



Solarize Frederick County

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**Frederick County Office of
Sustainability and Environmental
Resources**





County Snapshot

- **Population:**
241,411 (65,000+ in City of Frederick)
- **Owner Occupied dwellings:**
~64,000+
- **Median Household Income:**
~\$83,706
- **Politics:**
Conservative Republican Board of County Commissioners
- **County Renewable Incentives:**
None
- **Liability Concerns**





The Green Homes Challenge

Special Initiatives

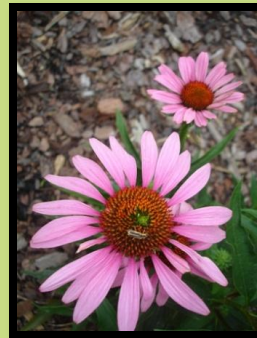
Power Saver

- *SummerServe Energy Action House Calls*
- *Power Saver Retrofits*
 - ~150 homes retrofitted
- *Refrigerator Exchange*
 - ~ 234 Households



Green Leader

- *Neighborhood Green*
 - ~ 51 acres of native trees and shrubs planted
- *Expanded Neighborhood Green*
 - ~ 150 households



Renewable Star

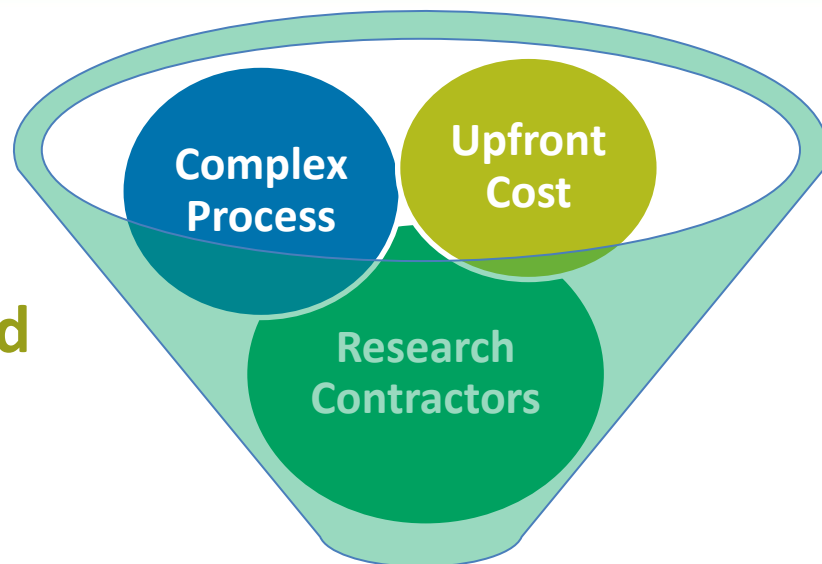
- *Solarize Frederick County*





Solarize Frederick County

Addresses all this 



INERTIA



- **Goal: Increase Installations**
 - Educate Homeowners
 - Simplify Process by Vetting and Selecting Installers
 - Reduce Costs: 2 Ways to Save
 - Motivate
 - Limited Enrollment Period
 - Target Communities
 - Reduce Time to Contract and Install

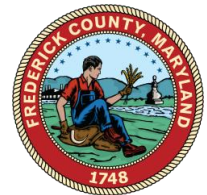


Solarize Implementation

- Followed the Solarize Guidebook
 - Lots of input from other Solarize coordinators
- Both Solar PV & Solar Thermal (PV Leasing too)
- Available to 2 Target Communities and countywide residents
- Volume Purchase Discounts
- \$2,000 - \$2,500 Incentive Grants
 - Incentivized for Energy Efficiency
- Education: Solarize 101. Solarize 201 with Contractors
- Enrollment Period: ~4 months:
April 26 – Aug. 30, 2013



www.SolarizeFrederick.org





Solarize Incentive Grants

- **Granted upon Contract**
- **First Come-First Served**
- **Processed as discounts on Homeowner Contract**
- **Contractor Reimbursed, not Homeowner**
- **Grantees required to provide photos and testimonials, and to share Solarize information with 3 households**

Solar PV (30)

\$2,500 for Certified Power Savers

\$2,000 for Others

Solar Thermal (30)

\$1,000 for Certified Power Savers

\$750 for Others

Changed to \$2,000 to promote uptake for solar thermal



Funding & Support

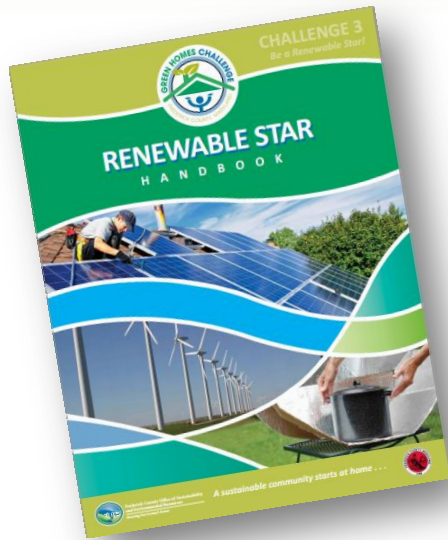


- **EPA Climate Showcase Communities Grant (2011 – 2014)**
 - Overall Green Homes Challenge
 - Solarize Coordination
 - Solarize Incentive Grants (\$129,000)
- **No local County funds used to support program**
- **In-kind support from Solarize Targeted Communities and contractors**





Benefits Of Affiliation with GHC



- **Renewable Star Handbook**
- **Funding for coordination and incentives**
- **Existing pool of registered participants for Solarize promotion**
- **Solarize brought new people into the GHC**
- **Solarize Workshops and incentivizing Solarize incentives motivated some participants to address energy efficiency first through our Power Saver Challenge**





Target Communities – Why 2?

Myersville

- Mix of new and old neighborhoods
- Enthusiastic mayor
- 3 Green Ambassadors
- Exp. With RFPs and procurement process
- Staff support for RFP
- Willing to take lead on contractor selection

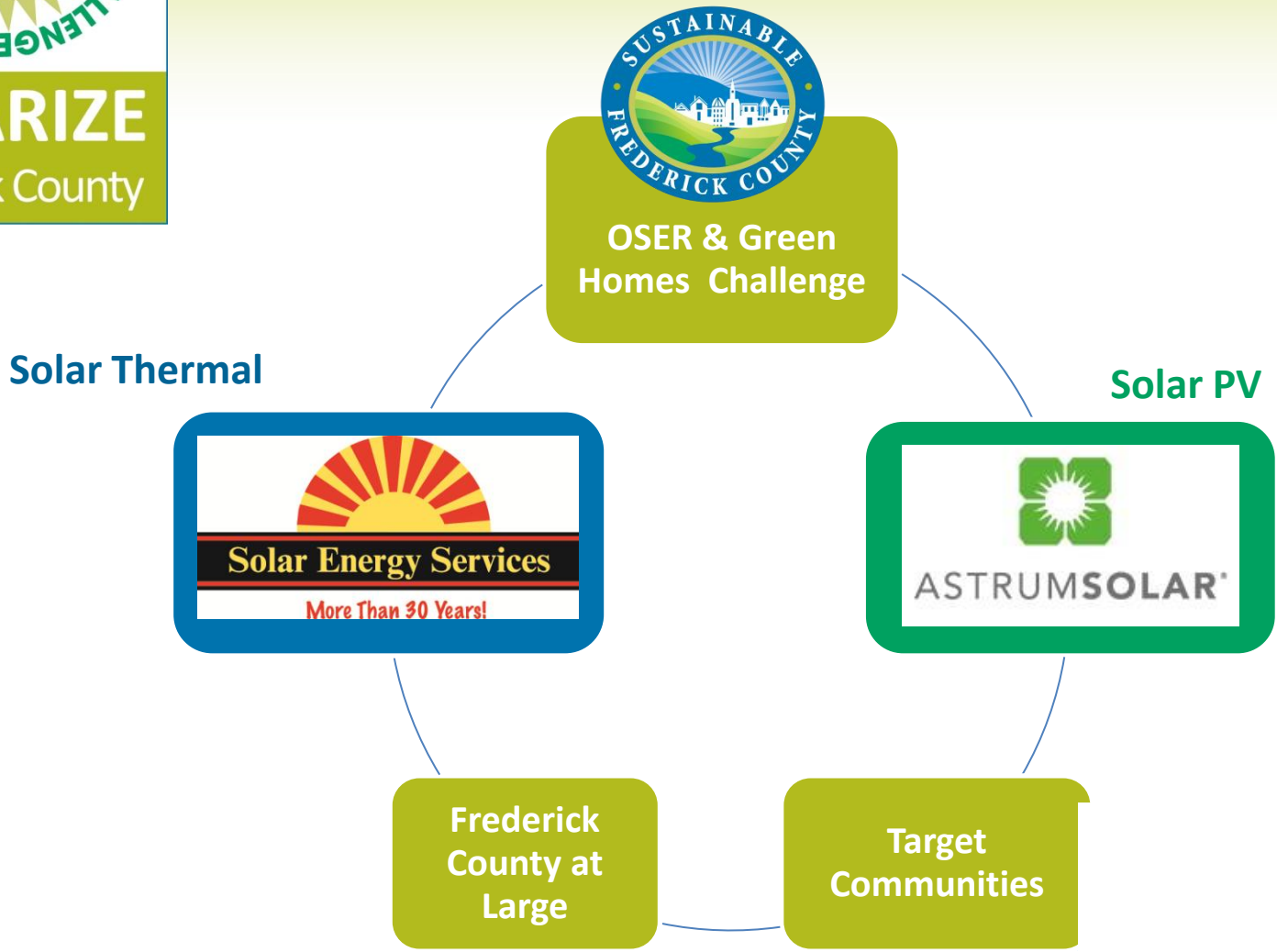
Villages of Urbana

- 1600+ new homes
- Enthusiastic property managers
- Built-in communications network
- Diverse, tech-savvy, professional residents
- VOU Board wary of RFP process and responsibility

Solarize Committee for contractor selection made up of stakeholders from both communities and County coordinator, who led RFP and Partner Agreement development



Solarize Partners





Volume Discounts

Solar Electric (PV) Installer



ASTRUMSOLAR®

- Average Astrum retail price per watt for a 6.2 kW system in 2013 is \$4.52
- Discount ranges from ~15% for Tier 1 to ~24% for Tier 5

	Tier 1 1-25 kW	Tier 2 25-50 kW	Tier 3 50-100 kW	Tier 4 150-250 kW	Tier 5 >250 kW
Purchase (\$/Watt)	\$3.85	\$3.80	\$3.65	\$3.55	\$3.45
Lease (\$/kWh)	\$0.115	\$0.110	\$0.105	\$0.100	\$0.095

Reached Tier 5: \$3.45/W or 24% discount for all





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Volume Discounts



Solar Energy Services

Celebrating over 30yrs

**Solar Thermal
Installer**

Up to nearly 20%

**(More complicated pricing
due to sizing)**

Solarize Frederick County - Solar Thermal Pricing

	System Size (people served)	Retail Cost	Solarize Cost	% Discount from Retail
Tier 1: Up to 10 Systems of Any Size	1-2 person	\$8,725	\$7,725	11.5%
	2-3 person	\$9,446	\$8,446	10.6%
	3-4 person	\$9,625	\$8,625	10.4%
	5+ person	\$10,064	\$9,064	9.9%
Tier 2: 11-29 Systems of Any Size	1-2 person	\$8,725	\$7,416	15.0%
	2-3 person	\$9,446	\$8,137	13.9%
	3-4 person	\$9,625	\$8,343	13.3%
	5+ person	\$10,064	\$8,755	13.0%
Tier 3: 30+ Systems of Any Size	1-2 person	\$8,725	\$7,004	19.7%
	2-3 person	\$9,446	\$7,725	18.2%
	3-4 person	\$9,625	\$8,034	16.5%
	5+ person	\$10,064	\$8,343	17.1%

**Reached
Tier 2,
~14%**





Outreach & Education

Myersville

- 1 Solarize 101 (21)
- 2 Solarize 201 (36)
- Myersville Night Out
- Postcard mailing to all residents; Fliers
- 2 Town banners

Villages of Urbana

- 3 Solarize 101 (75)
- 1 Solarize 201 (29)
- Urbana Music Festival
- Postcards with Pool Pass distribution
- 2 Installation Demos



Community at Large

- Website – simple pre-launch Interest Form
- 3 Solarize 101 (70); 1 Solarize 201 (37)
- Fliers, Stick-on door hangers in promising communities
- Articles in Frederick News-Post, community papers, OSER E-newsletter



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Engagement Results

- 498 people filled out the Interest Form
- 321 signed up for Solar PV Assessment (64%)
- 186 signed up for Solar Thermal Assessment (37%)
- 308 attended Solarize Workshops (62%)



Installation Results!

- **66 solar PV installs** (21.5% of assessments)
Collective kilowatts: **511.6 kW**
- **12 solar thermal installs** (6.5% of assessments) Collective minimum equivalent kilowatts: **30.6 kW**
- Volume Discounts, Grants, Tax Credits, SREC sales, and Electricity Cost Savings **Reduced 1st Year Costs by as much as 54 - 88%**
- Collectively will produce ~685,696 kWh of electricity equivalents per year and **reduce GHG emissions by ~484 MteCO₂-e annually.**



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Installation Distribution

Community at large
46 PV Systems (70%)

11 Solar Thermal

Villages of Urbana

20 PV Systems (30%)

6 more after from DIY
Solarize

Myersville

3 PV

1 ST

**Did we need
our Target
Communities?**



What Worked!

- **Press Releases**

- From Target Community solicitation through launch and wrap-up

- **Myersville Leading RFP and Contractor Selection**

- **Incentive Grants**

- More important to participants than volume discounts

- **Solarize Workshops**

- Experienced volunteer Green Ambassadors speaking from personal experience



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What Didn't...

- **Mixing Solar Thermal & PV**
 - More challenging customer intake
 - Contractor-Contractor Communication
 - Unequal Customer Service Quality
- **Myersville Participation**
 - Only 3 PV, 1 Thermal
- **Postcards & Stick-On Door Hangers**
- **2 Target Communities made for a lot more work!**





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What Didn't...

- **Solar Thermal Uptake**

- **Not universally suitable**
 - **Depends on water heater energy source**
 - **Better for families of 4 or more (except for those with boilers)**
- **Not suitable in VOU due to prevalence of natural gas water heaters which have very low operating costs**
- **Competition for roof space**
 - **PV Disincentive for smaller arrays**



Solarize Frederick County Case Study

by

ICLEI/Solar Outreach Partnership

Powered by
SunShot
U.S. Department of Energy

I.C.L.E.I
Local
Governments
for Sustainability

Solar Group Purchasing

Frederick County, MD

Eliminating Barriers to Increase Solar Capacity

ICLEI Case Studies

July 2014

<http://solaroutreach.org/resource/solarize-frederick-county-md/#.VGYS5PnF8fi>



Thank You! Contact Me....



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and Environmental Resources**

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Available... anything we have!

- **Solarize Workshop PowerPoint Presentations**
- **RFPs**
- **Partner Agreements**
- **Marketing materials**
- **Sample Press Releases**

