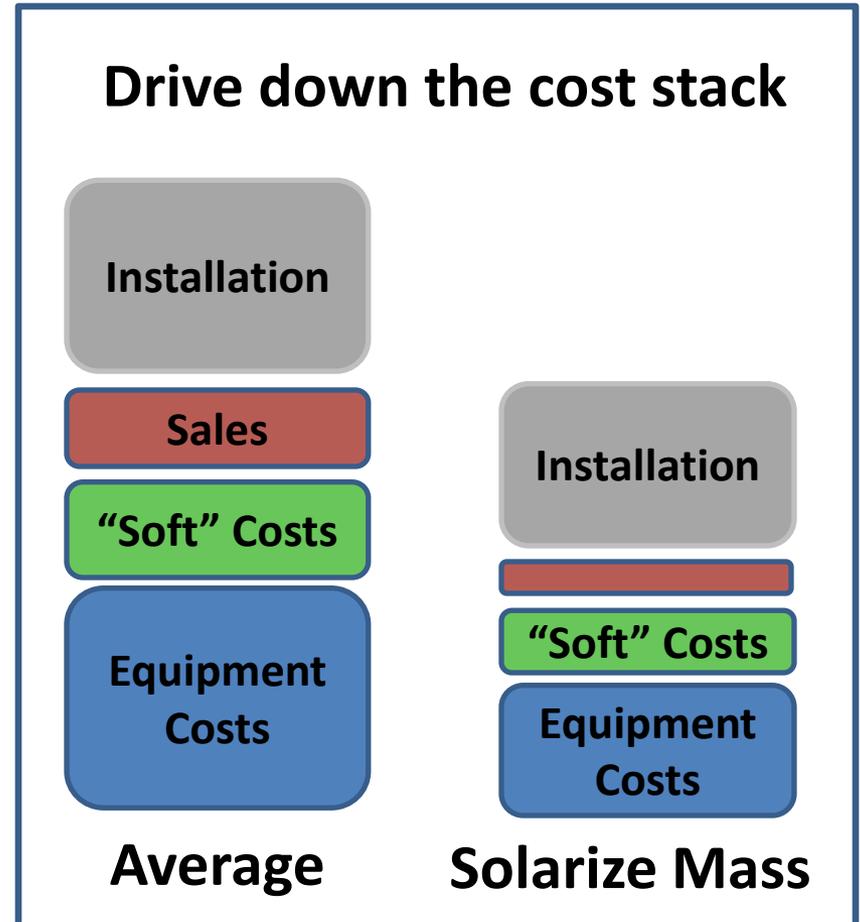


# Levelized Cost of Solar PV (w/ 5% Financing)



# Goals of Solarize Mass

- Increase education through community outreach
- Introduce model to simplify process
- Reduce installation costs
- Reduce time to contract



# 2012 Solarize Massachusetts Basics

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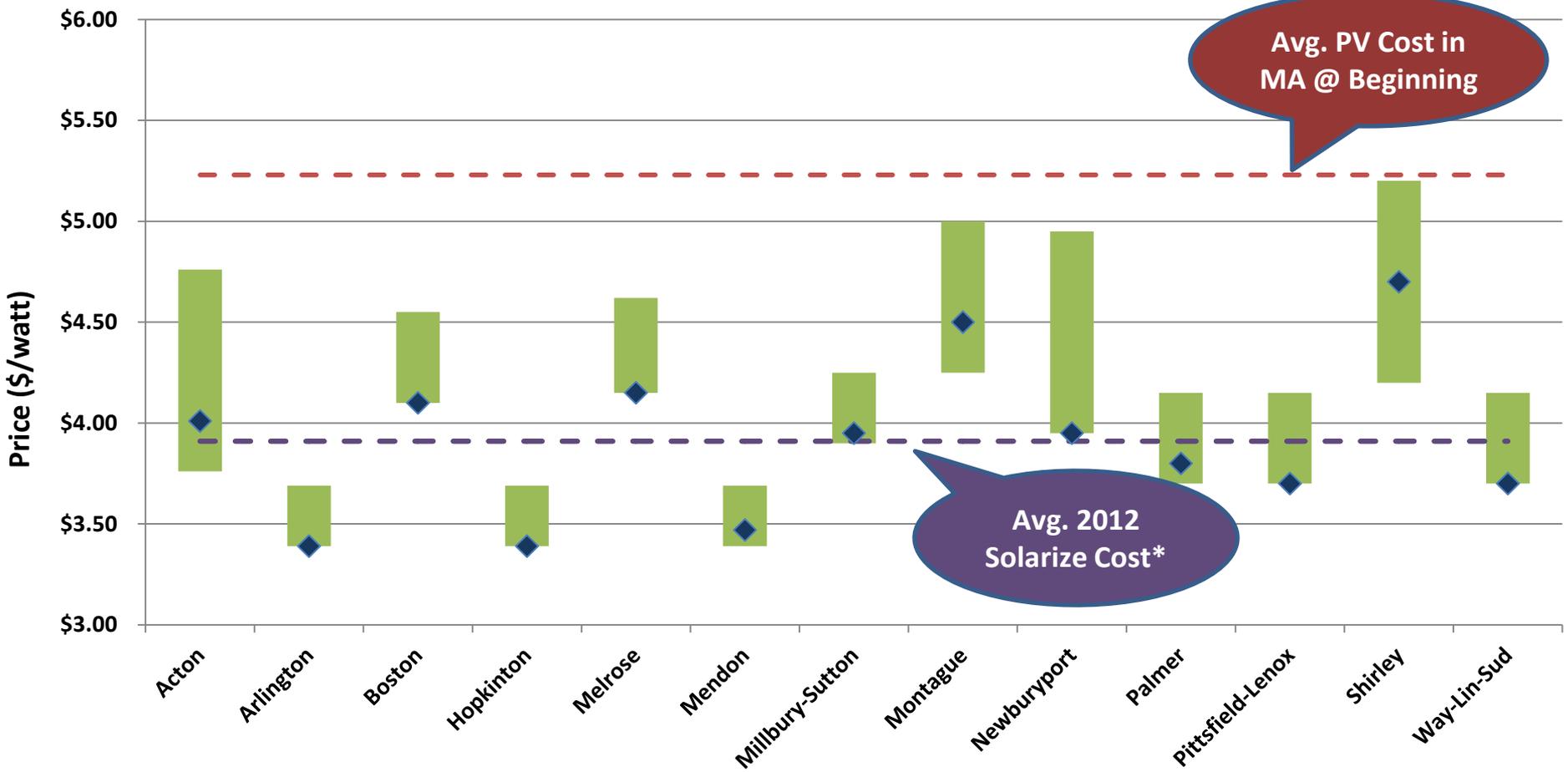
- 17 Green Communities
- 8 Installers
- Tier Pricing (based on contracted capacity)

Tier 1	Tier 2	Tier 3	Tier 4	Tier 5
1 kW-25 kW	>25 kW-50 kW	>50 kW-150 kW	>150 kW-250 kW	250 kW+

- Limited time offer – Sign Ups through **Nov 4, 2012**

# Solarize Mass Pricing

Tier Pricing versus Average Price in Massachusetts

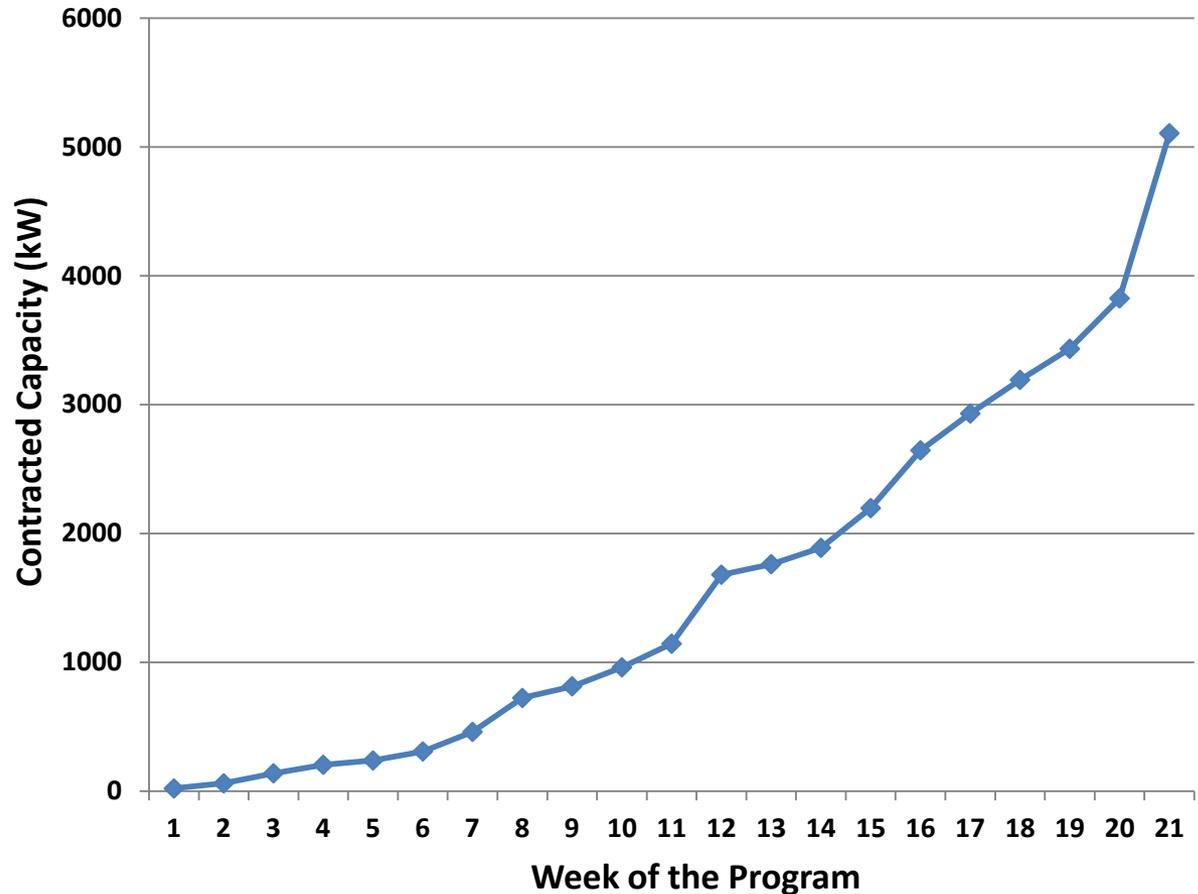


\* Price does not include any cost adders that may apply.

# Solarize 2012 Final Metrics

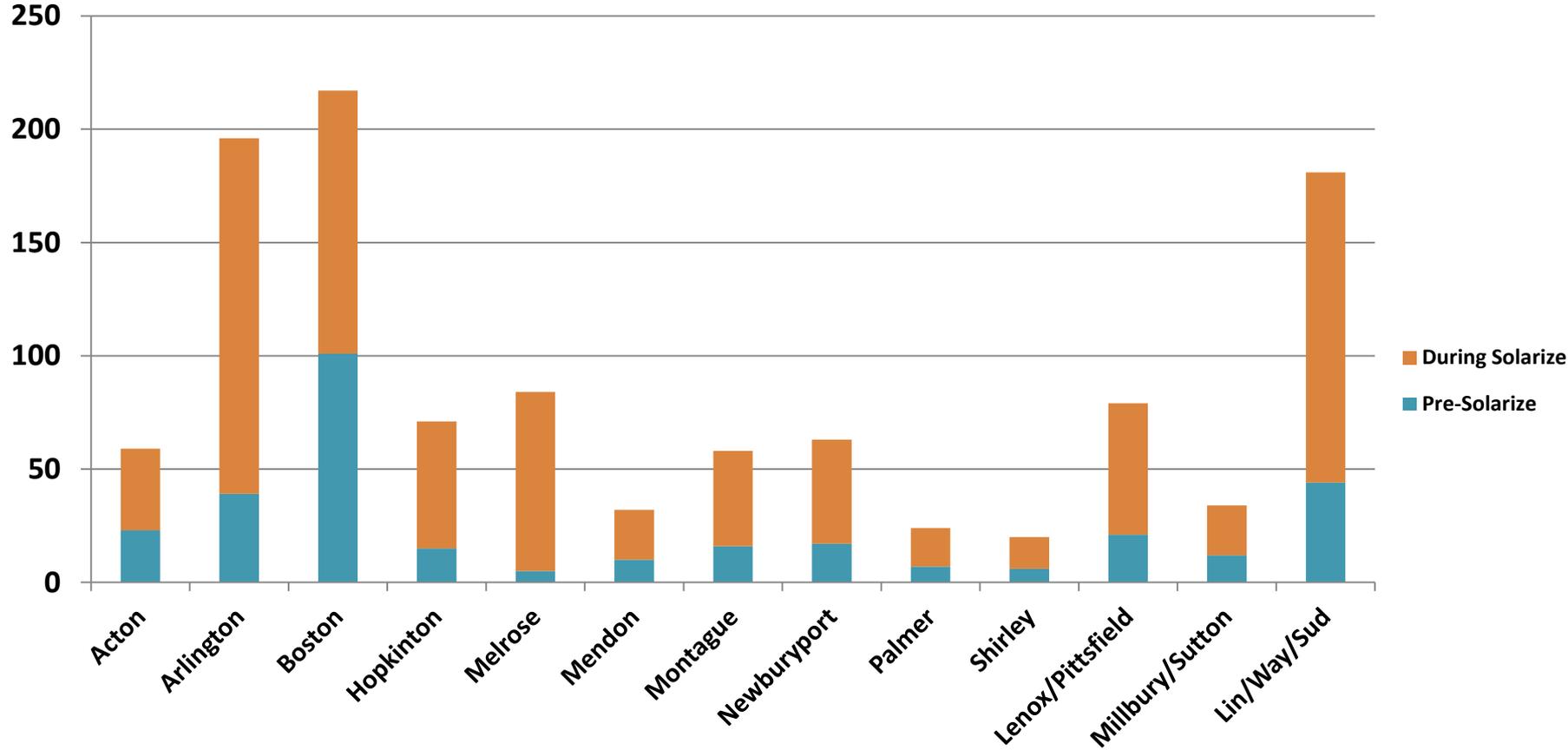
Total Number Of:	
Leads Generated	5,405
Contracts Signed	803
Contracted Capacity (kW)	5,146
Communities at Tier 5 Pricing	10

### Cumulative Contracted Capacity



# Total number of Projects more than DOUBLED

Total number of PV Projects



# Thank you!

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