

Creating an impactful solar program for the University & community



Why not invest on-campus?

- Low electrical rates: <math>< \\$0.05 /kWh</math> - Solar PV ~ \$10/watt
- Local conditions: Roofing stnds
- Tax credits not available for small projects
- Limited rooftop & ground



COMMUNITY SOLAR BACKGROUND



Barriers to homeowner solar

Homeowner barriers

- Inertia: takes time and energy!
- Solar is an unfamiliar technology,
- Up-front costs
- Comparing apples to pears

Contractor challenges

- Marketing costs (5-15% success rate)
- Customer Education
- Lack of customer trust



COMMUNITY SOLAR BACKGROUND



Community Solar benefits

- Realize cost savings through discounted pricing;
- Simplified process helps overcome hurdles;
- Education: workshops, website, pre-screening
- Trust in the University = strengthened affiliation.

U COMMUNITY SOLAR
THE UNIVERSITY OF UTAH

Home • What is UCS? • Get Started • Solar 101 • Calendar • Solar & EVs

Take the First Step

Are you interested in powering your home with inexhaustible, stable and secure solar energy? Have you been waiting for the right time or the right price? Now is your time to shine!

[Learn More ...](#)

Did You Know?

Past Community Solar projects in Utah have helped many homeowners power their community with clean, solar energy. Collectively

RSVP for a Workshop

Attend a U Community Solar Workshop to learn more about the benefits of solar and how the program works. You can [view a list of workshops](#).

Learn More

Find out answers to your questions about U Community Solar.



PROGRAM SET-UP

Tasks – important program issues

- **Administrative support: purchasing, legal & risk;**
- Meet with local contractors to learn common issues;
- Create program and marketing goals - develop plan;
- Formalize team roles;
- **Convene steering and selection (RFP) committee;**
 - FM, Administration, legal, purchasing, students, community allies
- Contractor selection criteria

PROGRAM SET-UP

Considerations for “Installer” RFP

Issues to resolve & how to score?

- Capacity: number of installers
- Geographic area(s)?
- Firm price vs. tiered pricing
- Standardized RFP responses
- Equipment (monitoring system, panel type, American made?)
- Standardize pricing if multiple installers
- Site visit fee? (\$35)



PROGRAM SUMMARY



Considerations for “Installer” BAFO - pricing

Required price guarantees

- Panel & inverter specs (US, black option, warranty, watts)
- Monitoring type (**mandatory**)
- Roof type(s): steep, flat, tile, shingles, etc.
- Ground-mounted
- Long wire runs
- Separate arrays
- EV charger install
- Permit & connection fees

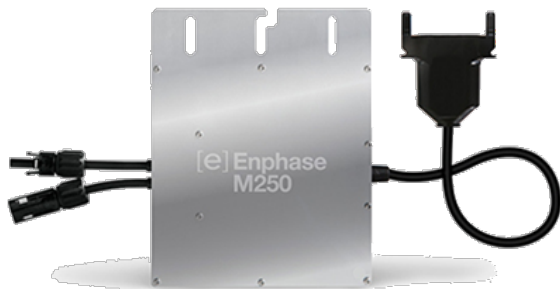
Not resolved

- Historic District concerns
- Structural work
- New electrical panel
- Trenching
- No storage options through the program
- Proposals evaluated based on 85-90% “average Utah home”

PROGRAM SET-UP

REC registration

- Western Renewable Energy Generation Information System (WREGIS) tracks generation w/ verifiable data - creates renewable energy certificates (RECs).
- **Enphase system for REC reporting – need help from I.T. to set up automated reporting (challenging)**
- REC “contract” between homeowner and University (explain, explain, explain)



PROGRAM DETAILS: Marketing

- Coordinate with University Marketing
- Launch: media event/ press release
- Workshops throughout program
- Marketing partnership with suppliers (SolarWorld)
- *"Limited-time offer"*
- **Mass emails**
- Traditional & Social media
- Solar open house
- Tabling at campus events
- **Refer friend / neighbor prizes**



as been purchasing green energy for the U for 10
of the [Top 10 College & University EPA Green Partners](#). The U offsets 86 million kWh of electricity and supports local solar energy development in Utah through U Community Solar. The U is the first university in the nation to run a community solar program.





PROGRAM SUMMARY

Marketing "Discount" pricing

"U Community Solar is offering a substantial discount on a typical solar installation (based on the national average price for solar.)" **NOT "____%" discount.**

Average Utah home's energy usage	System Size (kW)	2014		2016	
		System Cost*	per watt	System Cost*	per watt
50%	3	\$10,005	\$3.34	\$8,495	\$2.83
75%	4.6	\$14,957	\$3.25	\$12,767	\$2.78
100%	6.1	\$19,700	\$3.23	\$16,772	\$2.75

*Cost before tax incentives

*These prices are for a standard 3 kilowatt or 5 kilowatt PV system. Some homes may require additional customization that is subject to additional installation costs. These prices do not include permitting fees.

- RFP 25% lower than next bid (30% below mat'l market)
- **Program impacted the local market**

PROGRAM SUMMARY



<u>Round 1</u>	<u>Round 2</u>	<u>Total program</u>
1,698	697	2,395 Surveys
705	307	1,012 Site Visits
382	227	609 Contracts
1,797	1,436	3,233 KW

- 5% ineligible (ownership)
- 41% opted out prior to proposal (trees, age of roof, roof configuration, other installer)
- **54% installed PV system after personalized contract (typical numbers 5-15%)**



PROGRAM SUMMARY



Progress to date

Progress: REC Equivalencies

REC production	Price per mWh
Open market REC purchase	\$0.97/mWh (2013)
U Community Solar	~\$1.50/mWh
2013 proposals for local SRECs	~\$10-12/mWh

- 1.3 MW of solar will produce 44,134,101kWh of electricity over a 25-year period=\$1.69/mWh for \$25K investment



SURVEY INFORMATION

How did you learn about the program?

- Email (65%)

Why install solar? 1-5 (**highly motivated to buy**)

- Reduce environmental impact (4.45)
- Improve air quality (4.32)
- Discounted price (4.28)
- Trusted installer (4.07)

Why not install solar? 1-5

- No budget (3.18)

89% Contributed RECs to University

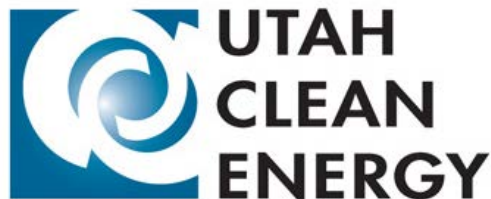
- Motivations: Contribute to success of program & help U of U sustainability goals

LESSONS-LEARNED & RECOMMENDATIONS



General comments

- Be careful re: claims of discount
- Encourage alternative bids – stay neutral: *“If you need help, we’re here. If you are uncertain, keep looking. Please consider solar whether in our program or not.”*
- Confirm Installer capacity (“Quality of Service”)
- Enlist Non-profit partner: Utah Clean Energy



U DRIVE ELECTRIC SLIDE



Program Summary by round

<u>1</u>	<u>2</u>	<u>Total program</u>
76	127	203 vehicles sold
3	5	7 manufacturers + used

