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Integrated Climate Solutions: The "Solarize" Model for Engaging Communities and Empowering Businesses

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Integrated Climate Solutions: The "Solarize" Model for Engaging Communities and Empowering Businesses

Over the past five years, "Solarize" community campaigns in all six New England states have lowered up-front costs for solar energy, boosted local installer know-how, and engaged local residents.

The model, based on a program piloted on the West Coast in 2011, is simple: A local solar contractor and a community enter into a tiered pricing agreement. The more installations sold in the community, the lower the price for everyone. Over the course of a 15-week outreach campaign, the partner installer collaborates with community leaders, energy committees, renewable energy groups and volunteers to establish solar installation agreements with as many community members as possible in order to deploy the maximum amount of cost-effective solar in the community.

Solar contractors save by dramatically lowering their customer acquisition costs and receiving a high volume of contracts in a concentrated geographic area. Collaboration with town officials and energy committees also allows the installer to lighten bureaucratic and legal burdens associated with navigating permit and tax ordinances that may differ by town. These savings are all passed on to the customers who can purchase solar at up to a 20% discount on installation costs.

From 2011 to 2013, Solarize Massachusetts deployed nearly 16 megawatts of solar spread across 2,448 customers in 42 communities. Connecticut saw similar results across its 44 participating towns, reducing the average cost of (solar produced) electricity from $4.68 to $3.78 per watt. It was estimated that the tons of carbon dioxide avoided over the lifetime of the deployed solar in the Solarize CT campaign will equal up to 26,649 tons. "Besides building community and employing contracts, this is an impressively inexpensive way to reduce carbon dioxide emissions," said Nate Hausman during a CT Solarize Webinar.

HIGHLIGHTS

Outcomes

- Reduced solar installation price (up to 20%)
- Informed and engaged citizens
- Avoided greenhouse gas emissions
- Built Capacity/ Economic Development
- Identified and effectively engaged all key stakeholders

Limitations

- Need for coordinating organization
- Resource intensive: funding, organizing, time
- Finance options exclude those who could potentially benefit the most (lower socio-economic status)

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SOLARIZE IN VERMONT AND NEW HAMPSHIRE

In 2013, local nonprofit Vital Communities received support from the John Merck Fund and Smartpower to tackle the challenge of adapting the Solarize model to the communities of the Upper Valley (northern Vermont and New Hampshire)—an area that is less affluent and more rural than those where Solarize had previously seen success.

The critical first step was to forge deep partnerships with Local Energy Committees and other local leaders. Another important principle of Solarize Upper Valley was making partnerships that distributed capacity across community members interested in investing in solar, solar installers able to deploy solar in the community, and enough financial streams to finance the amount of projects. To ensure a level playing field with opportunities for all (installers, community members, loaners) to participate, it was critical to ensure complete transparency in Vital Communities' selection process.

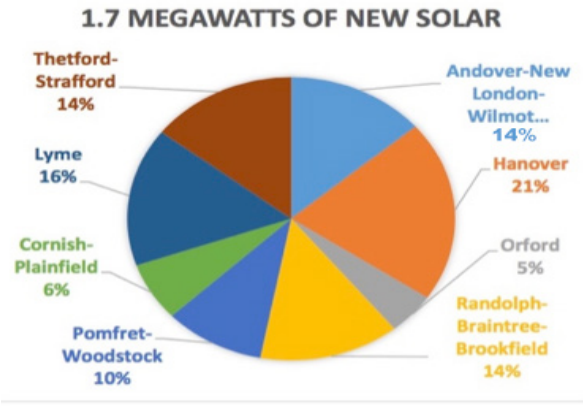
Sarah Simonds, Energy Program Manager for Vital Communities, comments about the transparency of the Solarize process and building even capacity across all stakeholders involved: "We try to spread the weight of Solarize evenly among the market so that we evenly build the capacity of the installers and do not leave any installers behind. We also don't want to leave any communities behind. A rising tide raises all ships. We address this issue by being rock solid about being transparent in our selection process. We find all of the installers that are hiding so that everyone has an equal opportunity."

We are doubling our region's solar installations in just two years… We've got people talking about solar in a very public way".

– Sarah Simonds, Energy Program Manager, Vital Communities

Vital Communities realized that installers were experts in installing solar, but not in financing projects. Most installers also did not have established partnerships with local lenders and did not know that local lenders often have "green loan" financing options and other loan options that could be applied to solar projects. Both solar installers and local lenders were losing out on opportunities to serve customers because of the disconnect between them. From there, Vital Communities compiled a list of banks in the area with potentially- applicable products, along with a basic outline of terms and contracts, and helped the installers approach the lenders. In the end, all of the financing for Solarize Upper Valley came from the private sector and the number of financing options available for this campaign grew as a result. For example, Mascoma Savings Bank created a discounted home equity loan specifically for Solarize participants, which they've since made available to all clients.

The first eight Solarize Upper Valley communities have deployed 1.7 megawatts for 301 homeowners, and the Solarize program has now gone through multiple rounds. From the 1.7 MW of solar deployed through the Solarize the Upper Valley campaign



SOLARIZE UPPER VALLEY ROUND TWO RESULTS:
Distribution of the 1.7 megawatts of contracted capacity in communities in the Upper Valley, by county.

1,487 metric tons of carbon dioxide emissions will be avoided; that equal about 313 cars taken off the road!

Building off of Vital Communities' success, the Southern NH Planning Commission started piloting the Solarize model in its communities in 2015. Tentative plans are now underway to enlist the regional planning commissions in other regions to scale the program statewide.

LESSONS LEARNED

Solarize increases the skills of solar installers and fosters important relationships between installers and capital providers to overcome the barrier of high upfront costs by developing mainstream financing options. This is one critical piece of the puzzle when it comes to scaling up deployment of solar energy. A vital component of this program is the education it provides to installers about financing options, which connects installers with local lenders who have attractive and affordable financial products. Solarize builds the potential of each municipality it partners with by equipping it with the tools and know-how to understand solar business options, financing, and local ordinances. Solarize also gives local businesses the tools to continue to expand clean energy development after the campaigns themselves have come to an end, expanding the reach of the solar market and changing the way residents perceive alternative energy sources—making them less "alternative" and more mainstream. Solarize campaigns have transformative impacts, but are discrete projects. From this perspective, they are ideal for philanthropic donors.

"The most significant piece is that we have taken the skeptics and the fence sitters and changed them into major public advocates for solar."

– Sarah Simonds, Energy Program Manager, Vital Communities

The Solarize model depends entirely on significant local engagement and partnership with Local Energy Committees or with other leaders engaged on energy and climate issues. It has also, traditionally, relied upon the resources and expertise of established state or regional nonprofit agencies to coordinate successful campaigns. However, not every region has such an organization. Now that the model has been extensively tested in communities across New England, Sarah Simonds, SmartPower, Southern NH Planning Commission, and the NH Sustainable Energy Association are developing a toolkit to empower any group of motivated volunteers with roots in their communities to carry out a Solarize campaign, without needing the support of a dedicated nonprofit or planning commission.

The Solarize model has some limitations. It mostly helps homeowners whose properties are well-suited to solar installations and who are likely to be deemed credit-worthy by traditional lenders. From this perspective, it doesn't reach those who could benefit from the rate reduction the most. That said, the program has demonstrated clear success in connecting eager buyers and sellers, spurring solar installations, and building community strength for supporting solar development in the long term.

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Integrated Climate Solutions Case Study Series

This briefing was researched and written by the Climate Solutions New England research team: **Henry Herndon**, Jennifer Andrews, Sarah Large, Cameron Wake, Catherine Ashcraft, Irene Queen, and Tom Kelly. This briefing is part of Climate Solutions New England's "Integrated Climate Solutions" project. The "Integrated Climate Solutions" project aims to promote leadership and innovation by highlighting initiatives that provide opportunities for enhanced civic participation and democratic governance, economic development, public health, and social justice, while tackling climate change mitigation and/or adaptation. Full case studies on each of the solutions featured are in development, and will be available at climatesolutionsne.org.

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