



SIMPLY SOLAR

PRESENTED BY:
Shannon Wagner
Products & Services



ABOUT CPS ENERGY

- Largest municipally-owned combined natural gas and electric utility
- Acquired by the City of San Antonio in 1942
- Serves over 1.1 million customers (765k electric and 335k natural gas)
- #1 in Texas and #7 nationally for solar generation capacity
- #1 in Texas for demand response
- Customers' combined (electricity and natural gas) energy bills rank among the lowest nationwide

SOLAR PORTFOLIO

Expected by year-end:

Utility Scale	500 MW
Private Ownership/Net Mtrg	70 MW

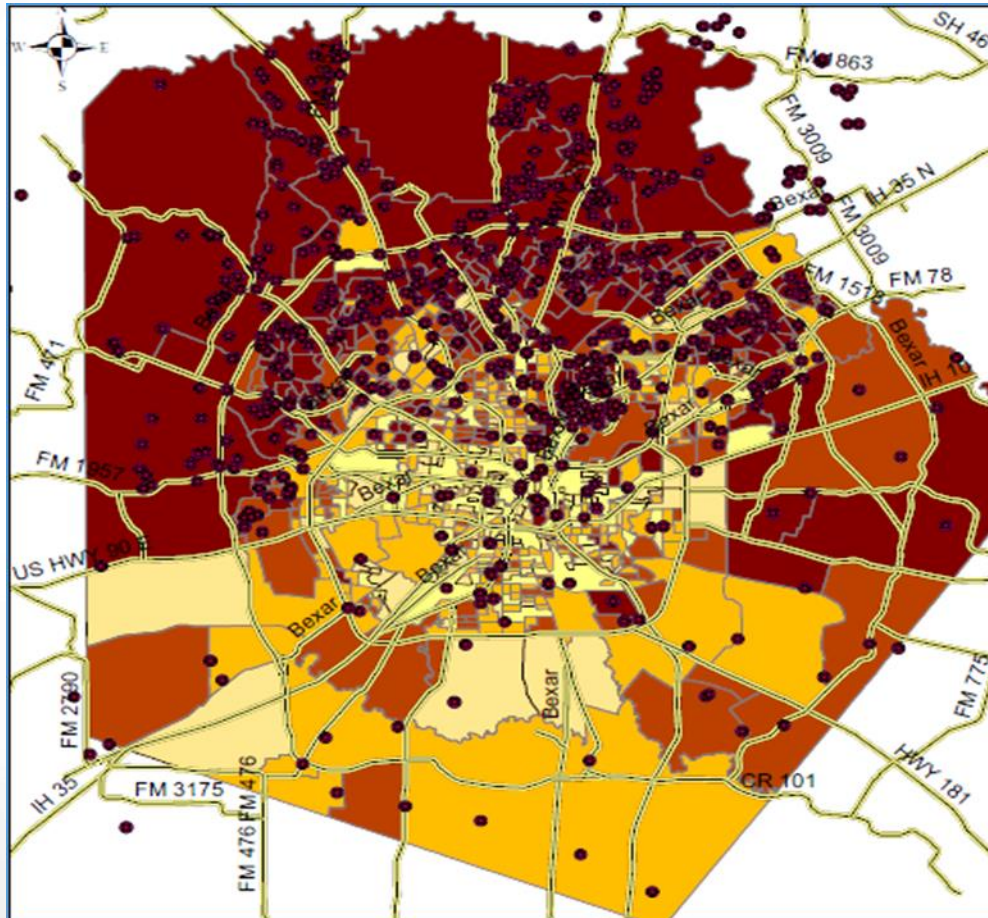
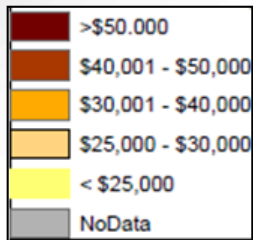
Simply Solar Pilots

Roofless Solar	 1 MW
SolarHostSA	<u>5 MW</u>

Total Expected 576 MW

PRIVATE OWNERSHIP OF SOLAR

Median Income:



- Potential clustering on circuits
- Concentrated in more affluent neighborhoods, yet...
- \$80M funding for rebates comes from all customers
- Solar Pilot programs designed to address these issues and more

SIMPLY SOLAR OBJECTIVES

- Solar For All: low & moderate income, renters, multi-family structures, disqualifying roofs (enhanced customer satisfaction & avoid customer defection)
- 2020 goal of reducing demand by 771 MW; reduce fossil generation & reduce carbon/water intensity of generation portfolio
- Hedge fossil fuel prices with long-term fixed-price solar PPAs; hedge unknowns around environmental regulation
- Distribute solar thoughtfully across distribution grid
- Adequately recover fixed costs, reduce dependence on rebates, reduce overall cost of solar with economies of scale, & reduce wide variation in \$/W paid by customers

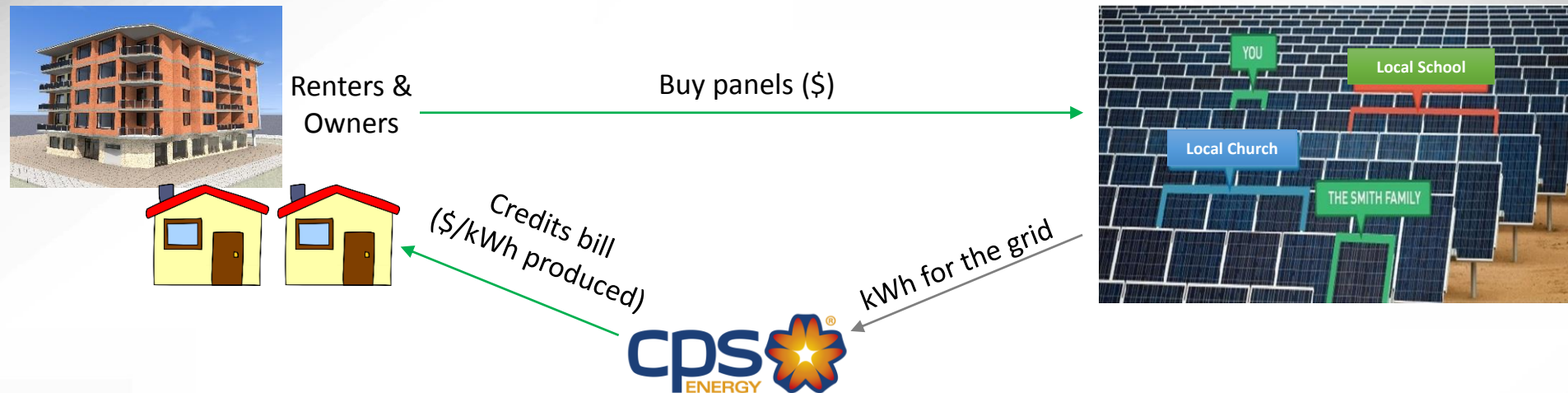
SIMPLY SOLAR PROGRAMS

- **ROOFLESS SOLAR:** 1 MW community solar
- **SOLAR HOST:** 5 MW free rooftop program for qualifying roofs
- **VALUE PROPOSITION:**
 - PPA-based; costs recovered via fuel adjustment
 - Siting beneficial to grid
 - Lower cost potential over traditional private ownership (bulk purchases & standard designs)
 - Power production during peak hours
 - Fixed price over the contract period

ROOFLESS SOLAR RFP

- RFP issued with wide parameters as to structure
 - Issued to all registered, local installers
 - Issued to community solar providers nationally
 - Issued to state & national installers with the most installed capacity
- Objectives in vendor selection
 - Price
 - Value to customer
 - Ability to turnkey
 - Ability to learn from vendor
- Clean Energy Collective (CEC) selected for 1MW array
 - Experience stood out

ROOFLESS SOLAR



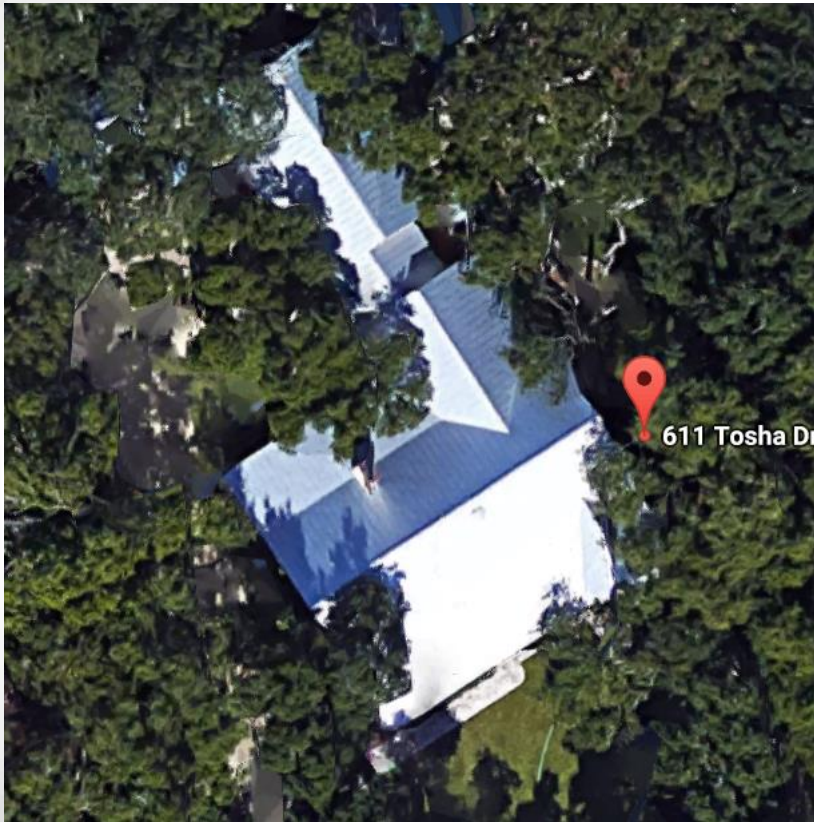
- 3rd party performs marketing & sales functions; co-brands with CPSE
- Bill credited for power produced over 25 years; ~9 year payback
- Portion of production sent to escrow for O&M
- Open to all (owners, renters, unqualified roofs, renters, commercial)
- Live anywhere in CPSE service area; sell or gift panels at any time
- Nothing on your roof
- 3rd Party provides O&M, insurance, monitoring, web portal, call center
- CPSE supplies power to grid & recovers costs via fuel adjustment

SUCCESSSES

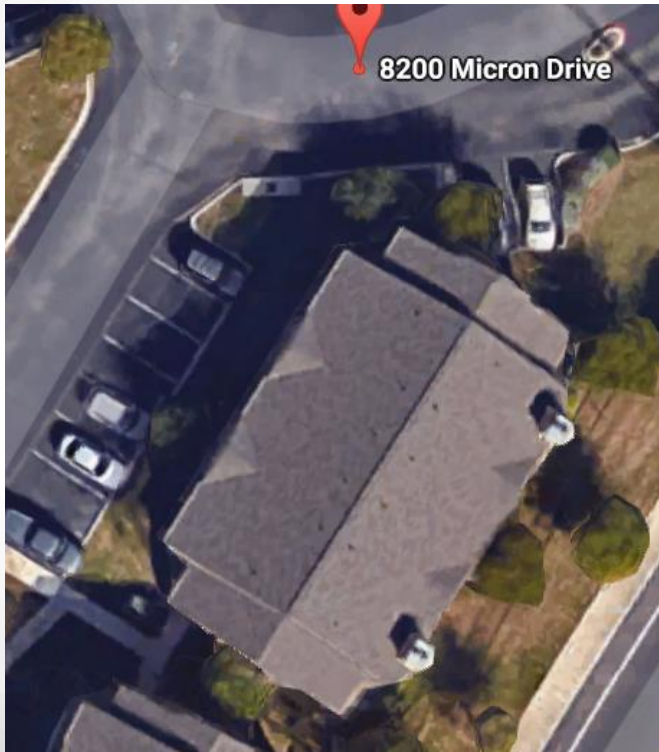
Early results of the pilots suggest real potential for these innovative programs to promote wider solar adoption:

- Strong customer interest for both programs
- Roofless Solar was fully subscribed prior to COD
- Extensive positive coverage of both programs from national and local media
- Winner of APPA 2016 Energy Innovator Award
- Finalist in SEPA Power Player Award

CUSTOMERS WITH SHADE



MULTI-FAMILY



OTHER REASONS



NEXT STEPS

- Conduct customer & stakeholder surveys & evaluations
- Modify programs as needed
- Potential for 2017 RFP
- Continue development on additional Simply Solar program offerings

APPENDIX

ROLES

Customer	Developer	Utility
Purchase panels	Build & manage array	Buy power & credit customer
Obtain tax & legal advice	Bring experience, legal & tax work on structure	Vet legal structure & tax
Self-educate	Negotiate PPA & IA	Negotiate PPA & IA
Shop around	Research local rules & requirements	Manage the contract
Verify bill credits	Vet sites, negotiate lease	Approve site
	Obtain permits	Manage interconnection
	Educate & market to the customer	Co-market, customer road shows
	Contract with customer	Manage customer & regulator expectations
	Insure & maintain asset	Set policies (size limits, customer segments)
	Manage production & allocation to customers	Pay credits to customers
	Field customer calls	Field customer calls

PAYBACK COMPARISON

Payback Estimates - 4/27/2016 Residential Rebate, Roofless, & SolarHost-SA Programs (2016

(2016\$)		Rooftop (With Rebate) (With ITC)	Roofless (With Rebate 1) (With Tax Credit) *	SolarHost-SA
System Size	kW dc	8.06	8.06	8.06
Customer's System Cost	\$/Watt dc	2.95	3.75	n/a
CPS Rebate	\$/Watt	1.20	1.09	0.00
Total Cost of System	\$	23,784	30,225	n/a
CPS Rebate	\$	8,417	8,788	0
Investment Tax Credit (ITC) (30%, net of CPS Rebate)	\$	4,610	6,431	In Cust. Credit
Total Out of Pocket Cost	\$	10,757	15,006	0
Annual Bill Savings Due to Solar - Year 1	\$	1,089	1,737	344
Simple Payback Period	Years	9	9	Immediate
IRR (25 Years)	%	13.7%	12.1%	n/a

*Higher bill savings with Roofless due to optimized utility-scale construction and single-axis tracking, resulting in more output per unit of capacity.

**Above estimates based on current assumptions which could be updated from time-to-time.

