CELEBRATING STEP SUCCESS

PRESENTED BY:

Rick Luna
Interim Director, Technology & Product Innovation

November 18, 2019

Informational Update
OBJECTIVES & TAKEAWAYS

- REVIEW THE HISTORY OF STEP
- CELEBRATE ACHIEVEMENT OF OUR COMMITMENT
- HIGHLIGHT THE CUSTOMER & COMMUNITY VALUE OF OUR INVESTMENT
- LOOK AHEAD TO FlexSTEP
AGENDA

• THE VISION OF STEP
• STEP ACHIEVED
• BROAD PORTFOLIO OF CHOICES
• BENEFITING CUSTOMERS
• PROGRAM HIGHLIGHTS
• COST RECOVERY & ROI
• BENCHMARKING
• LOOKING AHEAD
THE VISION OF STEP

Aligned with City of San Antonio & Mayor Hardberger’s Mission Verde Initiative

- Promoted a sustainability vision for San Antonio
- Placed us at forefront of New Energy Era
- Created green jobs locally with new skills

Embraced Conservation as the “Fifth Fuel”

- Created additional diversity to our generation mix
- Avoided need for a power plant
- Reduced dependence on fossil fuels

Responding to the community, we developed the STEP Program, a comprehensive energy efficiency & conservation portfolio of products & services
THE HISTORY OF STEP

• Approved by the Board & City Council in 2009
• Created an ordinance based on the program presented
• Designed to deliver benefits:
  – Delaying or avoiding the need for new generation capacity & transmission infrastructure
  – Leverage emerging technologies
  – Help customers manage their energy consumption
  – Support job creation & economic growth
  – Reduce carbon emission & air pollution
ENERGY TRANSITION

2009 Approach (Traditional)
- Large Baseload Assets
- 40+ year commitments
- 5-year lead time
- $1B+ Investment

2019 Approach (Flexible Path)
- Smaller Investments
- More Agile & Dynamic
- More Renewables
- Energy Storage
- New Technologies on the Horizon

STEP bridged the transition to our diverse generation portfolio and is key to our Flexible Path strategy
The timing of STEP allowed us to leverage the technologies transforming the industry & the customer experience.
STEP ACHIEVED
SUCCESS FOR OUR COMMUNITY!!

We achieved our 771 MW STEP goal in August

- One year ahead of schedule
- More energy savings
- Under budget
- Higher ROI per dollar invested
OUR PATH TO SUCCESS

$STEP has delivered >771 MW without debt or capital spend for 13 years!

$s Supporting Conservation: STEP

$1B Capital for New Power Plant + O&M for 30-40 years
<table>
<thead>
<tr>
<th>Highlight</th>
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<tbody>
<tr>
<td><strong>1.4 TWh of gross electricity savings in FY 2019</strong> - <strong>enough energy to power 104,000 Greater San Antonio Area households</strong> for the year. Over the life of STEP so far, it has yielded 6.3 TWh of electricity savings.</td>
</tr>
<tr>
<td><strong>3.3 million (short) tons of CO₂ emissions reductions.</strong> Additionally, STEP has reduced SO₂ emissions by 6.6 million lbs. and NOₓ emissions by 3.1 million lbs.</td>
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<td><strong>680 estimated annual jobs and $28 million in annual income</strong> from FY 2009 to FY 2019. In total, STEP generated 7,500 local job-years and $312 million in labor income.</td>
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*Source: ICF, STEP Program Review, November 2019*
## INDUSTRY AWARDS THROUGH THE YEARS

<table>
<thead>
<tr>
<th>Year</th>
<th>Organization</th>
<th>Award Description</th>
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<tbody>
<tr>
<td>2019</td>
<td>Alliance to Save Energy</td>
<td>Chairman’s Award (STEP Program)</td>
</tr>
<tr>
<td>2019</td>
<td>American Public Power Association (APPA)</td>
<td>Smart Energy Provider</td>
</tr>
<tr>
<td>2018</td>
<td>APPA Demonstration of Energy &amp; Efficiency Developments (DEED)</td>
<td>Energy Innovator Award (SAVENOW Programs)</td>
</tr>
<tr>
<td>2017</td>
<td>POWERGRID</td>
<td>International Project of the Year (Demand Response)</td>
</tr>
<tr>
<td>2016</td>
<td>APPA Demonstration of Energy &amp; Efficiency Developments (DEED)</td>
<td>Energy Innovator Award (Solar Programs)</td>
</tr>
<tr>
<td>2016</td>
<td>Peak Load Management Alliance</td>
<td>Thought Leadership Award (Demand Response)</td>
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Our STEP programs have been recognized many times nationally for their thought leadership and innovation.
BROAD PORTFOLIO OF CHOICES

Energy Efficiency - Residential
• Casa Verde (Weatherization)
• Home Efficiency
• New Home Construction
• Retail Partners
• Home Energy Assessments
• Schools 2 Home
• Cool Roof

Energy Efficiency - Commercial
• Commercial & Industrial Solutions
• Schools & Institutions
• Small Business Solutions
• Whole Building Optimization

Demand Response
• Commercial & Industrial Demand Response
• Automated Demand Response
• Smart Thermostat
• My Thermostat Rewards
• Reduce My Use

Solar
• Solar Rebates
• Roofless Solar
• Solar Host

Customers have 20+ product choices, many delivered through partnerships with leading technology providers
BENEFITING CUSTOMERS

- **236K** Energy Efficiency Rebates
- **300K** Reduce My Use Customers
- **36K** Students reached through School 2 Home
- **17K** Solar Rooftop Systems
- **150K** Smart Thermostats
- **261MW** Demand Response Capacity

We drive tremendous value for our community through diverse programs & partnerships
DELIVERING ON WEATHERIZATION

- By end of FY20, we’ll have weatherized 29,000 homes under STEP and ARRA
- Total Weatherization spending to date:
  - ARRA $ 17.0 M
  - STEP\(^{(1)}\) $125.5 M
  - $142.5 M
- Another 26,000 applied but were disqualified due to income\(^{(2)}\) or structural issues.

<table>
<thead>
<tr>
<th>Program Year</th>
<th>Total Homes Weatherized</th>
</tr>
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<tbody>
<tr>
<td>ARRA</td>
<td>3,320</td>
</tr>
<tr>
<td>FY 2013</td>
<td>815</td>
</tr>
<tr>
<td>FY 2014</td>
<td>3,202</td>
</tr>
<tr>
<td>FY 2015</td>
<td>2,956</td>
</tr>
<tr>
<td>FY 2016</td>
<td>4,051</td>
</tr>
<tr>
<td>FY 2017</td>
<td>3,905</td>
</tr>
<tr>
<td>FY 2018</td>
<td>3,624</td>
</tr>
<tr>
<td>FY 2019</td>
<td>3,608</td>
</tr>
<tr>
<td>FY 2020(^{(1)})</td>
<td>2,380</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27,861</strong></td>
</tr>
</tbody>
</table>

\(^{(1)}\) as of Sep 30, 2019
\(^{(2)}\) Income eligibility for Weatherization is based on <200% of federal poverty level
STEP COST RECOVERY

• We are compensated for STEP program costs
• Expenses are recovered after 3rd party validation of energy savings
• Annual Reports evaluate performance relative to:
  – Estimated energy & demand savings
  – Cost effectiveness
  – Recommendations for program improvements
TECHNOLOGY TRANSFORMED
LIGHTING EXAMPLE

Technology improvement + Declining cost = The price at which customers will adopt new technology

Sources: energyearth.com, U.S. Department of Energy
INCREASING RETURN ON INVESTMENT

STEP Return per Dollar Invested
Measured by Utility Cost Test (UCT)

Since FY 2010, the STEP program has delivered $1.92 ROI for every $1 invested!

(1) Utility Cost Test
IMPACT TO CUSTOMER BILLS

Residential Bill Impact from STEP
Based on an average of 1,000 kWh/month

Everyone pays for STEP as it provides societal benefits to all customers and the community.
BENCHMARKING

Conservation Programs Bill Comparison (1)
Based on an average of 1,000 kWh/month

We invest significantly more in energy efficiency programs relative to other parts of the state

(1) Based on an average of 1,000 kWh/month; Bills reflect 12-month average pricing through September 2019. Energy efficiency costs sourced from PUCT tariffs.
BENCHMARKING

Texas Cities Combined Residential Bill Comparison\(^{(1)}\) – Trailing Twelve Months (TTM) September 2019

We invest more in energy efficiency programs and still have among the lowest electric and gas bills in Texas

(1) Based on an average of 1,000 kWh/month and 5 MCF/month; Bills reflect 12-month average pricing through September 2019.
LOOKING AHEAD

• Leveraging the success of STEP to create FlexSTEP, our next generation energy management program
• Further expand options available to our customers and support market and economic growth
• Currently, we are packaging options for FlexSTEP based on feedback from stakeholders and customers
Thank You
Appendix
MEASURING COST EFFECTIVENESS

\[
\text{UCT}^* = \frac{\text{Value of Avoided kW & kWh}}{\text{Program Costs}} \\
(\text{Avoided fuel costs & plant capital})
\]

*UCT (Utility Cost Test)

<table>
<thead>
<tr>
<th>Examples</th>
<th>UCT</th>
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</thead>
<tbody>
<tr>
<td>Bring Your Own Thermostat</td>
<td>5.67</td>
</tr>
<tr>
<td>Small Business Solutions</td>
<td>4.20</td>
</tr>
<tr>
<td>Residential Solar Rebates</td>
<td>3.30</td>
</tr>
<tr>
<td>C&amp;I Demand Response</td>
<td>2.26</td>
</tr>
<tr>
<td>New Home Construction</td>
<td>1.47</td>
</tr>
<tr>
<td>Casa Verde (Weatherization)</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Portfolio UCT (FY19)</strong></td>
<td>2.68</td>
</tr>
</tbody>
</table>

Continuing to improve performance of the STEP program & provide value to the community
<table>
<thead>
<tr>
<th>Acronym or Word</th>
<th>Definition</th>
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<tr>
<td>APPA</td>
<td>American Public Power Association</td>
</tr>
<tr>
<td>Casa Verde</td>
<td>CPS Energy’s branded version of the Weatherization program, which applies to CPS Energy customers with incomes within 200% of the federal poverty guidelines.</td>
</tr>
<tr>
<td>CFL</td>
<td>Compact fluorescent light is a fluorescent lamp designed to replace an incandescent light bulb</td>
</tr>
<tr>
<td>CO₂</td>
<td>Carbon Dioxide</td>
</tr>
<tr>
<td>DEED</td>
<td>Demonstration of Energy &amp; Efficiency Developments</td>
</tr>
<tr>
<td>Demand Response (DR)</td>
<td>Demand Response is a change in the power consumption of electric customers to better match the demand for power with the supply. Customers may adjust power demand by reducing or shifting tasks that require large amounts of electric power.</td>
</tr>
<tr>
<td>Energy Efficiency (EE)</td>
<td>Energy Efficiency is using technology or services that requires less energy to perform the same function.</td>
</tr>
<tr>
<td>Fiscal Year (FY)</td>
<td>For CPS Energy, February 1 to January 31.</td>
</tr>
<tr>
<td>Acronym or Word</td>
<td>Definition</td>
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<td>------------------</td>
<td>---------------------------------------------------------------------------</td>
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<tr>
<td>Kilowatt (kW)</td>
<td>A measure of capacity to produce electric power. A kilowatt equals 1,000 watts.</td>
</tr>
<tr>
<td>Kilowatt Hour (kWh)</td>
<td>A measure of energy generated. 1 kWh is equivalent to 1,000 watts.</td>
</tr>
<tr>
<td>LED</td>
<td>An LED light bulb is an electric light for use in light fixtures that produces light using one or more light-emitting diodes.</td>
</tr>
<tr>
<td>Megawatt (MW)</td>
<td>A measure of capacity to produce electric power. A megawatt equals 1,000 kilowatts or 1,000,000 watts.</td>
</tr>
<tr>
<td>NO$_x$</td>
<td>Nitrogen oxide</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>Operation &amp; maintenance</td>
</tr>
<tr>
<td>ROI</td>
<td>Return on investment</td>
</tr>
<tr>
<td>Solar</td>
<td>A solar system employs solar modules to generate electrical power.</td>
</tr>
<tr>
<td>SO$_2$</td>
<td>Sulfur dioxide</td>
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</table>
## GLOSSARY / DEFINITIONS

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<tr>
<td>STEP</td>
<td>CPS Energy’s Save for Tomorrow Energy Plan (STEP) is an aggressive energy conservation program. The goal of the program is to save 771 MW of electricity between 2009 and 2020.</td>
</tr>
<tr>
<td>TTM</td>
<td>Trailing twelve months</td>
</tr>
<tr>
<td>Terawatt Hour (TWh)</td>
<td>A measure of energy generated. 1 TWh is equivalent to 1,000,000 MwH.</td>
</tr>
<tr>
<td>Utility Cost Test (UCT)</td>
<td>Utility Cost Test measures cost-effectiveness from the viewpoint of the sponsoring utility or program administrator. A UCT&gt;1.0 means avoided capacity and energy costs exceed the costs incurred to operate a program.</td>
</tr>
<tr>
<td>Weatherization (WX)</td>
<td>Weatherization is the process of modifying a building to reduce energy consumption and optimize energy efficiency.</td>
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