



CASE STUDY: CPS Energy's Solar Programs

**PRESENTED TO:
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ABOUT CPS ENERGY

- Nation's largest municipally-owned natural gas and electric utility
- Acquired by the City of San Antonio in 1942
- Serve 800k electric and 340k natural gas customers in a 1,515 square-mile service area
- Customers' combined energy bills rank among the lowest nationwide



NATIONAL LEADER IN SOLAR

- #1 in Texas and #8 nationally for installed solar capacity (SEPA)
- 446 MW of utility scale solar deployed as of Dec. 2016
- First solar manufacturing in Texas:
 - US headquarters for OCI Solar Power and Mission Solar Energy
 - Manufacturing branches for Kaco New Energy (inverters) and SunAction Trackers

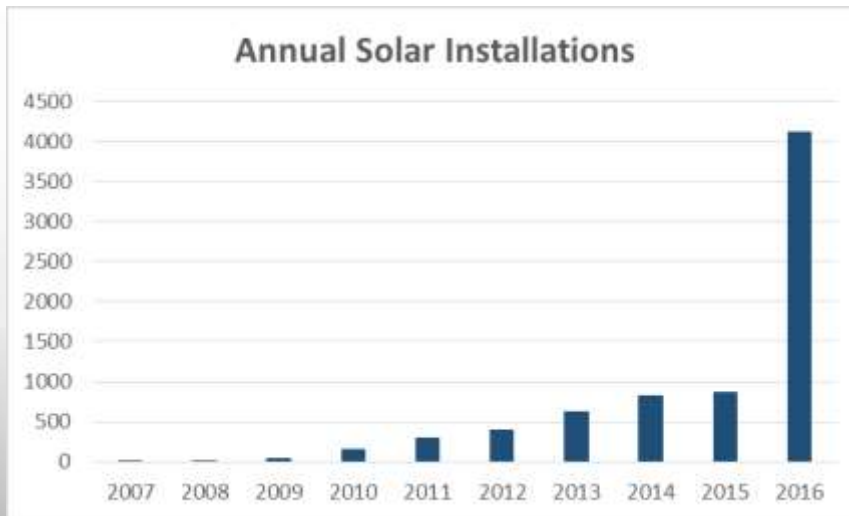


SOLAR STATS

• Utility Scale	446 MW
• Private Ownership	76 MW
• Simply Solar Pilots:	
Roofless Solar	1 MW
SolarHostSA	<u>5 MW</u>
Total Capacity	528 MW

PRIVATE OWNERSHIP

- 2016 was a record year for solar adoption in San Antonio
- Driven in part by declining cost of solar components
- Extension of solar rebates from CPS Energy also drove adoption



Benefits of Private Ownership

- Retail net metering
- CPS rebate of \$0.60-\$0.70/watt
- Payback about 9 years

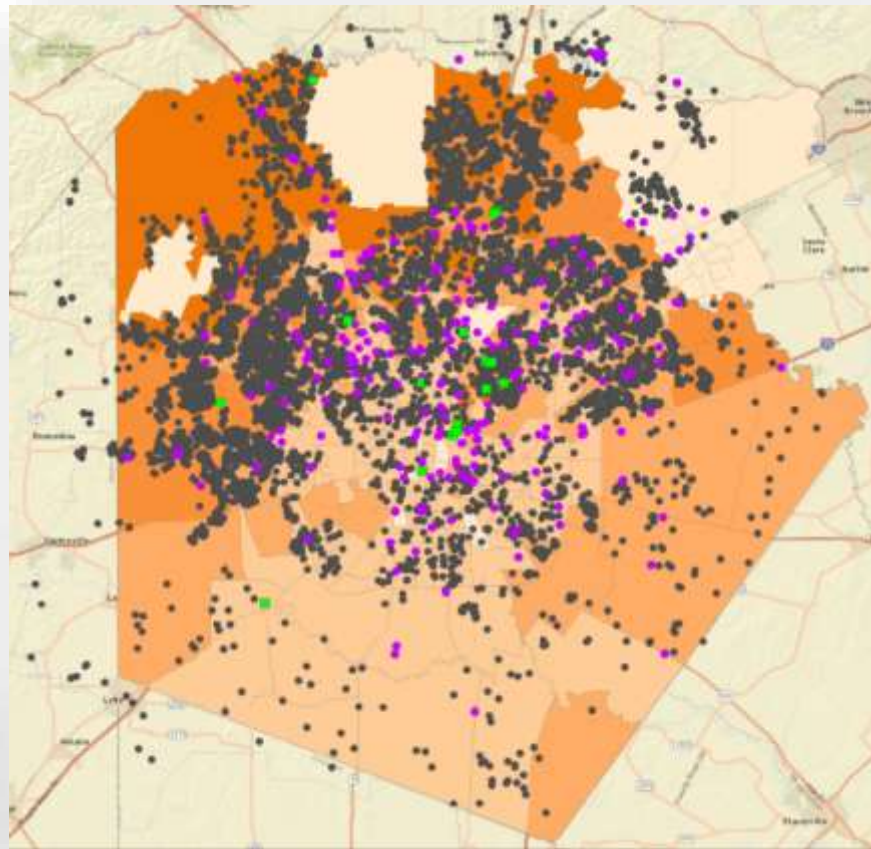
COMMUNITY BENEFITS

- Solar capacity contributes to STEP target of reducing 771 MW by 2020
- Reduced emissions from a clean source of energy
- 60 registered solar installers support 650 direct jobs
- Higher rebate for using locally-manufactured modules and inverters



SOLAR CONCENTRATION

Private ownership is concentrated in more affluent areas



- Commercial
 - Residential
 - School
- 5 Year Median Income**
- \$0 - \$18,310
 - \$18,310 - \$45,391
 - \$45,391 - \$70,455
 - \$70,455 - \$103,300
 - \$103,300 - \$204,821
- ServiceArea

SIMPLY SOLAR

Two pilot programs were conceived in 2015 to address equity issue and broaden access to solar

- **ROOFLESS SOLAR:** 1 MW community solar
- **SOLAR HOST:** 5 MW rooftop leasing program



PILOT CONCEPT

- Small scale allows us to innovate and test program models
- PPA-based, fixed price contracts
- Third-party developer leverages the Federal ITC
- Provides alternative to net metering
- Greater efficiency from standardized PV design

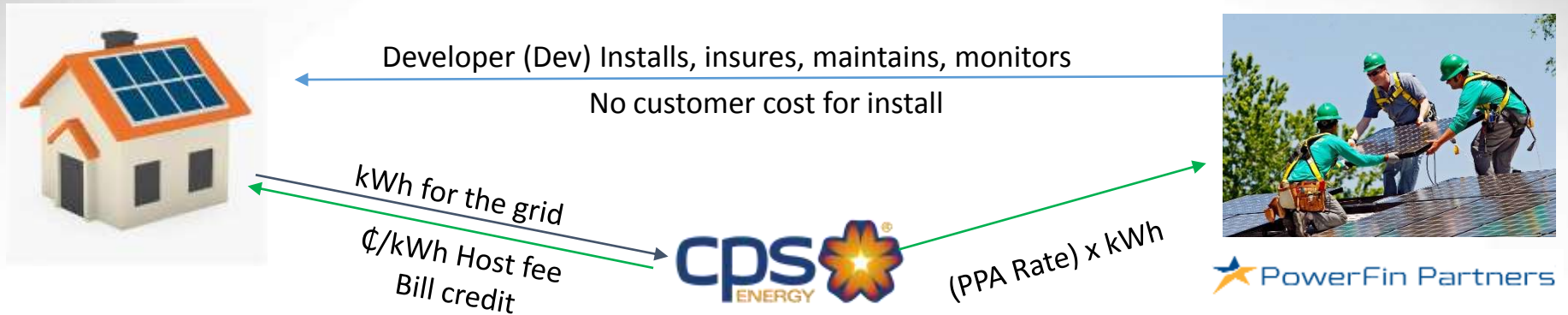


ROOFLESS SOLAR



- CEC performs marketing & sales functions, co-brands with CPS
- Bill credited for power produced over 25 years, ~9 year payback
- Open to all (renters, historical homes, commercial)
- Live anywhere in CPS service area; sell or gift panels at any time
- CEC provides O&M, insurance, monitoring
- CPS supplies power to grid & recovers costs via fuel adjustment

SOLAR HOST



- No upfront cost to customer, unless they opt-out
- Open to residential & commercial customers
- Customer earns a Host Fee for participating
- Sites qualified based on roof age, orientation, shading
- Installations subcontracted to local companies, use standardized design
- Connected at CPSE's side of meter, 20 year PPA
- PowerFin covers O&M, insurance, monitoring

CUSTOMER RESPONSE

- Roofless Solar
 - Program sold out before go-live
 - Survey shows 91% of customers satisfied or very satisfied with program
- Solar Host
 - 7,000 apps for 600 slots
 - 50% built out
 - On pace for 5 MW by Sept. 30, 2017



QUESTIONS?