



# Green Needham Solar Team

## Introductory webinar

February 20, 2013  
February 28, 2013





# Goals

## Solar Team Goal:

**Accelerate renewable solar energy in Needham**

## Webinar Goals:

- Introduce Solar PV projects and opportunities
- Discuss the role of the Solar Team
- Build the solar team



# Webinar Agenda

## Green Needham background

- What we've done and what we're doing
- How we work – projects and teams

## Solar Team Projects and Opportunities

- Solar PV at the RTS (+ other opportunities)
- Solar 101 Workshop (upcoming)
- Solarize Needham

## Next Steps

## Q&A and your ideas



# Background

- Green Needham Collaborative
  - Volunteer group founded in 2006
  - Bring together people and organizations to build a much more sustainable community through collaborative efforts on energy and the environment
  - 501(c)3 Green Needham Foundation- larger projects, fiscal agency
- How we work
  - Collaborative and inclusive by design
    - Municipal & schools involvement
    - Business outreach and engagement
    - People in individual and social contexts
    - Community organizations – clubs, service organizations, houses of worship, colleges
  - Champion and lead projects
  - Foster, support, connect and partner with other organizations
  - **We leverage relationships and networks**



# Green Needham Projects

## Needham Community Solar Challenge

- Community donations to NE Wind Fund → \$21,000 for municipal projects & 2kW Solar PV array for school building

## Home Energy Efficiency Improvement Seminars

- Education on overcoming barriers; partnered with domain experts

## Wind Power Feasibility Study

- Raised funds & developed collaborative project with schools; advocacy and support for zoning changes and DEP approval

## Outreach & Education

- Meetings, seminars, web site, blog, newsletters, cable TV

## With others

- School-based projects, Interfaith Environmental Group, Needham Community Farm, Needham Farmers Market



# Green Needham Projects

(continued)

## 10% Challenge – Needham 1,000

- Easy-to-use online tool to identify ways to save 10% on energy use
- Over 900 households (and selected businesses) participated
- Plaque presentation to Town of Needham October 2012

## Green Communities

- Pursuing Green Community status for Needham

## Community Summit on Energy and the Environment

- Community conversation on Needham in 2020 in the context of the Massachusetts 2020 Clean Energy & Climate Plan
- Over 150 residents, students, elected officials & staff participated

## NStar Community Energy Challenge

- Promoting home energy assessments & follow-up actions
- Significantly overachieved kWh reduction targets but much opportunity remains



# Current Projects & Teams

## Home Energy Savings Team

- Building on Community Energy Challenge

## Solar Team

- Accelerate Solar PV in Needham

## Living Green in Needham

- Resources for the community

## Communications

- Web, social media, e-mail, media, meetings, outreach, education



# Solar Team

## Organization & operation

### Builds on what we've learned:

- **In-person meetings every 4-8 weeks**
  - vital to build team, accelerate progress, keep ourselves accountable and generate new ideas
- **Ongoing electronic communication**
  - e-mail/listerv plus other tools available
- **Individuals/small groups for tasks**
  - volunteer/assign by interest & availability
- **Flexible but Accountable**
  - Take on something, even if it's small to start
  - Don't be afraid to stretch yourself – people will help if you ask
  - Choose something familiar or something new you want to learn
  - Stay connected - even when the rest of your life takes over
  - You can make it work – we've all been there

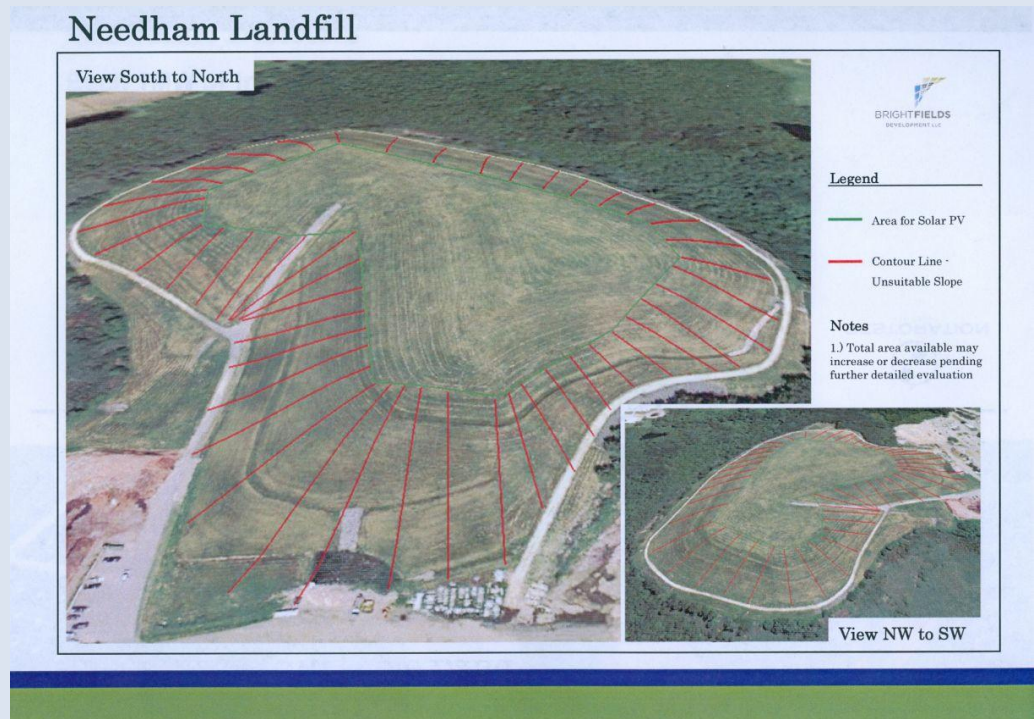




# Solar PV at the RTS

Needham's capped landfill isn't trash -- it's treasure!

- Save money
- Generate clean, renewable energy for Needham
- Promote energy independence
- Advance the Massachusetts clean tech economy
- Create local jobs





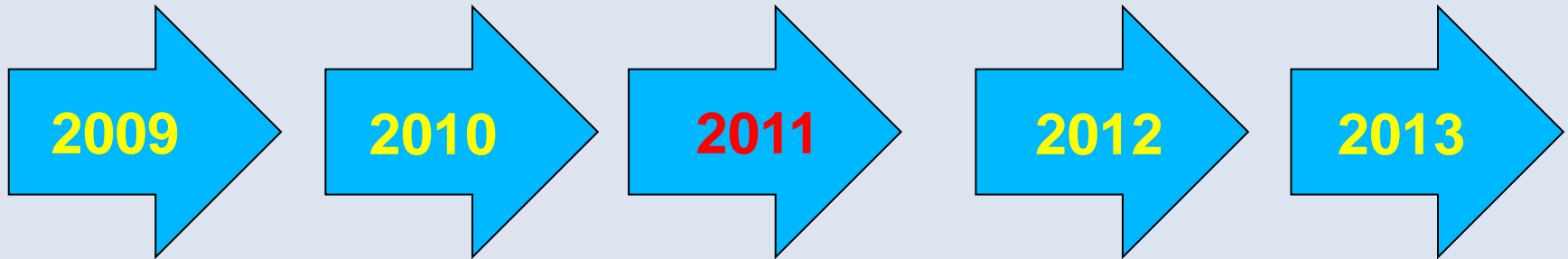
# RTS Solar Chronology



- Green Communities Act
- Patrick administration commitment - 400 MW solar
- Green Needham begins conversations on opportunity
- First walk-through with local contractor & Chip Laffey
  - Preliminary estimate of 1 MW



# RTS Solar Chronology



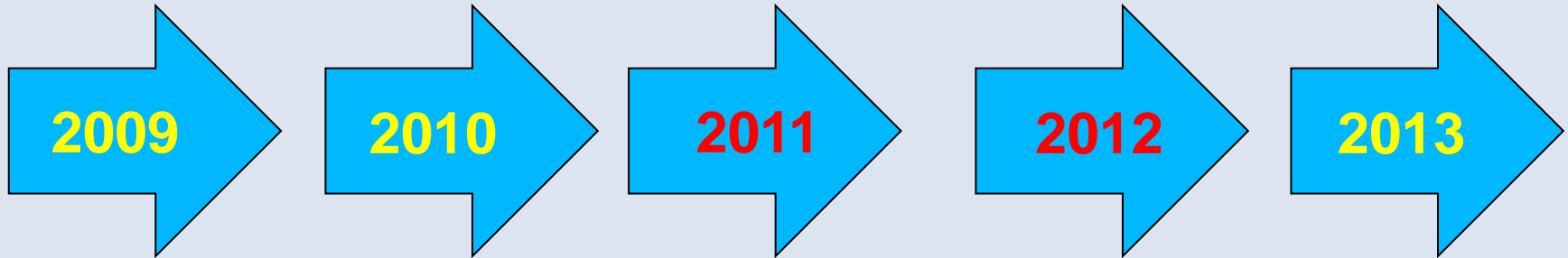
Green Needham engages with Brightfields

- Experience with landfills & brownfields
- Preliminary Feasibility study done
  - 2 MW potential
- Review with Jerry Wasserman

Background work on financing & ownership models, DEP/post-closure issues and utility interconnect



# RTS Solar Chronology



## Green Communities qualification effort

- Selectmen-appointed study committee recommends adoption
- Selectmen & Finance Committee endorse
- Town Meeting votes down Stretch Code
- Solar project on hold during this time

## Conversations with Planning Board on zoning

- Model solar by-law / overlay district
- Would meet Green Community requirement, but not needed (business district qualified)



# RTS Solar Chronology



Conversations with Kate Fitzpatrick & Jerry Wasserman

- Other communities' experience adds confidence
- Staff & community interest
- Develop study committee outlines

Green Needham announces RTS solar initiative

Selectmen appoint Solar Exploratory Committee



# RTS Solar Chronology



## Solar Exploratory Committee

- Research, analysis and recommendation to Selectmen
- Green Needham (Greis) shares results of work to date and resources available

## Community and Stakeholder outreach

## Research & analysis (in support of Committee)



# RTS Solar Chronology

## Path Forward



From recommendation to installation (outline)

- Selectmen and Town Manager decision to proceed
  - Decision on acquisition & financing model (PPA or municipal ownership), procurement option
- Consultation with other boards
- Community and Stakeholder outreach
- Zoning changes – Planning Board & Town Meeting
- DEP approval of post-closure re-use
- Issue RFP/Q, evaluate responses, negotiate with vendors
- Select vendor and negotiate contract
- Town Meeting approval (if land lease - PPA model)
- Construction and grid interconnection



# RTS Solar PV Solar Team

## Current (while SEC does its initial analysis)

- Follow and communicate Exploratory Committee progress
- Community & Stakeholder outreach and education
- Information gathering, research & analysis (in support of Committee)
- Building our online library of information & news

## Future

- Build community-wide support
- Publicize and communicate widely
- Offer domain knowledge and expertise
- Support with boards, committees and Town Meeting as needed

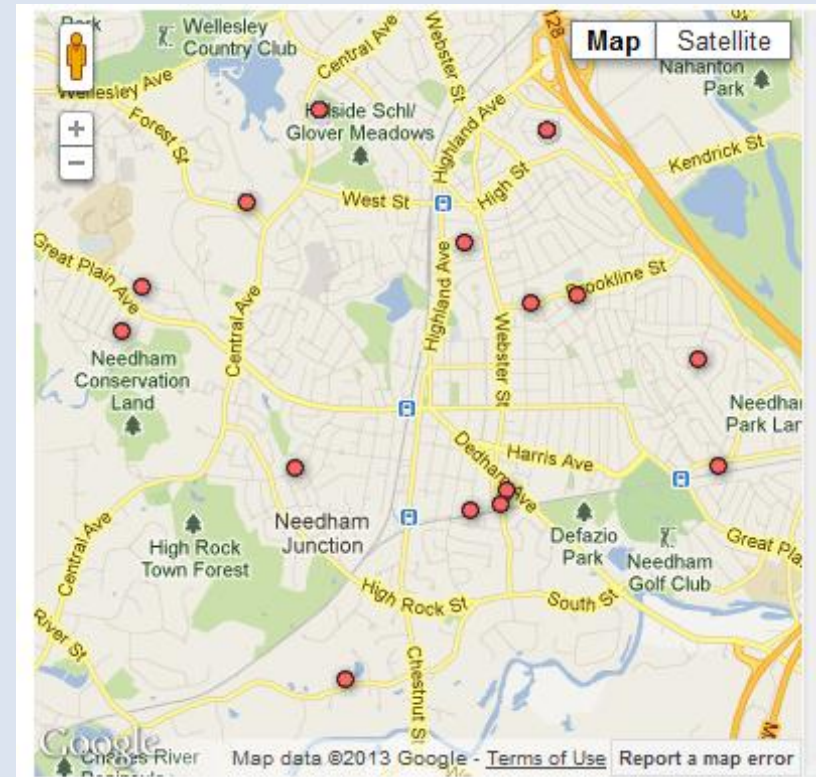




# Solar 101 Workshop

**March 20<sup>th</sup> at Broadmeadow School**

- Introduction and guide to residential solar energy for homeowners.
- Provide homeowners tools and confidence to evaluate solar PV
- Presented in collaboration with Needham Community Education





# Solar 101 Workshop Agenda

## Presentation by Nick Hill & Michael Greis

- Technology and terminology of solar PV (photovoltaic) and solar thermal systems
- Criteria homeowners should consider before proceeding
- Acquisition and financing options (lease/PPA versus purchase)
- Building code requirements & considerations (Building Inspector David Roche, if available)
- Questions homeowners should ask of installers
- Preview of Solarize Needham

Meet and Greet with neighbors and their installers



# Solar 101 Workshop

## Solar Team

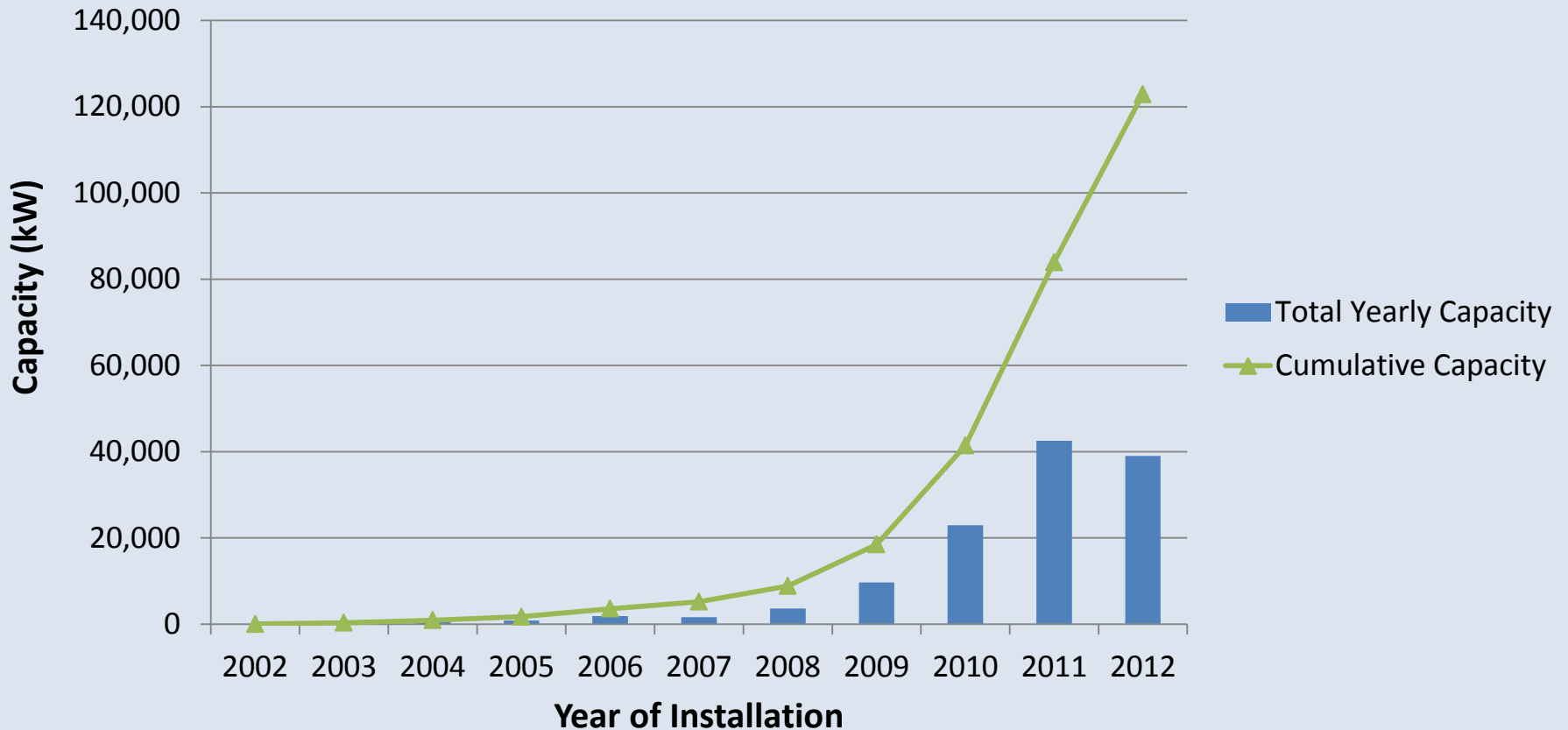
### Opportunities for the solar team

- Register and attend the workshop
- Promote the workshop to friends and neighbors
- Help with community-wide promotion
- Follow-up coordination with residents and installers participating in the “meet & greet” portion
- Develop a questionnaire for participants to gather information and interest in a Solarize Needham program
- Follow-up with “meet & greet” residents to assemble tips/lessons learned (before and after workshop)



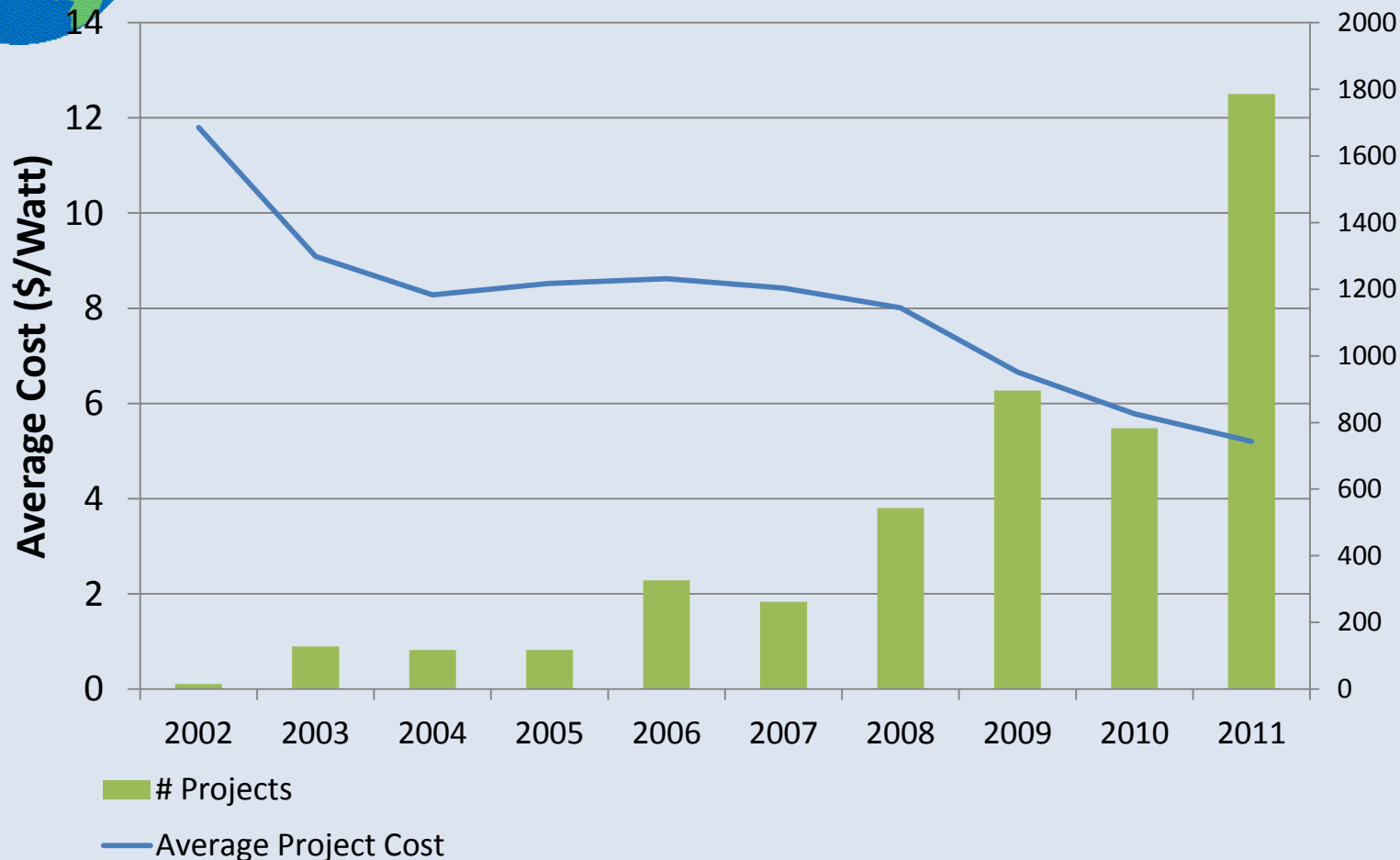
# Growth of Solar PV

## Yearly & Cumulative Solar PV Capacity (Through June 2012)





# Residential Project Trends





# Solarize Needham

**Solarize Massachusetts** is a hugely successful program piloted by the Massachusetts DoER to accelerate the adoption of residential solar PV.

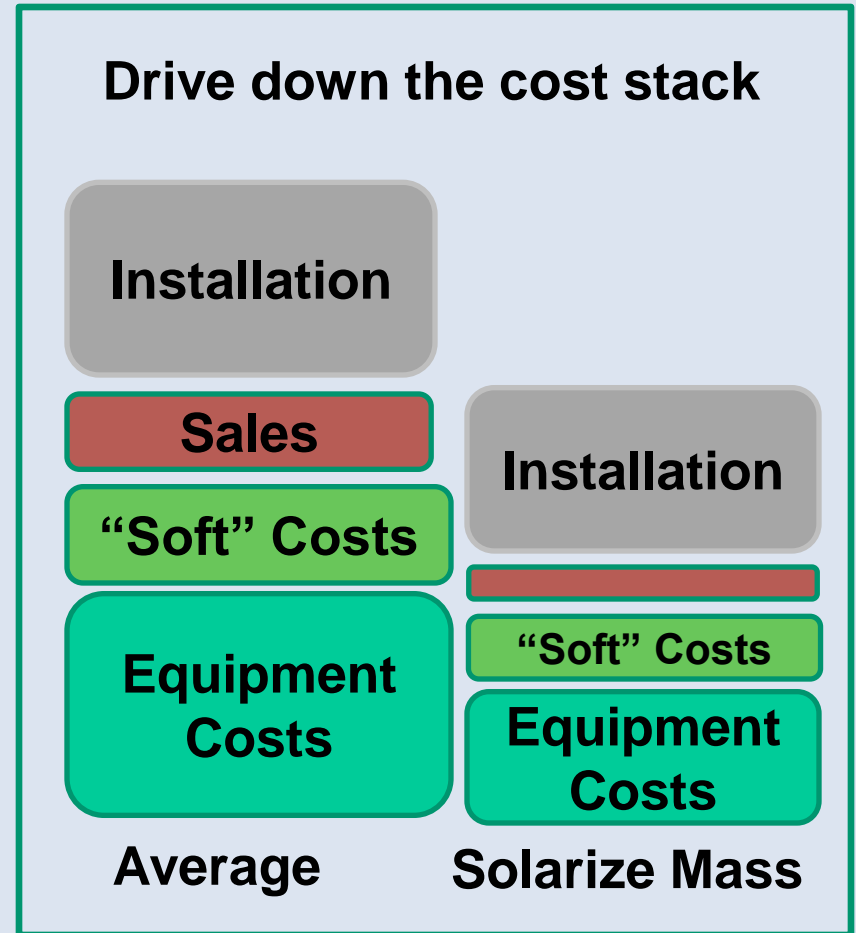


- 2011 - Initial pilot in 4 Green Communities
- 2012 – Follow-on programs in 17 Communities
- 2013 – Two rounds – February & September
  - Targeting September round for Needham



# Goals of Solarize Massachusetts

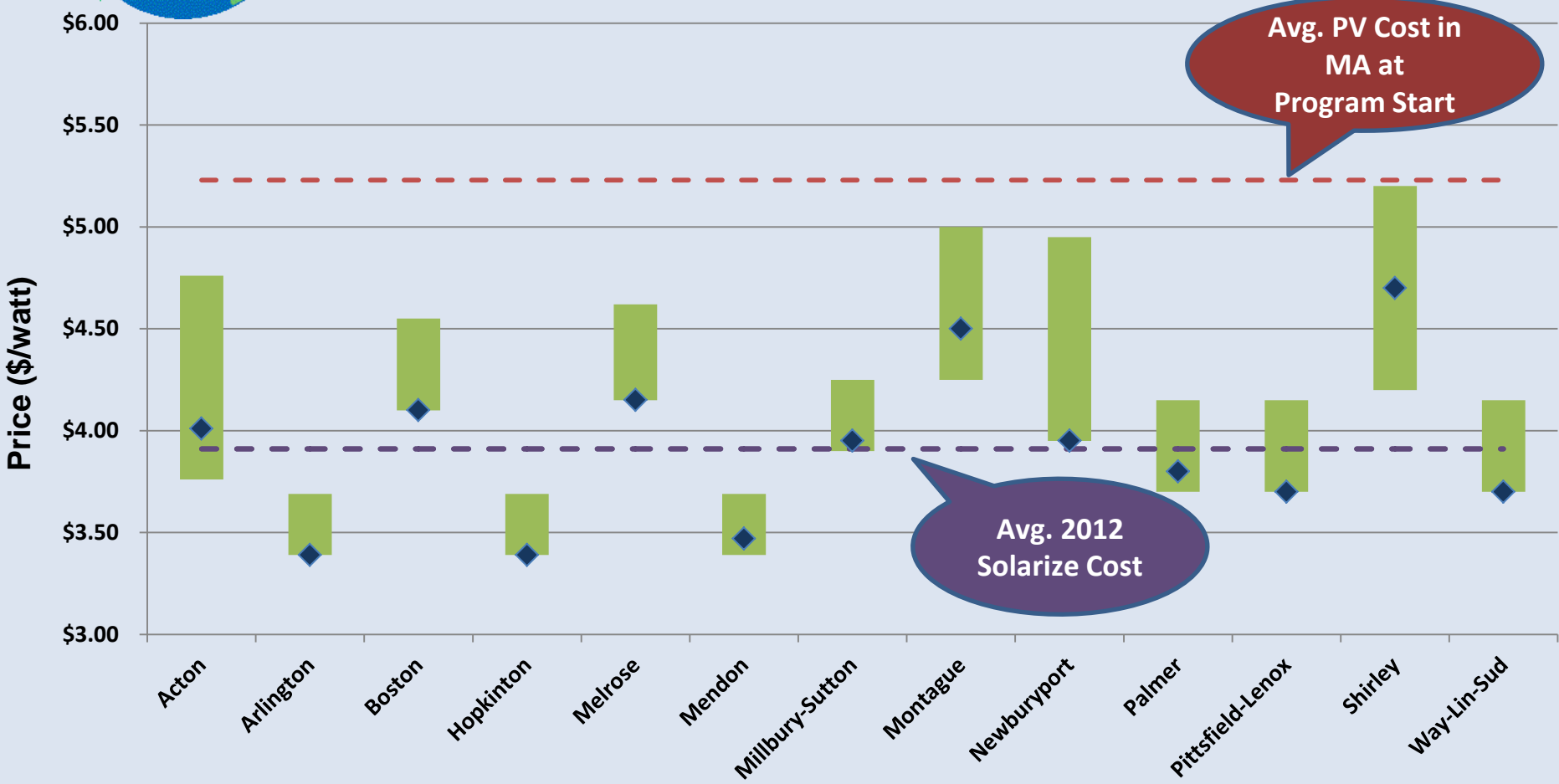
- Increase education through community outreach
- Introduce model to simplify process
- Reduce installation costs
- Reduce time to contract





# Solarize Mass Pricing

## Tier Pricing versus Average Price in Massachusetts



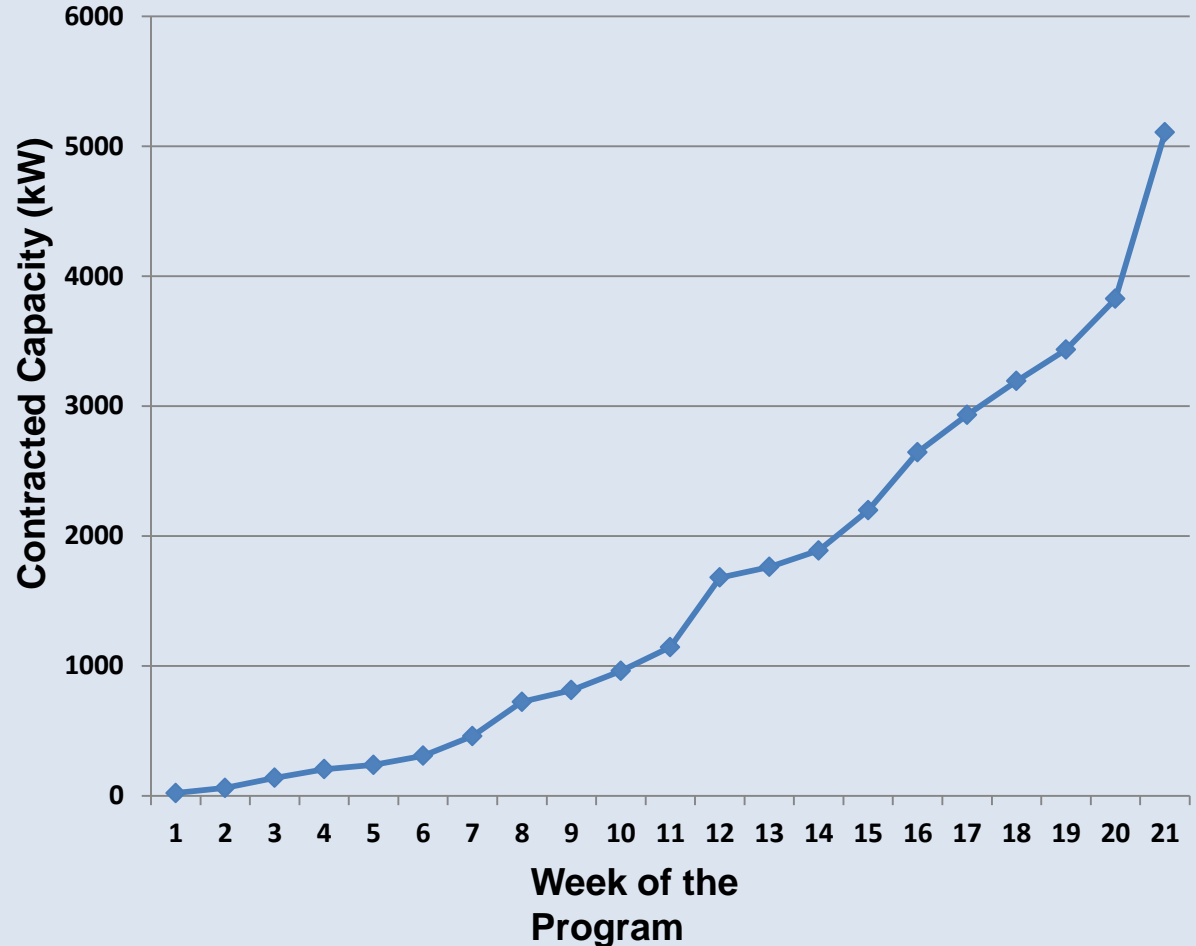




# Solarize 2012 Final Metrics

## Cumulative Contracted Capacity

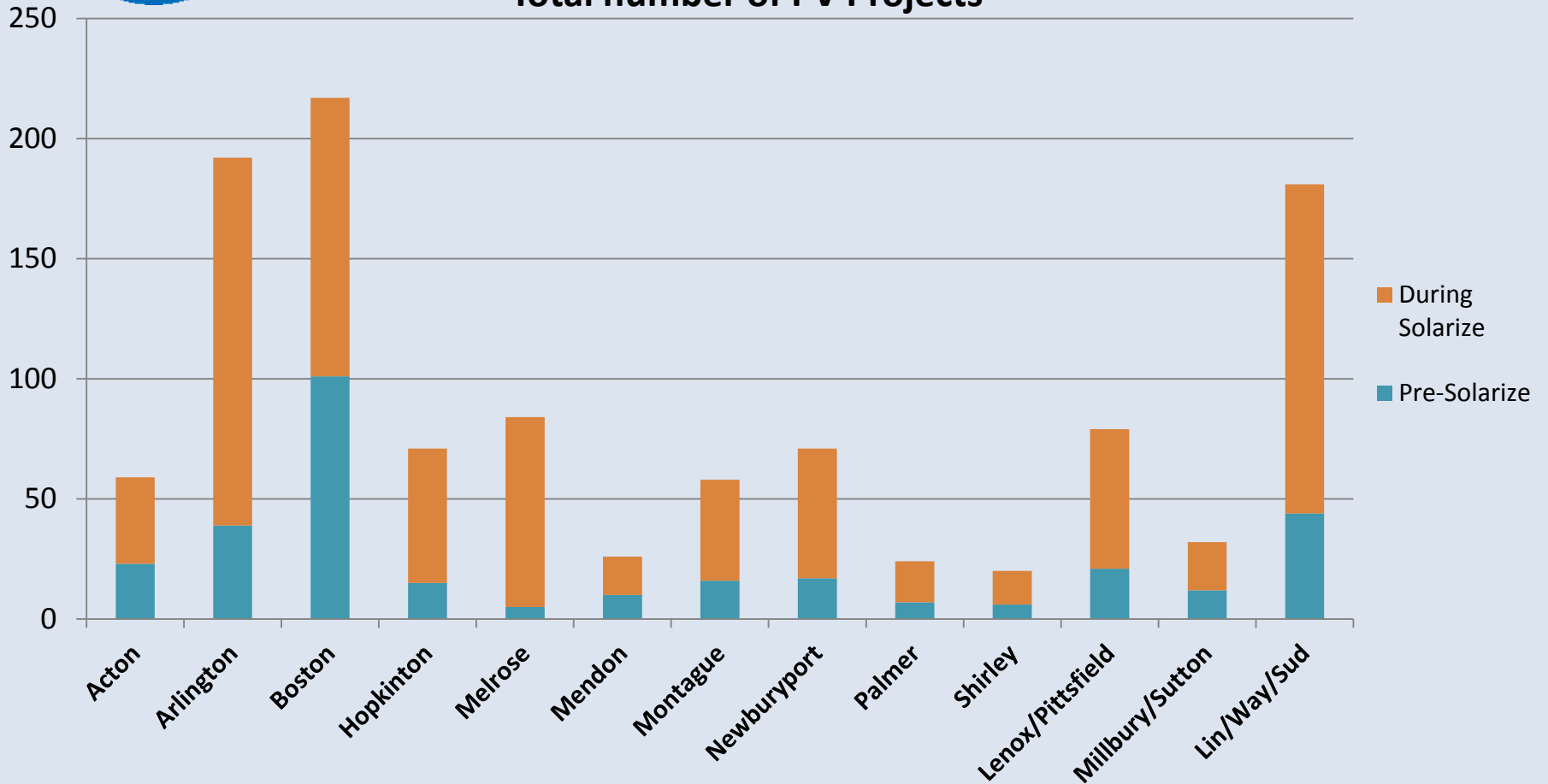
Total Number Of:	
Leads Generated	5,331
Contracts Signed	798
Contracted Capacity (kW)	5,105
Communities at Tier 5 Pricing	10





# In All Communities: Total number of Projects more than DOUBLED

## Total number of PV Projects





# How Solarize Works

## Municipality

- Issues RFP
- Assembles committee to review responses and select vendor

## Mass Clean Energy Center

- Vets participants (installers)
- Provides contractual structures, program oversight

## Community Organization

- Does community outreach and education through “solar coaches”

## Selected installer

- Provides volume-based tiered pricing
- Installs systems for homeowner



# Solarize Needham

## Solar Team Role

### Near-term

- Use Solar 101 for initial survey and outreach
- Start generating community interest – social media and direct
- Develop plans for solar coaches, outreach
- Learn from other communities' experience

### Early Summer – September

- Follow-up with Town Manager and Selectmen to secure Needham's participation in fall round
- Select and train solar coaches
- Test run community outreach
- Prepare for fall rollout

### Late Fall – early 2014

- Program rollout and homeowner signup



# Next Steps

## Join the team

- We'll add you to the listserv

## Solar 101

- Attend, recruit and/or help

## Choose one task or area to get started

- Follow up with one of us if you have questions or just want to talk through ideas

## Plan for a meeting after Solar 101 (end of March)



Questions?  
Ideas?

The webinar slides and much more  
information available at

[www.greenneedham.org](http://www.greenneedham.org)