Community Campaigns for Renewable Heating and Cooling Technologies, Part 2

Hosted by
Val Stori, Project Director, CESA

August 5, 2019
Housekeeping

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• Choose Telephone and dial using the information provided

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Community Campaigns for Renewable Heating and Cooling Technologies: Four Case Studies

By Georgena Terry and Val Stori for the Clean Energy States Alliance, June 2019

Available at: https://www.cesa.org/resource-library/resource/community-campaigns-for-renewable-heating-and-cooling-technologies-four-case-studies
Webinar Speakers

Sam Saltonstall
Peaks Environmental Action Team (PEAT), Maine

Jonathan Comstock
Program Director, HeatSmart Tompkins

Rachel Genzer
Project Management Intern, Clean Heating & Cooling, NYSERDA

Val Stori
Project Director, Clean Energy States Alliance (moderator)

Georgena Terry
Research Associate, Clean Energy States Alliance (moderator)
Peaks Island Heat Pump Purchase Groups 2014-2016

Sam Saltonstall
ssalty88@gmail.com
207-838-9843
Small but lovely!
Cultural Events!

Peaks to Portland Swim!
The summer residents have left, but c. 1,000 of us are still here.
PEAT is a Peaks Island, Maine nonprofit. We meet monthly at the Community Center. Meetings are announced on Nextdoor Peaks Island, Carol’s list, and in the Star. Join us in working for a lighter footprint on the island environment.

PEAT supported me all the way!
Vinalhaven Wind

Maine’s Offshore Wind Resource

Samsø Island hay in the boiler shed
Island Institute
Weatherization
Week -
108 homes weatherized!
WindowDressers Insulating Window Inserts
Oil costs about $1 more per gallon than it does on the mainland. Keith, the owner of Peaks Island Fuel got certified as a heat pump installer!
High Efficiency Heat Pumps

More than 30,000 high efficiency ductless heat pumps have been installed in Maine homes and businesses over the past five years. Long used for cooling in warm climates, heat pumps are now one of the most popular technologies for heating in cold climates. Efficiency Maine offers rebates for high-efficiency ductless heat pumps for residential and commercial customers. Click here to learn how to get the most out of a heat pump.

How do they work?

Ductless heat pumps provide heat by extracting heat from outside air and delivering it indoors as needed. Because they are moving heat, rather than generating it through combustion or resistance, heat pumps can achieve efficiencies well above 100%. Long used for cooling in warm climates, heat pumps are now able to provide efficient heating in cold climates even at outdoor temperatures as low as -15 °F.
Efficiency Maine’s online heating cost comparison tool was one very convincing way Islanders could get a sense of their potential savings if they purchased a mini-split.

View it at: https://www.efficiencymaine.com/at-home/heating-cost-comparison/
How do you communicate with fellow islanders about saving on energy?

**At the Island market**

- At the Island market
- On the ferry
- Via the Island email list (indispensable!)

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Dear Peaks Islanders,

**It’s a new year for energy and the environment:**
Climate talks in Paris have resulted in a hopeful agreement. The federal tax credit for solar has been extended. Maine’s Public Advocate is working on a new way to incentivize solar. The price of solar panels continues to fall. Signs of the urgent need to tackle climate change abound.

**PEAT is curious to find out if you have interest in:**
- weatherization work
- storm window inserts
- two possible solar options
- yet another heat pump purchase group

Our Google Forms survey contains only five multiple choice questions with a brief explanation of each, so is very quick to complete. With your help, we can determine whose interests lie and figure out which options to pursue. (If none interest you, no need to submit).

Thanks if you choose to complete the survey today, or at the latest by this coming Sunday, January 17th. To do so, [Click here](#).

*Paper copies of the survey are posted at the Community Center. If you know of someone without computer access who might be interested, please let them know.*
Request for Proposals by Peaks Island 2016 Heat Pump Purchase Group

32 Peaks Island residents would like to receive proposals for the installation of heat pump systems in their homes. Some group members are considering heat pumps but are unsure. The purpose of this request is to get information from several contractors regarding the cost (installed) of the heat pump units specified below.

Your Proposal should be emailed as an attachment to Sam Saltonstall (s salty88@gmail.com) no later than Feb. 1, 2015. He will confirm receipt. Prices you specify below and on the contract will apply to all contracts signed and returned within one week of receipt of the contractor’s proposal by the customer.

Once proposals are in hand, a weekend afternoon meeting will be scheduled to provide group members with info about heat pumps, hear from islanders who own them, and to discuss the proposals. If you would like to be present to answer questions, you would be welcome to attend. At the end of this meeting, group members will be asked to tell Sam if they wish to move forward with a visit from one of the participating contractors, and if so which. Sam will then forward a list of customers to their chosen contractor (with phone, email and physical address included). The contractor will contact his/her customers and meet with them. From then on, the heat pump group will no longer function, and each customer will deal directly with the chosen contractor.

Description of Service requested: The sale and installation of single mini-split heat pumps meeting all Efficiency Maine program criteria listed at the bottom of this RFP. For the purpose of providing a fair cost comparison, contractors should assume:

- 16 feet Line Hide or similar (Please include: one 90 degree ell, one wall inlet, one end fitting)
- 20 feet of line set
- Brackets with vibration dampening features for models mounted on house
- Exterior units must be mounted above the level of snow drifts typically experienced at the location of the installation
- Exterior unit to be mounted on wood framed wall
- Home construction assumed to be wood frame with clapboard or shingle siding

* It is assumed that contractors will be prepared to meet with homeowners individually to answer questions and size/locate the heat pumps appropriately before the homeowners commit to purchase. It is also understood that units from other manufacturers, or with greater heating capacity, multiple heads or different design type (floor or ceiling units for example) may be purchased for an adjusted price in lieu of the units listed below.
How we put customers together with their contractor of choice:

This email is blind copied to the 32 Island folks who have expressed interest in joining a heat pump purchase group similar to those we had over the last two years. I’m glad that a good number of you is considering these innovative heating and cooling devices.

The process we will use this year is simpler. It still allows for choice of contractor and provides discounts for those who sign contracts in a timely fashion. The two contractors involved are Peaks Island Fuel and Goggin Energy. These two businesses have done the lion's share of heat pump installations on the island, and I believe their customers have been happy with their work. Here's how it will work:

- **A Request for Proposals has been emailed to both contractors (see attached).** The RFP requests prices on three power levels of mini-split heat pumps (one outside matched to one inside unit). The contractors’ proposals will be forwarded to you in early February, and a meeting will be held on a following weekend (obviously not during the Super Bowl!).

- **This meeting will be at the Community Room on a weekend afternoon,** and will be an opportunity to ask questions about heat pumps, speak with Islanders who already own them, and meet the contractors involved, should they plan to attend.

- **After the meeting, group members decide individually whether to proceed with a contractor visit,** and if so, which contractor they wish to work with. I then send each contractor a list of prospective customers. From here on in, the group no longer functions, and each customer works directly with his/her chosen contractor. **Group members agree to have only one of the two participating contractors visit their homes.**

- **The chosen contractor scopes out the home for the desired work and sends the customer a proposal / contract.** Every heat pump installation is different. Sometimes the home’s electrical service has to be upgraded. Sometimes a rain cover is required for the outside unit because it is installed under a roof that sheds water on it. Sometimes there are other challenges. For these reasons, there may be costs over and above the price quoted on the RFP for a particular unit.

- **Group members who sign a contract within one week of receiving it get the price quoted on their contractor's RFP (plus the cost of any add-ons) and proceed with their purchase.** This is in addition to the $500 rebate available from Efficiency Maine.
How the meeting with prospective customers and contractors was divided up:

Here is the meeting agenda:

1:00 Why heat pumps?

1:15 Islanders owning heat pumps answer questions

1:25 Heat pump contractors answer questions

1:40 Time to speak individually with contractors

1:50 Add your name to one of the lists on the "contractor selection clipboard"

2:00 Adjourn
### A portion of the spreadsheet emailed prospective customers comparing what the contractors provided for their price

<table>
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<tr>
<th>Item</th>
<th>Goggin Energy</th>
<th>Peaks Island Fuel</th>
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<tr>
<td>Fujitsu 9RLS3</td>
<td>$3,159</td>
<td>$2,800</td>
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<tr>
<td>Fujitsu 12RLS3</td>
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<tr>
<td>Fujitsu 15 RLS3</td>
<td>$3,449</td>
<td>$3,350</td>
</tr>
</tbody>
</table>

(above prices include stainless steel rain cap, discounted at outdoor unit)

- Mitsubishi PH01NA | $3,399 |
- Mitsubishi PH012NA | $3,049 |
- Mitsubishi PH015NA | $3,995 |

**Extras:**
- Ground mounted stand & pad (instead of wall bracket): $200
- Rain cap: $160 if installed with new heat pump
- GFI outlet (if one is not currently within 25' of outdoor unit): $100
- Condensate pump: $200 if installed with a new heat pump

(Extras above are discounted prices which are higher on the mainland.)

**Fujitsu:**
- Low Temperature "H" model outdoor unit $225, (rated to -15, qualifies for rebate)
- Wired wall thermostat: $250

**Mitsubishi:**
- Wireless wall thermostat: $280
- Wired wall thermostat: $250 + Installation (job specific)

(Both brands offer a solution for controlling the heat pump remotely via smart phone or tablet. Inquire for details.

**What is NOT included:**
- New electrical entrance, other addl electrical &/or carpentry work to be priced by
- Labor rate for same: the job

**Warranty Information:**
- 1 year on labor
- 10 years labor 100% guaranteed

**Fujitsu Warranty:**
- 12 years for compressor, 12 years for parts
- 7 years for compressor, 5 years for additional parts

**Mitsubishi Warranty:**
- 10 years for compressor, 10 years for parts

**Maintenance & Repair:**
- We offer a 24 hour answering service that can always reach us in the event of an emergency. We are fully equipped and qualified to perform all maintenance and repairs. We charge our customers $65/hr. plus parts for service beyond the 1-year warranty period, which is a discounted rate over the $85/hr that we charge to non-Goggin Energy installation customers. In addition, we offer an annual maintenance plan to keep your heat pumps in good working order. We are located in the Old Port in downtown Portland and just a few minutes from the Casco Bay Ferry.

- Peaks Island Fuel is able to provide prompt emergency service for all of our heating customers as we are located on island and provide 24 hour emergency service. Peaks Island Fuel has a standard labor rate (non-emergency) of $106

**Fully insured?** yes

**Certifications & licenses current?** yes

- Our master technician carries a Master Oil Burner License and a Universal EPA Certified License, so that it is not necessary to subcontract any labor.
Installation!

Buy and save!

PEAT
The Peaks Environmental Action Team announces its

Green in ’15 time-limited bulk purchase of 60-watt-equivalent low priced LED light bulbs

available in bright or soft white,
priced lower than what you would pay at the store,
and delivered for pickup right here on Peaks*

Don’t delay - your order and payment must be received by Jan. 24th.
(order forms emailed to Island list serves,
posted on the bulletin board at the Community Center
and available at Duffy’s Island Hardware)

*Thank you, Fred Rainbow of Duffy’s Island Hardware!

Questions?
Sam Saltonstall
207-888-0822 (home)
We feel that our success with heat pumps was due in large part to the way we intensively “bundled” these energy efficiency opportunities over a period of a couple of years. And, we were fortunate to have email contact with almost everyone on the island, probably the biggest thing that helped us succeed.
Where I mean to take you

A. Evolution and Origins
B. Initial strategies
C. Initial results
D. Current efforts
E. Lessons learned
Evolution and Origins

A. We began as a Solarize Program in 2012
   ❖ We received invaluable coaching, training and resources from Solarize Madison, the first in NY.
   ❖ We were the second and first large Solarize program in NY.
   ❖ The 1st year only included three townships and solarized 110 homes.
     The second year we went county-wide and solarized 360 homes.

B. We have enjoyed good funding throughout.
   ❖ During both Solarize programs and the first 2 ½ yrs of HeatSmart funding was primarily through grants from the Park Foundation and a few individual donors. We had municipal fiscal sponsors.
   ❖ We transitioned to funding from NYSERDA in the middle of our third campaign and it is ongoing for two more campaigns, one just started.
What was so special about HeatSmart Tompkins?

A. We think we were the first group in the country to create an integrated program including insulation and air sealing along with multiple options for heat pumps in a community program. This gave enrollees comprehensive home heating assessments.

B. We served as a guidepost for several programs to follow.

C. We still enjoy the position of being the only HeatSmart program with multiple years of experience to draw from.
The first strategy was to mimic Solarize as much as possible. We assumed some level of pent-up demand existed and organized our work around removing the barriers to individual action.

1) Lowering the cost through volume sales
2) Providing accessible information at public meetings
3) Provide home tours and other community events to share knowledge
4) Generating confidence in a path forward
   a. Build knowledge base and comfort with technology
   b. Best Practices
   c. Vetted installers from competitive application process
   d. Easy pathway requiring a minimum # of choices by participants
   e. At Enrollment participants chose just one installer to work with
5) Present program as a limited-term option to spur immediate action
Participation in HeatSmart Tompkins across 3 years

- **Year 1 participants**
  - Wanted a Solarize-type experience.
  - **1)** Vetted installers
  - **2)** Only wanted one bid

- **Year 2 participants**
  - Were restricted to 1 bid at enrollment. Only a few asked for a 2nd
  - **Feedback survey indicated many desired more assessments.**

- **Year 3 participants**
  - 66% signed-up for both installers.
  - Of the dozen I talked to all also had at least 1 outside bid and most had 2.

A) Shopping Approaches changed!

B) Was there evidence of market stimulation not represented in the enrollment numbers?

This year’s participating installers had, between them, an additional 42 jobs from their own leads.

Both installers said most of these people had been motivated in part by HeatSmart activities.

Anecdotal evidence says many other local installers and builders similarly benefited.

**Indirect market stimulation is several-fold greater than direct enrollment numbers.**
How well did our Solarize model work?

We assumed some level of pent-up demand existed and organize our work around removing the barriers to individual action.

1) Lowering the cost through volume sales
2) Providing accessible information at public meetings
3) Provide home tours and other community events to share knowledge
4) Generating confidence in a path forward
   a. Build knowledge base and comfort with technology
   b. Best Practices
   c. Vetted installers from competitive application process
   d. Easy pathway requiring a minimum # of choices by participants
   e. Allow only a single installer choice (i.e. just one bid)
5) Present program as a limited term option to spur immediate action
What is our revised HeatSmart model?

Pent-up demand is limited at current price points. Demand must be nurtured over a period of time. People are not all ready at once.

1) Provide cost transparency across multiple participating installers
2) Provide accessible information at public meetings
3) Provide home tours and other community events to share knowledge
4) Generating confidence in a path forward
   a. Build knowledge base and comfort with technology
   b. Best Practices
   c. More vetted installers for more choices
   d. Support evaluation of choices participants need to make
   e. Allow multiple bids within program
5) Run enrollment for most of the year to be there when we are needed
Broaden the Vision

A. Work at utilizing individual networks
   House parties- host invites

B. Low Price is not what we bring most effectively.
   1) Our knowledge of ‘market price’ is limited.
   2) Participating installers must be tolerant of reporting issues that generate overhead.
   3) We bring reliability and transparency

C. Explore new public awareness methods such as public awards for HeatSmart businesses.
A. Pent-up demand is limited at current acceptance and price points.
B. People are not all ready at once. Be there when they need you!
C. Companies that respond to community RFPs tend to have similar profiles
D. Don’t run a ‘Stealth Program’!
   1) Grassroots energy networks are invaluable at first but limited in scope.
   2) There is initial pent-up demand only in a very limited group of the environmentally conscious. Awareness may stay in that limited group.
   3) Reaching the broader public may require extensive advertising. In our 5th campaign we have the resources to advertise on public busses, movie theaters, billboards, radio, newspapers and more. We are testing it all!
E. Statewide programs avoid having every team reinventing the wheel. They need to provide resources but leave flexibility for communities.
Acknowledgements

Key HeatSmart Volunteers

Current Board members
- Brian Eden
- Martin Hatch
- Rick Darfler
- Charles Woodcock
- Gay Nicholson
- Tom Seaney
- Mark Witmer

Other Engaged Volunteers
- Mary Alyce Kobler
- Gerrie Wiley
- Judy Pierpont
- Social Ventures
- Sara Hess

Staff
- HeatSmart Program Director: Jonathan Comstock
- Lansing HeatSmart Coordinator: Lisa Marshall
- Summer Interns: Leigh Miller
- Communications Consultant: Kitty Gifford

Many additional Volunteers who help our programs succeed!
The Park Foundation, NYSERDA and all our Individual Sponsors
from: HeatSmart Tompkins

THANKS FOR LISTENING!
Clean Heating and Cooling Communities

CESA Webinar
August 5th, 2019
Rachel Genzer
Clean Heating & Cooling Benefits

Heating and cooling is responsible for about 1/3 of GHG emissions

- Role of CH&C in reducing GHG emissions 40% by 2030
- CH&C can also provide other benefits including: bill savings, improved comfort, electricity grid benefits

Estimated 2014 NYS GHG Emissions from Fuel Combustion

- Transportation: 41%
- Residential & Commercial HVAC: 32%
- Residential Natural Gas: 12%
- Industrial: 9%
- Residential and Commercial non-HVAC: 18%
- Commercial Electricity: 3%
- Commercial Natural Gas: 8%
- Commercial Petroleum: 2%
- Residential Electricity: 1%

Total 2014 New York State GHG Emissions from Fuel Combustion: 181 MMtCO₂e
Renewable Heating & Cooling Policy Framework
(Options to Advance Industry Growth and Markets in New York)

• Published February 7, 2017

• Policy Framework’s Three Pillars
  – Reducing Technology Costs and Lowering Barriers
  – Renewable Heating & Cooling Mandates
  – Incentives
NYSERDA Clean Heating & Cooling Initiatives

- Executing approved Clean Energy Fund Investment Plan Initiatives
- Implemented GSHP Rebate & Biomass and ASHP incentive programs
- Engage with utilities to hand off incentive programs
- Launched “Geothermal Challenge” with NYPA for State, local government, healthcare and higher education facilities
- Launched Clean Heating & Cooling Communities Program
- Developing comprehensive workforce training & development programs
- Launched a co-branded marketing and awareness campaign with the Joint Utilities
- Continued support of the RTA
Why did NYSERDA Fund the CH&C CC Program?

• Community based approaches are critical to success in clean energy
• Soft cost reduction
• Increase public education and awareness
Learning from HeatSmart Tompkins

• Many discussions during the 2 years prior to our program launch
• Conducted focus groups with their participants
• Helped us understand critical success factors
Round 1 (PON 3723) CH&C Community Campaigns

- 8 community teams selected in Round 1 from across the state
  - Over 1.2 Million homes
  - 37% oil, propane, and electric heating

- Contracted with Cadmus to provide technical assistance to communities
- Contracted with Faraday to develop a customer targeting tool
- Contracted with KSV to develop marketing toolkit
- First campaigns began in Fall 2018
Round 2 (PON 3922) CH&C Community Campaigns

- 6 community teams selected in Round 2 from across the state
- Contracted with Cadmus to provide technical assistance to communities
- Available customer targeting tool
- Available marketing toolkit
- First campaigns beginning this fall
Program Changes

• Funding determined by number of campaigns
• Differentially funding downstate campaigns at a higher level
• Emphasizing campaigns in gas constrained areas
Program Overview

• $2.5 Million available; 2 to 5 year contracts
• Multiple awards of up to $300,000 for Category A – Campaigns
• Multiple awards of up to $50,000 for Category B – Workforce Development
• Multiple awards of up to $200,000 for Category C – LMI Household Participation
• Only proposals selected for Category A will be evaluated for Categories B and C
Solicitation Overview

• Community eligibility
  – City, town, borough or region in NYS
  – Outside of Long Island
  – At least 40,000 residents
Solicitation Overview

• Eligible proposers
  – Community Based Organizations
  – Municipality

• Other Team members recommended
  – Local financial institutions
  – Local higher education institution
  – Local utilities
Solicitation Overview

• Eligible technologies
  – Air Source Heat Pumps
  – Ground Source Heat pumps
  – Solar Heating and Cooling Technologies
  – High Efficiency, Low Emissions Biomass Heating
  – Heat Pump Water Heaters

• All campaigns must include building envelope and distribution system improvements
Solicitation Overview

• Technical Assistance Contractor will provide assistance with:
  – Installer selection
  – Campaign implementation
  – Reporting and Analysis of lessons learned
Category A – Community Campaigns

• Proposal requirements
  – Campaign approach
  – First year technology choice(s)
  – Campaign team
  – Campaign impact
  – Project plan and budget
Category A – Community Campaigns

• Evaluation criteria highlights
  – Community commitment
  – Gas constrained areas
  – Previous Solarize experience
  – Replication potential
  – Teaming
  – Other
Category B – Workforce Development

• Proposal Requirements
  – Need
  – Outcomes
  – Training partners
  – Training courses and certification
  – Budget
Category B – Workforce Development

- Evaluation Criteria Highlights
  - Clearly identified skill gaps
  - Plan
  - Trainer qualifications
  - Curriculum
  - Budget
Category C – LMI Household Participation

• Proposal requirements
  – Develop a plan to increase LMI household participation in community campaign
    • Characterize LMI households in the community
    • Identify a specific LMI target audience
    • Income eligibility
    • Ensure installation only in cases of clear economic benefit
Category C – LMI Household Participation

• Evaluation criteria highlights
  – Proposed plan
  – Likelihood of success
  – Leveraging federal, state and local resources
  – Improving energy affordability
  – Budget
# Campaign Results to Date

**As of 6/7/19**

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<td><strong>118</strong></td>
</tr>
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*Likely underestimate based on review of reporting data
**Not captured/updated by installer reporting
Challenges and Next Steps

• Reporting
  – Common platform (Airtable)
  – Better templates and definitions
  – Videos and other support for installers
How can I help?

• If you or someone you know is interested in participating, please reach out to chccc@nyserda.ny.gov

• You can find more information here
Thanks!
Rachel Genzer
rachel.genzer@nyserda.ny.gov
518-862-1090 x3081
Thank you for attending our webinar

Val Stori
CESA Project Director
val@cleanegroup.org

Find us online:
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Upcoming Webinar

New York’s Energy Storage Roadmap and Other Initiatives
Wednesday, August 21, 1-2pm ET

Read more and register at: www.cesa.org/webinars