



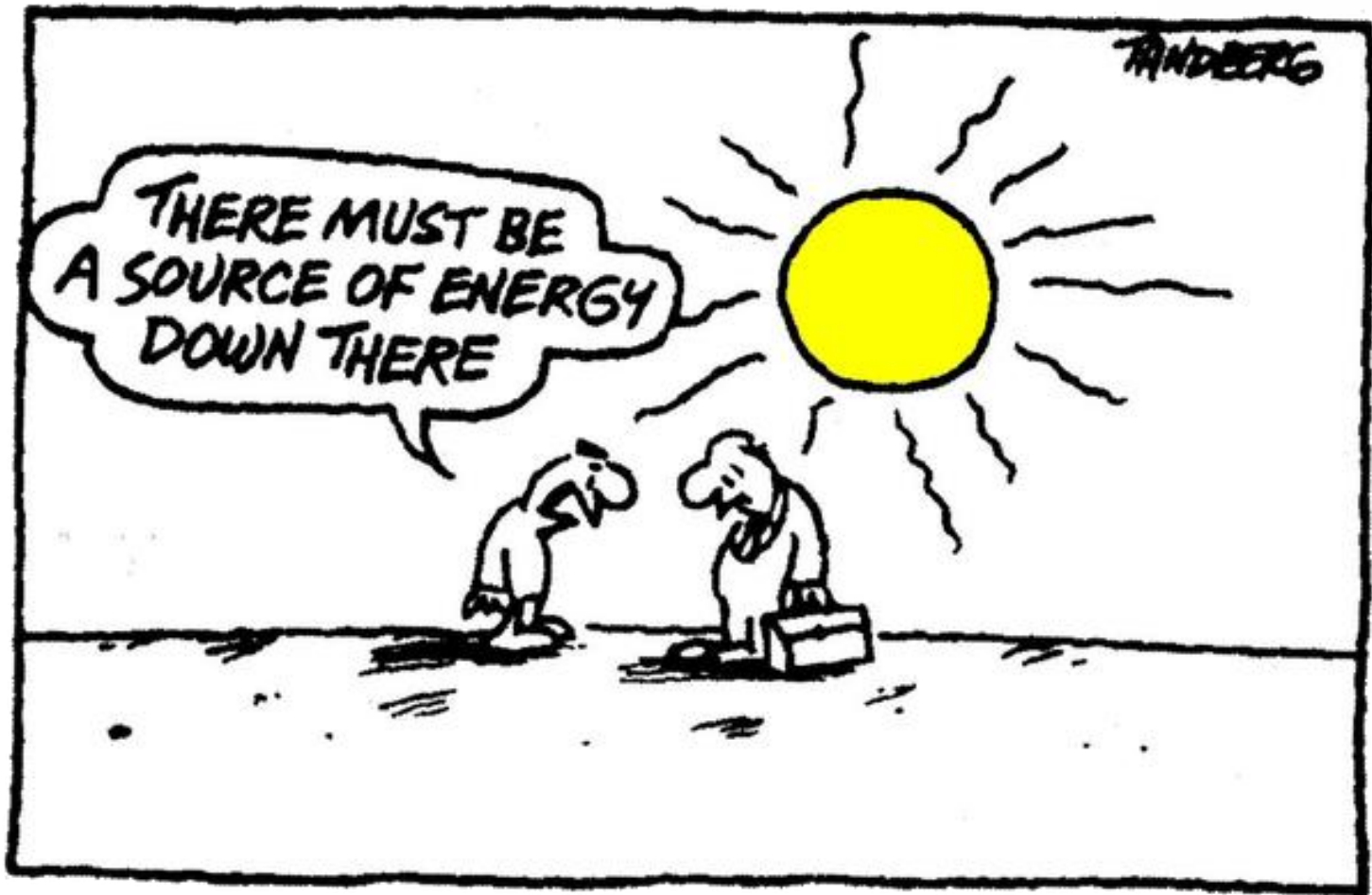
Solarize

Cedar Rapids & Linn County
a solar group buy

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What is a Solar Group Buy?

- An evidence based practice for local homeowners, organized by government and non-profit partners, to work together to purchase and install solar power as a community.
 - “Networked Urban Climate Governance: Neighborhood-Scale Residential Solar Energy Systems and the Example of Solarize Portland” (2013)
 - Solarize CT program, “[Solarize Your Community: An Evidence-Based Guide for Accelerating the Adoption of Residential Solar](#)” (Yale 2016).
 - MREA led five (5) successful Solar Group Buys in MN, WI, and IL prior to the first Solar Group Buy in Iowa.

Why Does a Solar Group Buy Work?

- The public is attracted to purchase through a group because it lowers costs through:
 - Competitive Contractor Selection
 - Economy of Scale
 - Limited-Time Offering
 - Community-Led Outreach
 - Strong Customer Education



Group Buy

How It Works

A vetted installer for a competitive price: installer selected by Community Advisory Committee based on strict criteria including price per watt, professional certifications, history of quality work, etc.

The more customers, the lower price:

Base Price: \$2.45/W (20-40% below national rate)

Additional Discounts (assumes avg Solar array = 5kW):

>50 kW	>150 kW	>250 kW	>350 kW
-\$0.05/W	-\$0.10/W	-\$0.15/W	-\$0.20/W
~10 homes	~30 homes	~50 homes	~70 homes

An Effective Approach to Influencing Behavior

- When participants were asked how likely they were to install solar without the group buy:
 - 51% said not likely (versus 41% in past programs)
 - 20% said likely (versus 20% in past programs)
 - 100% said they knew more about issues relating to solar as a result of the program (vs. 92.5%).
 - 84% said they are more likely to pay attention to energy policy issues in their state (vs. 88.1%).



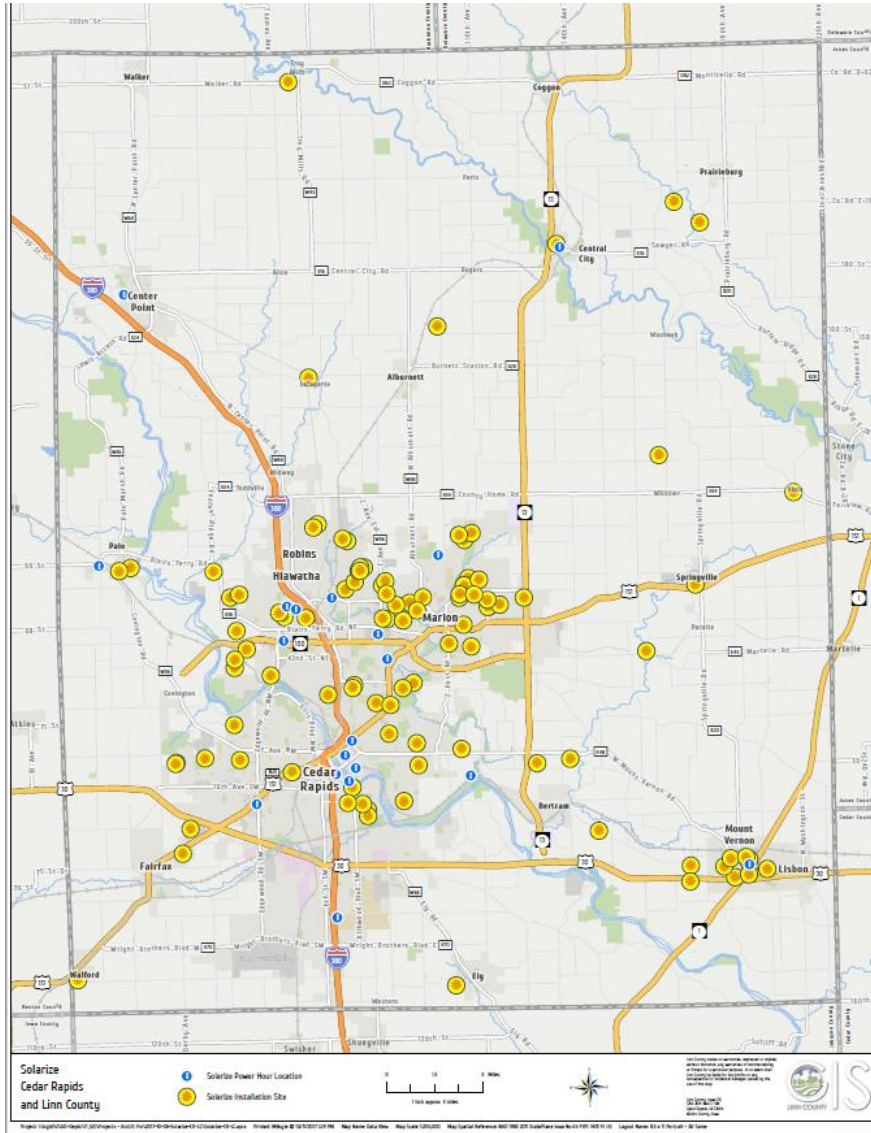
Why Public Health?

- In a survey of group buy participants, it was important or extremely important:
 - ✓ 73%, “Is managed by an independent, nonprofit organization.”
 - ✓ 80%, “Has the support of local government.”
 - ✓ 75%, “Information provided is developed by an independent, non-profit organization.”



- Number of Solar Power Hours (23)
- Number of Unique Households Reached (454)
- Number of Times Solarize Cedar Rapids – Linn County was Covered by Local Media (7)
 - 41% of participants survey said they heard about Solar Group Buy through newspaper and online.
- Number of Posters Publicly Placed (63)
- Social Media

Installations



- There was a 23% conversion of households attending the Solar Power Hours.
- Of the 104 signed contracts, 55 were other municipal or rural Linn County residents.

Homeowner Savings



- The group buy reduced the price per watt of installed capacity by 30% below prevalent US market rates.
- Federal tax incentives of 30% and Iowa state tax incentives of 15% provide additional cost reduction, resulting in an average payback period of 8 years.
- Participants will save over \$104,000 in utility costs annually.



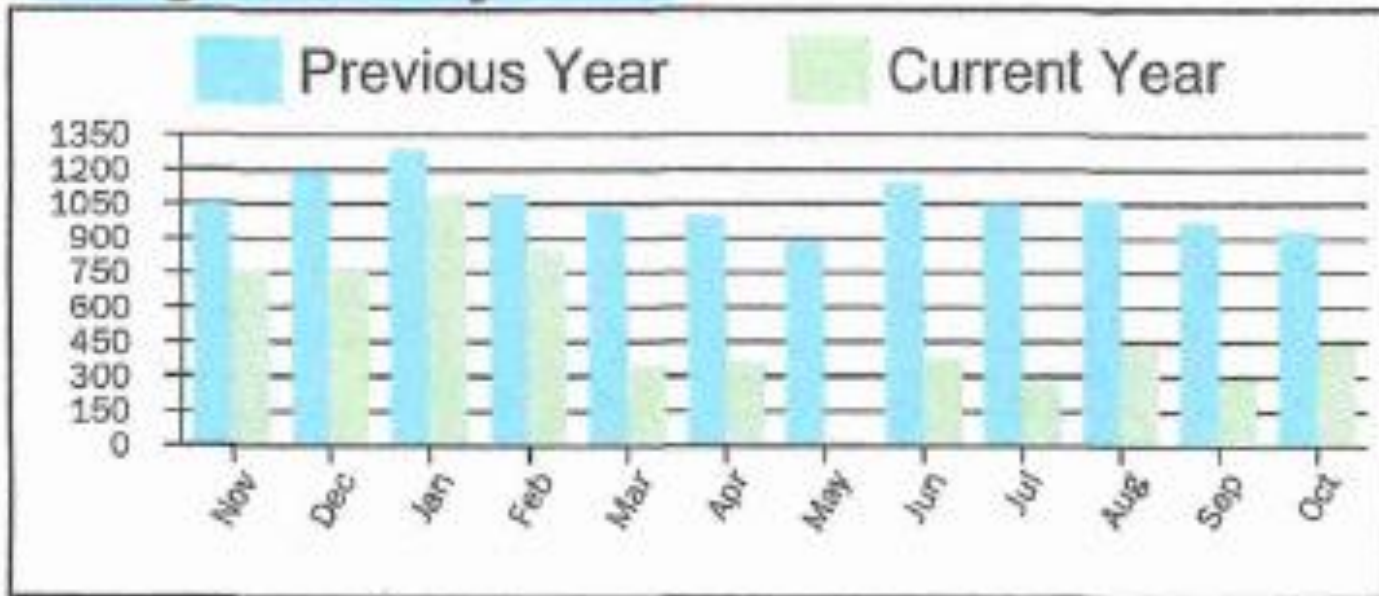
My One-Year Electric Bill



Monthly Energy Use Comparison



Usage History




Calculated Environmental Health Benefits

US EPA AVERT Tool

- LCPH utilized the AVERT Tool to calculate air quality emissions reductions from the 607 kW of installed Solar PV systems.
 - AVERT is a free Excel Template and uses public data that are accessible and auditable.
 - AVERT's Main Module estimates the displaced emissions likely to result from EE/RE programs.
 - LCPH utilized the Upper Midwest regional electric generation data set provided in AVERT to estimate the air quality emissions

Annual Air Quality Benefits

- CO₂ = 740 tons
- SO₂ = 1400 lbs
- NO_x = 1020 lbs
- PM_{2.5} = 60 lbs



When there's a huge solar energy spill,
it's just called a "nice day"

www.yalesolar.org

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Environmental official helps spread solar power in Linn County

James Hodina takes work home with him

The Cedar Rapids Gazette