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:

<table>
<thead>
<tr>
<th>Category</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility Scale</td>
<td>500</td>
</tr>
<tr>
<td>Private Ownership/Net Mtrg</td>
<td>70</td>
</tr>
<tr>
<td>Simply Solar Pilots</td>
<td></td>
</tr>
<tr>
<td>Roofless Solar</td>
<td>1</td>
</tr>
<tr>
<td>SolarHostSA</td>
<td>5</td>
</tr>
<tr>
<td>Total Expected</td>
<td>576</td>
</tr>
</tbody>
</table>
PRIVATE OWNERSHIP OF SOLAR

Median Income:

- >$50,000
- $40,001 - $50,000
- $30,001 - $40,000
- $25,000 - $30,000
- < $25,000
- NoData

- 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
SUCCESSES

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
ROOFLESS ADOPTION

Similar income demographics
CUSTOMERS WITH SHADE

611 Tosha Dr

23 Great Wood
MULTI-FAMILY

8200 Micron Drive

127 Burr Road
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

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


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

*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.