Energy Assistance Programs for Multi-Family Properties

Greenfield Landlord Workshop

12/1/2020

Agenda

- Energy Efficiency Programs for 1-4 unit homes
- Energy Efficiency Programs for 5+ unit homes
- Rebates & Financing for Energy Efficiency Improvements
- Overview of Clean Energy Technologies & Incentives
- Franklin County Case Studies

Energy Efficiency

- Reduces the amount of energy required for heating, cooling, hot water, and lighting
- Applicable to all building sizes and types
- Saves property owners and renters money on energy bills
- The process typically begins with a home energy assessment or energy audit during which an energy specialist identifies opportunities to reduce energy use

Opportunities include:

- ✓ **Instant Savings Measures / Products** - LED lightbulbs, advanced power strips, low-flow showerheads, faucet aerators, and efficient thermostats
- ✓ **Weatherization** – air sealing around doors, windows, attic; insulation in walls & attic
- ✓ **Equipment & Appliances** – Heating, ventilation, air conditioning, and hot water; clothes washers, refrigerators, etc.

Mass Save Energy Efficiency Programs: 1-4 units

- Incentives and programs are dependent on # of units, ownership, and tenant income
- Currently **no co-pay** for weatherization through the Landlord program

Market Rate	Landlord (1-4 units)	Enhanced Residential	Income Eligible
• No-cost energy assessment • No-cost instant savings measures • **25%** co-pay for weatherization • Equipment and appliance rebates • Zero percent financing (up to $25,000) • Financing available for barrier removal • Choose your contractor	• No-cost energy assessment • No-cost instant savings measures • **10%** co-pay for recommended weatherization • Equipment and appliance rebates • Zero percent financing (up to $50,000) • Financing available for barrier removal • Choose your contractor	• No-cost energy assessment • No-cost instant savings measures • **No co-pay** for recommended weatherization • Equipment and appliance rebates • Zero percent financing • Grants for barrier removal • Choose your contractor	• No-cost energy assessment • No-cost instant savings measures • **No-cost appliance replacements** • **No co-pay for cost-effective insulation, heating system replacements** • **No-cost barrier removal** • **All contractors provided by the program**

Mass Save Landlord Program

WHO?

- ✓ Landlords of **1-4 unit rental properties**
- ✓ Owners and occupants of attached **2-4 unit condominiums** may join with other condo owners in the building to become eligible for this program

WHAT?

- **No-cost** energy assessment
- **No-cost** installation of in-unit instant savings products
- **No-cost** weatherization
- **0% HEAT Loan** for upgrades & removal of barriers (knob & tube, asbestos) up to $50,000

  Franklin First FCU

  Greenfield Co-op (up to $25,000)
- **Rebates** for heating and cooling, hot water, lighting, appliances, etc.

HOW?

Mass Save website: https://www.masssave.com/en/saving/energy-assessments/landlords-with-1-4-unit-properties

Two Options:

1. Schedule Energy Assessment with Energy Specialist: 1-866-527-SAVE (7283) then choose installation contractor for weatherization work: https://www.masssave.com/en/learn/find-a-contractor-iic
2. Choose a participating Home Performance Contractor to conduct the Energy Assessment and complete the weatherization work: https://www.masssave.com/en/learn/find-a-contractor-hpc

Mass Save Income Eligible Program

WHO?

✓ Landlords of **1-4 unit rental properties where at least 50% of tenant households meet income requirements:**

Household Size	Annual HH Income
1	$39,105
2	$51,137
3	$63,169
4	$75,201
5	$87,233
6	$99,265

WHAT?

- **No-cost** energy assessment
- **No-cost** installation of in-unit instant savings products
- **No-cost** weatherization
- **No-cost** installation of recommended high efficiency heating and cooling, hot water, lighting, and appliances (refrigerator, freezer, clothes washer, A/C, dehumidifier)
- **No-cost** barrier removal - knob & tube, limited asbestos removal for homeowners

HOW?

Mass Save website: https://www.masssave.com/en/saving/income-based-offers/income-eligible-programs

In Franklin County, the Income Eligible Program is administered by Community Action Energy Programs (CAP Agency):

- https://www.communityaction.us/home-energy-assistance
- 413-774-2310 or 800-370-0940

Mass Save Income Eligible Program Case Study – Springfield Homeowner

Project Summary

- Two-story, two-family home built in early 1900s.
- Two oil boilers needed constant repairs and the oil tanks needed monthly refills
- Springfield Partners for Community Action Inc. installed measures

Solution

- Received **instant-savings measures** as well as **replacement of aging appliances**.
- Two oil boilers were replaced with **two high efficiency boilers with steam pipe insulation**.
- Drafty **leaks were sealed**, doors were **weather-stripped**, and **insulation** was added throughout the house.

Annual Energy Savings: 5,044 kWh

Annual Cost Savings: $2,517

Total Project Cost: $31,727

Eversource Incentive: 100%

Net Cost to the Customer: $0

Mass Save Multi-Family (5+ units) Program

WHO?

✓ Landlords of properties with 5 or more units

Multi-Family Apartment with 6 units in Dorchester, MA

Upon completion of the energy assessment, incentives were provided for LEDs, smart strips, air sealing and insulation, and domestic hot water conservation measures.

Total Project Cost:	**$12,726**
Incentive:	**$10,065**
Cost to Customer:	**$2,661**
Annual Electricity Savings:	**$1,339**
Annual Gas Savings:	**$1,331**

WHAT?

- **No-cost** energy assessment

Potential incentives for:

- Energy-efficient lighting upgrades and controls
- Occupancy sensors
- Water heating equipment
- Low-flow showerheads, faucet aerators, and pipe wrap
- Programmable thermostats
- Insulation
- Air sealing of drafty areas
- High-efficiency heating and cooling equipment and controls
- ENERGY STAR® certified refrigerators and other eligible appliances

HOW?

Mass Save website: https://www.masssave.com/en/saving/energy-assessments/multi-family-facilities-5-units-plus

To schedule an energy assessment:

800-594-7277

LEAN Multi-family Program (5+ units, Income Eligible)

WHO?

✓ Landlords of **5+ unit rental properties where at least 50% of tenant households meet income requirements:**

Household Size	Annual HH Income
1	$39,105
2	$51,137
3	$63,169
4	$75,201
5	$87,233
6	$99,265

WHAT?

- **No-cost** Whole Building Assessment and Electric/Appliance Audit
- **No-cost** installation of recommended efficiency measures
- All lighting, mechanical and weatherization opportunities are reviewed in addition to tenant spaces and appliances

HOW?

LEAN Program website: https://leanmultifamily.org/

LEAN Low-Income Multifamily Case Study– Agawam, MA

Project Summary

- 200-unit development
- Property owners are responsible for gas utilities and common area lighting and residents pay for individual unit utilities

Solution

- Added **wall insulation**, **air sealing**, and **attic hatch sealing**
- **LED fixtures** installed in residential bathrooms, common spaces, building stairwells, halls, and around building entryways for better visibility and energy savings for residents

Annual Cost Savings: $68,641

Total Project Cost: $569,100

Net Cost to Owner: $0

Total Energy Savings: 16,233 therms

Heating & Cooling Rebates

Mass Save

- https://www.masssave.com/en/saving/residential-rebates
- Programmable thermostats
- Electric heat pumps and water heaters
- Gas, oil, and propane heating and water heaters

Mass Clean Energy Center (CEC)

- Whole-Home Air-Source Heat Pumps - https://www.masscec.com/clean-heating-and-cooling/air-source-heat-pumps
- Accepting applications through June 25, 2021
- For 1-4 unit residences heated with natural gas

Whole-Home Air-Source Heat Pump Pilot Incentives			
Income Category	Base Incentive per Residence	Blower Door Test Rebate Adder (for existing buildings only)	Maximum Incentive per Residence for Existing Buildings
>120% of state median income	$2,500	$500	$3,000
80%-120% of state median income	$3,750	$500	$4,250
<80% of state median income	$5,000	$500	$5,500

Mass Save HEAT Loan

- https://www.masssave.com/en/saving/residential-rebates/heat-loan-program/eligible-services
- Central A/C, central heat pump, mini-split heat pump (*properties heated with natural gas are not eligible – see Mass CEC rebate information*)
- Heating system replacements – Natural gas, propane, oil, ground source heat pumps
- Hot water equipment – Natural gas, propane, oil, electric heat pump, solar hot water
- Replacement of single pane windows with ENERGY STAR® windows

BARRIER	ALLOWABLE FINANCING
Knob and tube wiring	Up to $10,000
Vermiculite	Up to $10,000
Mold abatement	Up to $4,000
Structural concerns	Up to $1,000
Combustion safety	Up to $1,000

Clean Energy Technologies

- Heat Pumps
- Solar Hot Water
- Solar PV
- Energy Storage

Heat Pumps

- Provides **heating and cooling using heat** from the air or ground
- Heat pumps use electricity to **transfer heat into a space (heating) or out of a space (cooling)**

Air Source Heat Pump

- More common
- Can be installed as ducted or ductless systems
- Less expensive
- More “off the shelf” technology

Ground Source Heat Pumps

- Less common
- Requires sufficient outdoor space to install the system
- More expensive
- Requires custom engineering

Photos courtesy of Green Energy Futures and Mark Johnson: flickr.com and commons.Wikimedia.com

Heat Pump Considerations

Considerations

- Property owners should be sure to **install cold climate heat pumps** that are equipped to provide sufficient heating in cold winter temperatures.
- **Cost effectiveness varies** based on home layout, type and efficiency of existing heating system and fuel

Average Cost

- $3,500-$5,000 **per zone** for ductless cold climate air source system
- $10,000-$12,000+ for ducted cold climate air source system
- $10,000-$12,000 per ton of capacity for ground source system

Air-Source Heat Pump Costs Comparison Tool

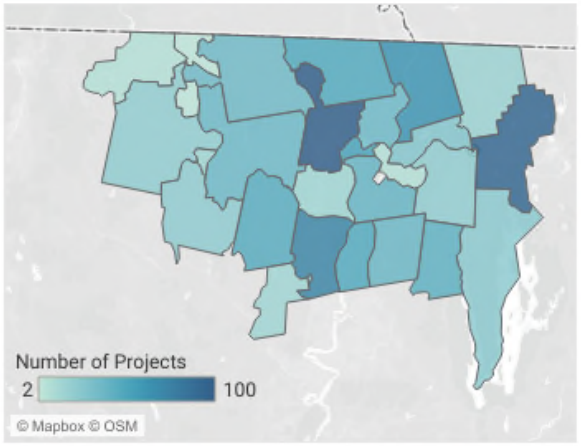
Residents interested in installing air-source heat pumps can use this dashboard to explore recent Massachusetts project prices. The following information was collected as part of MassCEC's Air-Source Heat Pump Rebate Program.

Use the filters to the right to select your county, unit manufacturer, installer, or year of installation to see updated information relevant to your criteria.

Project Snapshot

Median Capacity (Heating Tons)	2.04
Median Cost per Ton	$3,370
Median Cost per Ton (Single head)	$3,072
Median Cost per Ton (Multi head)	$3,625
Number of Projects	1,098

Project Location



Project Volumes

By Installer

Orange Oil Company, Inc.	170
Sandri Energy LLC	168
Climates by Pomeroy	109
Arctic Refrigeration	85
M.J. Moran, Inc.	70
Pioneer Heating & Cooling Inc.	57
Hubbard Heating and Cooling	50
Gates HVACR, LLC	46
Whittier Plumbing and Heating	38
Scott Zilinski Heating & Cooling	29
Tognarelli Heating and Cooling	29

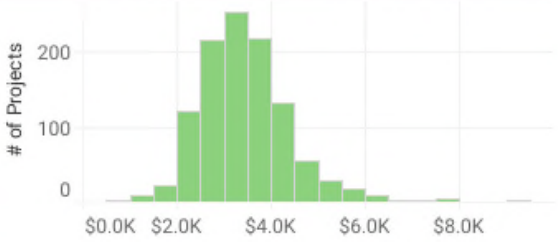
By Manufacturer

Mitsubishi	722
Fujitsu	283
Daikin	89
Haier	3
Carrier	1

Customize Data

Year	All
Manufacturer	All
County	Franklin County
Installer	All

Pricing Distribution ($/ton)



Consumer tip: Cost per ton is a standard way to compare heat pump pricing. You can likely find the system capacity in tons in the installer proposal. If your proposal lists Btu/hr instead, note 1 Ton = 12,000 Btu/hr. An example for a 24,000 Btu/hr system is below:
24,000 Btu/hr = 2 Tons
$7,000 cost / 2 Tons = $3,500/ton

https://www.masscec.com/cost-residential-air-source-heat-pumps

Heat Pump Water Heater

How Does a Heat Pump Water Heater Work?

- Provides **heating and cooling using renewable sources of heat** from the air or ground instead of generating heat directly.
- Because the system pulls heat from the surrounding air or ground, the **system will not work well in cold spaces**.
- Heat Pump Water Heating systems **can also be installed as integrated systems that provide space heating and cooling** in addition to domestic hot water.

Photo courtesy of Shutterstock: https://pixabay.com/

These are most effective in multifamily buildings where there are boilers or other gas or oil equipment that generates excess heat

Solar Hot Water

- Captures **heat from sunlight and circulates the thermal energy to a water tank**
- **Reduce the usage of traditional water heating fuels**
- Supply **50% to 80%** of a home's annual hot water needs.
- Requires un-shaded location that generally faces south in order to maximize sun exposure.

Photo courtesy of Missouri University of Science and Technology, University of Missouri: https://www.flickr.com/

Solar Photovoltaic (Solar PV)

Solar electric installations offer many benefits, including:

- Stable electricity costs and long-term savings
- Energy independence and control over energy choices
- Tangible solutions to combat climate change and protect our environment

Adding solar electric to rental properties provides landlords with opportunities to:

- Increase the value of their properties
- Become desirable homes for environmentally-focused tenants
- Lower electricity costs to tenants, making the property more desirable

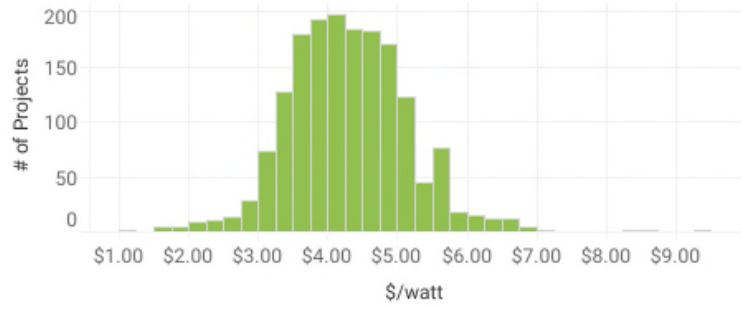
- The **SMART program** provides incentives for solar PV installation throughout the Commonwealth. Upon application approval, the incentive is paid by the utility to the system owner based on the amount of electricity generated by the system.
- Increased incentives are available for solar projects that serve low-income customers, provide community shared solar, or are coupled with energy storage.

MassCEC's Solar Costs Comparison Tool

To Get Started:
Use the dropdowns to the right to filter by county, the installers you are considering, and your preferred ownership model. The filters default to Residential, Direct Purchase projects from 2017 - 2019, but you can personalize these fields as well.

County	Franklin
Installer	All
Ownership	All
Year	Multiple values
Sector	Residential

Pricing Distribution:

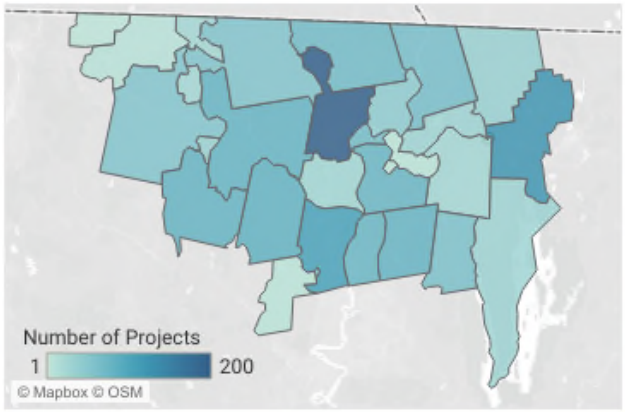


Installer Snapshot:

Installer	Median $/watt	Median Size (kW)	Number of Projects
Grand Total	**$4.25**	**7.2**	**1,691**
PV Squared (Pioneer ..	$4.53	7.6	275
Trinity Solar	$3.88	7.1	179
Solar Store of Greenfi..	$3.85	6.8	177
Vivint Solar Developer	$4.65	6.5	174
SolarCity Corporation..	$5.15	6.9	149
NorthEast Solar Desi..	$4.17	7.2	124
Direct Energy Solar (f..	$4.10	6.9	93
Roof Diagnostics	$3.41	6.7	70
Valley Solar	$5.11	7.4	57

Consumer Tip: Cost per watt ($/watt) is a standard way to compare solar electric system pricing. This is calculated with the total cost offered by your installer before any incentives are applied. To find your $/watt, follow the example below:
5 kW system = 5,000 watts
$20,000 cost / 5,000 watts = $4.00/watt

Where Solar is Installed:



Next Steps:
For more detailed cost and equipment information, see the next tab. Please note your selected filters will apply to the next tab.

Residential solar installations in Franklin County, 2015 - 2019

https://www.masscec.com/solar-costs-performance

MassCEC's Solar Costs Comparison Tool

To Get Started:
Use the dropdowns to the right to filter by county, the installers you are considering, and your preferred ownership model. The filters default to Residential, Direct Purchase projects from 2017 - 2019, but you can personalize these fields as well.

County	Franklin
Installer	All
Ownership	All
Year	Multiple values
Sector	Commercial

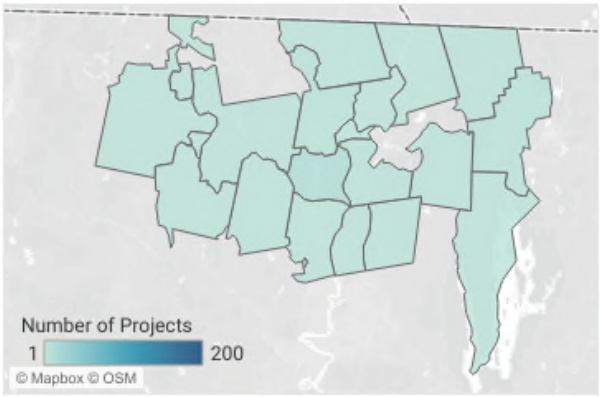
Pricing Distribution:

Installer Snapshot:

Installer	Median $/watt	Median Size (kW)	Number of Projects
Grand Total	**$3.80**	**25.0**	**49**
PV Squared (Pioneer ..	$4.22	22.6	22
Northeast Solar	$3.89	8.3	7
NorthEast Solar Desi..	$3.88	13.2	5
Solect Energy Develo..	$2.67	105.4	3
SunBug Solar	$3.64	50.7	2
Berkshire Photovoltai..	$4.75	9.6	1
Borrego Solar Systems	$2.25	2,770.6	1
C2 Special Situations ..	$3.00	829.4	1
Design With Nature L..	$3.00	18.0	1

Consumer Tip: Cost per watt ($/watt) is a standard way to compare solar electric system pricing. This is calculated with the total cost offered by your installer before any incentives are applied. To find your $/watt, follow the example below:
5 kW system = 5,000 watts
$20,000 cost / 5,000 watts = $4.00/watt

Where Solar is Installed:



Next Steps:
For more detailed cost and equipment information, see the next tab. Please note your selected filters will apply to the next tab.

Commercial installations in Franklin County, 2015-2019

https://www.masscec.com/solar-costs-performance

MASSACHUSETTS CLEAN ENERGY CENTER

SHARING THE SUN:

SOLAR SOLUTIONS FOR LANDLORDS AND TENANTS

Solar electric systems are appearing throughout Massachusetts. Over the past decade, the number of systems has soared from a few hundred to over 89,000 installed primarily on residential homes.

Solar electric installations offer many benefits, including:

- Stable electricity costs and long-term savings
- Energy independence and control over energy choices
- Tangible solutions to combat climate change and protect our environment

Adding solar electric to rental properties provides landlords with opportunities to:

- Increase the value of their properties
- Become desirable homes for environmentally-focused tenants
- Lower electricity costs to tenants, making the property more desirable

This guide will help you understand:

- Methods to use solar to create value for you and your tenants.
- Common metering scenarios for landlords that live onsite or offsite of their rental property.
- Questions to ask a solar installer to understand if solar is a good option for your property.

The Massachusetts Clean Energy Center (MassCEC) is now offering an education series for landlords to learn more about creating solar electric solutions for their rental properties. Below are five steps landlords should consider before making a decision about solar:

63 Franklin Street, 3rd Floor, Boston, MA 02110 USA masscec.com /MassCEC @MassCEC /MassCEC

9.19

- Metering and financial options
- Includes guidance for on-site and off-site landlords

- Webinar: https://www.youtube.com/watch?v=M8XwjlM7FVs&mc_cid=bb25520096&mc_eid=af331417c2
- Toolkit: https://files-cdn.masscec.com/solar/Sharing%20the%20Sun_MassCEC%20Solar%20Landlord%20Toolkit.pdf

Energy Storage

- Battery technology **stores energy** generated from the grid or generated from accompanying renewable sources
- Energy is **discharged at a later time** to meet electric demands on-site or on the grid.
- This can be used to **increase the utilization of on-site solar** and **reduce peak electricity demands**
- **Provides back-up power during power outages**

Graphic courtesy of Sam Churchill: flickr.com

Mass Save Connected Solutions Program:
https://www.masssave.com/saving/residential-rebates/connectedsolutions-batteries

- $225 per kilowatt (kW) for your battery's average contribution during summer events and $50 per kW for your battery's average contribution during winter events.
- Typical residential battery could earn $1,375 per year

Incentives for Clean Energy Technologies

Clean Energy Incentives by Technology					
Incentives	**Solar Hot Water**	**Air Source Heat Pump**	**Ground Source Heat Pump**	**Solar PV**	**Battery Storage**
Mass Clean Energy Center (CEC) rebates https://www.masscec.com/residential/clean-heating-and-cooling		✓			
Mass Save rebates https://www.masssave.com/en/saving/residential-rebates		✓			✓
Federal Tax Credit - up to 26% of qualifying project costs (declining to 22%) https://programs.dsireusa.org/system/program/detail/1235	✓		✓	✓	
State Tax Credit - $1,000 or 15% of qualifying project costs, whichever is less https://programs.dsireusa.org/system/program/detail/144	✓			✓	
Solar Massachusetts Renewable Target (SMART) Program https://www.mass.gov/info-details/solar-massachusetts-renewable-target-smart-program				✓	✓
Alternative Energy Credits (AECS) https://www.mass.gov/guides/aps-renewable-thermal-statement-of-qualification-application	✓	✓	✓		
Eligible for HEAT Loan financing https://www.masssave.com/en/saving/residential-rebates/heat-loan-program/eligible-services	✓	✓	✓		

Franklin County Case Studies

Community Action Pioneer Valley weatherization for renters - Case studies

Turners Falls - 2 unit

- Work completed
- Total job cost: $ 8,489.40
- Cost to property owner $ 0, cost to tenants $ 0

Greenfield – single unit

- Work completed
- Total job cost $ 3,211.64
- Cost to property owner $ 0, cost to tenants $ 0

Franklin County Case Studies

Community Action Pioneer Valley Large Project Multifamily Case Study

Greenfield – large multi-unit building

- Work Scheduled
- Total Job Cost $ 258,500
- Cost to Property owner $ 0, cost to tenants $ 0

- All cost effective efficiency improvements are made by our utility partners, Berkshire Gas, Eversource, or National Grid.
- Buildings with five (5) or more units must have at least 50% of the units occupied by income eligible tenants.

CAPV & FRCOG Resources

CAPV Energy Programs

- Administer the Income Eligible Mass Save and LEAN programs: https://www.communityaction.us/home-energy-assistance
- Coming Soon! – Energy Concierge services to assist with clean energy technology adoption (Solar Hot Water, Solar PV, Heat Pumps)

FRCOG – Coming Soon!

- Clean Energy Webpage - https://frcog.org/
- Assistance with finding the right program or incentives for your property
- Help with taking the next steps
- Connect to additional resources