



***FLEXIBLE PATH &
EFFICIENCY PROGRAMS***
***URBAN LAND INSTITUTE (ULI) SAN ANTONIO
SUSTAINABILITY FORUM***

PRESENTED BY:

Rick Luna
Interim Director, Technology & Product Innovation

February 12, 2019

OUR *PEOPLE FIRST* FOCUS



- Our everyday collective focus *must be* on our 3 Pillars:
 - ❖ **COMMUNITY**
 - ❖ **EMPLOYEES**
 - ❖ **CUSTOMERS**

PEOPLE FIRST!

EMPLOYEES

COMMUNITY

CUSTOMERS

SAFETY

SAFETY

SAFETY

cps ENERGY

Our Mission Statement

CPS Energy's employees are committed to providing world-class energy solutions to meet the diverse and unique needs of our customers, while acting as an economic engine to drive value and growth in our community.

WE MUST CONTINUE ASKING OURSELVES...
Are we solving things so customers benefit?

BY THE NUMBERS



Largest Municipally Owned Electric and Gas Utility in the U.S.
Solar Power Production in Texas; Seventh in the Nation
Wind Power Production in Texas



Premier
Credit
Rating



838k Electric¹

352k Gas

Our Customers



Years of Serving
San Antonio

Most Trusted Brand in the South
Region by MSI



\$11B - Assets
\$2.6B - Annual Revenue

¹ as of 11/27/18

ACCOMMODATING GROWTH, PROMOTING EFFICIENCY & CUTTING COSTS



This is how we save our customers money & add value.

CITY OF SAN ANTONIO

GROWTH (1)



San Antonio continues to be a magnet for economic & population growth.

Texas cities that added the most people from 2016 to 2017

City	2017 pop.	Population increase
San Antonio	1.5 million	24,208
Dallas	1.3 million	18,935
Fort Worth	874,168	18,664
Frisco	177,286	13,470
Austin	950,715	12,515
McKinney	181,330	8,346
Houston	2.3 million	8,235
New Braunfels	79,152	5,833
Pflugerville	63,359	3,852
Georgetown	70,685	3,617

Source: U.S. Census Bureau

- San Antonio's metro growth rate has climbed consistently for the last few years
- The 2017 increase of 24,208 represents an average of 66 people per day
- The San Antonio area is preparing for a 1.1 million population increase by the year 2040

(1) Source – <https://www.texastribune.org/2018/05/24/texas-census-san-antonio-tops-national-list-population-houston-growth/>
dated May 24, 2018

STRONG DIVERSITY

DELIVERING OPERATIONS EXCELLENCE



CPS Wind Plants (PPA)
1,059 MW
Wind



CPS Solar Plants (PPAs)
550 MW
Solar



Braunig Plants
859 MW
Gas



Spruce Plants
1,345 MW
Coal



**Plants
delivered
during the
Summer
run**

Milton B Lee Plants
373 MW
Gas



Sommers Plants
830 MW
Gas
Deely Plants
840 MW
Coal



Rio Nogales Plant
785 MW
Gas



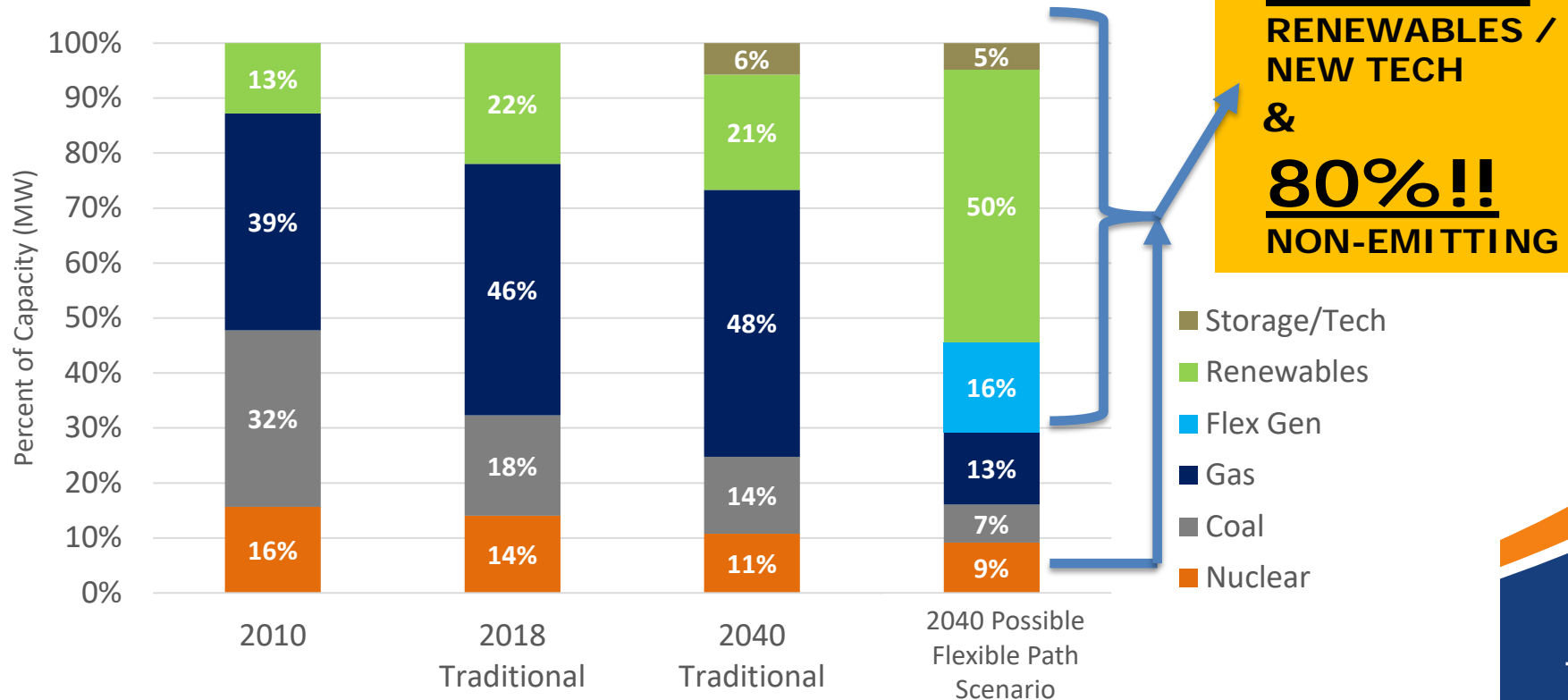
AVR Plant
492 MW
Gas



FLEXIBLE PATH - CAPACITY MIX



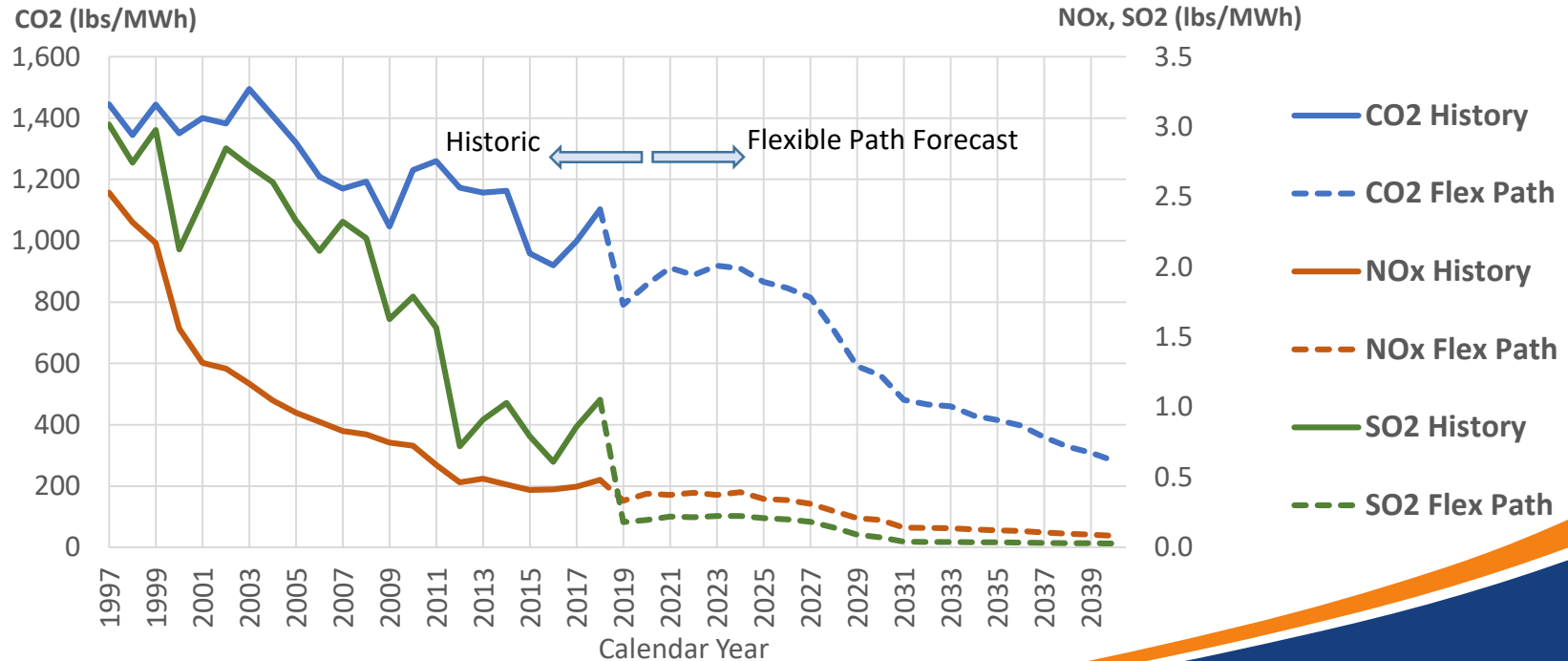
We will adjust our plan as new competing technologies provide more benefits



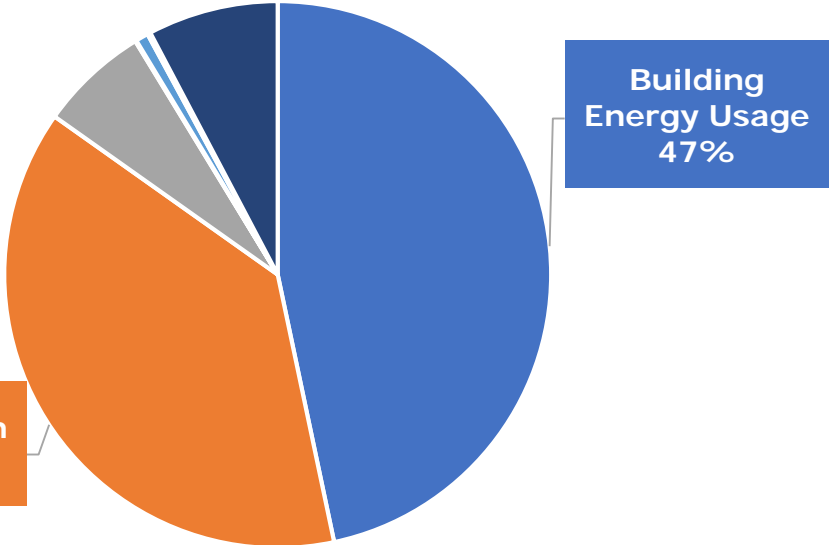
CPS ENERGY EMISSION INTENSITY REDUCTIONS THROUGH FLEXIBLE PATH



By 2040, the Flexible Path reduces the intensity of CO₂, NO_x, & SO₂ emissions by 80%, 97%, & 99%, respectively, as indexed to 1997



GHG EMISSIONS

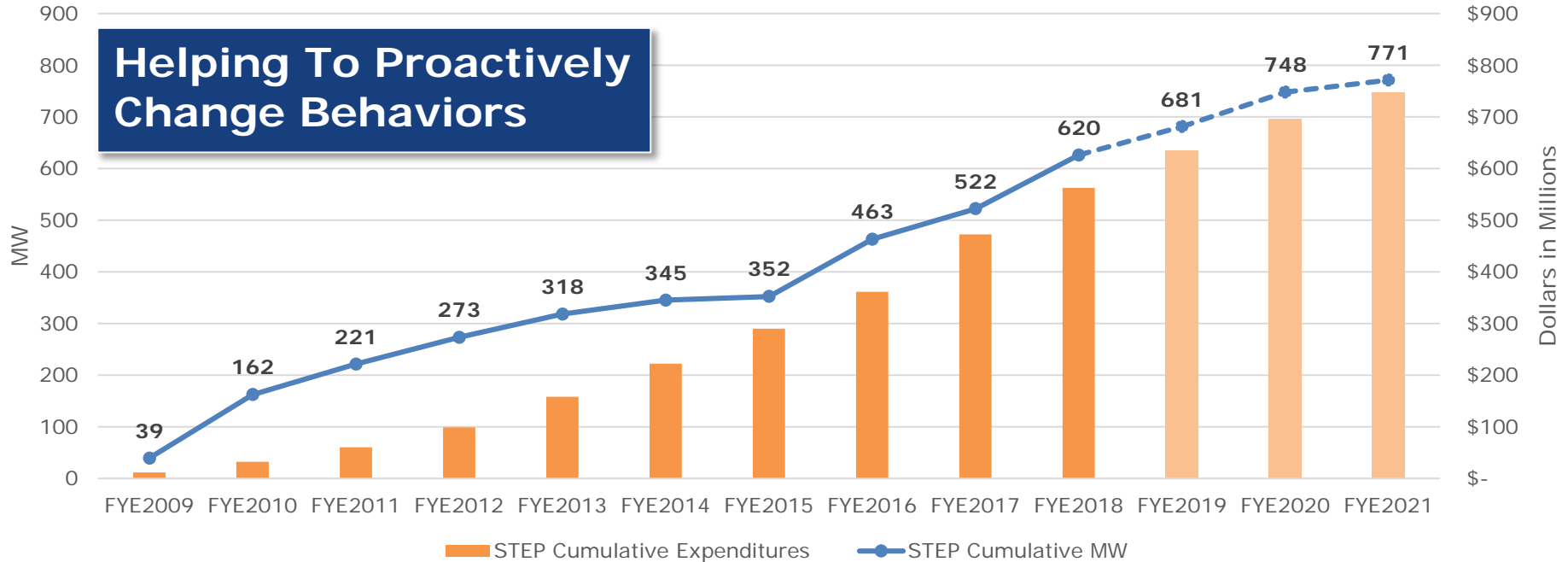


Building Energy Usage is the largest source of Green House Gas (GHG) emissions in the San Antonio area.

2016 San Antonio Total Community GHG Emissions by Sector

Source: SA Climate Ready, Final 2016 GHG Inventory

PROGRAM FLEXIBILITY



\$'s Supporting Conservation: STEP



\$'s Building a Coal Plant + Operations & Maintenance

CUSTOMER PROGRAMS



Energy Efficiency - Residential

- Casa Verde (Weatherization)
- Home Efficiency
- New Home Construction
- Retail Partners
- Home Energy Assessments/Kits
- Multifamily
- Schools 2 Home

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 Host
- Roofless Solar
- Solar Rebates



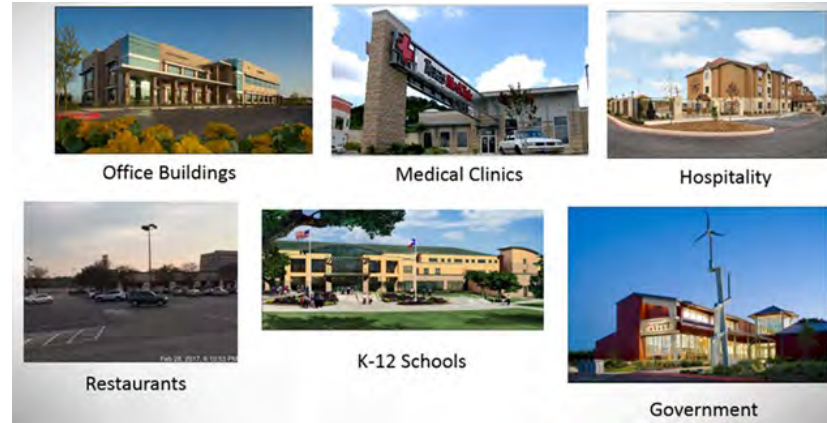
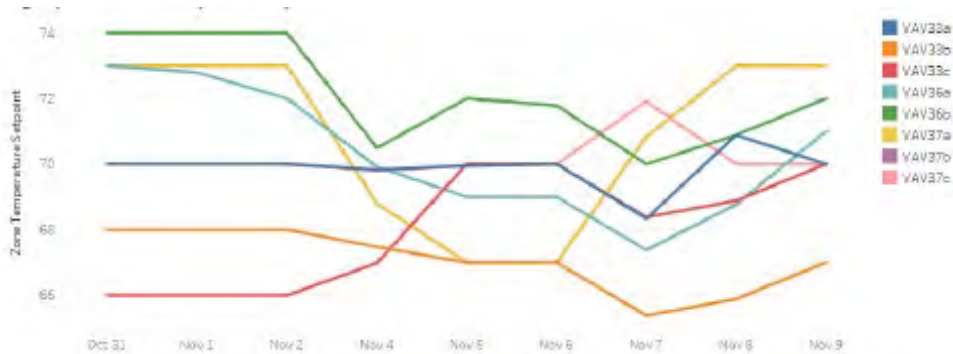
Customers have 20+ product choices, many delivered through partnerships with leading technology providers

BUILDING TUNEUPS



Building Tune-ups are a great low-cost program service that help save money by optimizing the energy performance of a facility

- Upfront savings and lower energy bill
- Increased comfort
- Cost of implementation capped at 100%



AHUs not synchronized producing excessive cooling and heating

SCORE/CITY SMART

RESOURCE MANAGEMENT SERVICES



- Improved operations and maintenance
- Modify behavior / change culture
 - Energy awareness
 - Ongoing engagement
- Action-based approach
 - How you track savings and tie them to actions is critical – IPMVP is standard
 - EnergyCenter software



SCORE/CITY SMART

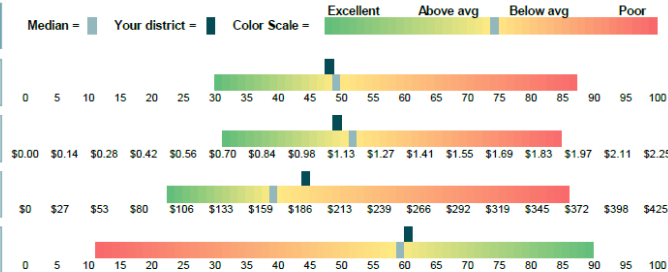
ENERGY PERFORMANCE BENCHMARKING



Energy performance benchmarking analysis

District-wide summary / Judson ISD

Benchmarks	Median*	Your district
Energy use index (kBtu/sq.ft)	49.6	47.5
Energy cost index (\$/sq.ft)	\$1.17	\$1.12
Energy cost per student	\$169	\$191
EPA portfolio manager score	59	60



* Median for a similar profile of K-12 schools in the San Antonio climate region.

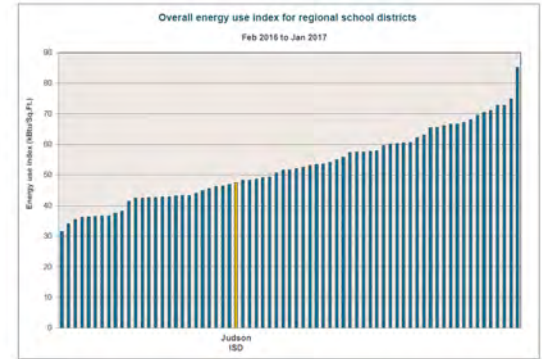
District characteristics	Monthly utility data					Annual energy use/cost summary			
	Month	kWh	kW	Cost	Therms	Cost			
Climate region	San Antonio	Feb-16	2,801,161	16,304	\$253,069	43,215	\$33,123	Usage- Electricity (kWh)	44,061,617
Type of school	All Schools	Mar-16	2,974,890	15,957	\$263,007	24,765	\$19,160	Usage- Gas (therms)	256,711
Type of heating system	N/A	Apr-16	3,169,601	16,735	\$276,230	22,946	\$19,783	Usage- Electricity (MMBtu)	150,338
Year built	N/A	May-16	3,747,238	16,626	\$322,654	14,158	\$10,068	Usage- Gas (MMBtu)	25,671
Floor area (sq. ft.)	3,704,618	Jun-16	3,988,479	17,509	\$377,712	12,865	\$13,507	Usage- Total energy (MMBtu)	176,009
Number of students	21,835	Jul-16	3,981,418	17,468	\$367,283	7,262	\$12,642	Usage- Electricity % of total	85%
Number of PCs	6,724	Aug-16	4,119,076	16,711	\$381,873	6,202	\$11,868	Cost- Electricity (\$)	\$3,916,494
On-site cooking?	N/A	Sep-16	5,574,340	19,315	\$485,198	8,939	\$11,101	Cost- Gas (\$)	\$244,586
Monthly energy use (MMBtu) profile		Oct-16	4,398,507	18,173	\$378,220	11,803	\$13,655	Cost- Total energy (\$)	\$4,161,080
	F	Nov-16	3,623,734	17,027	\$312,161	17,701	\$19,493	Cost- Electricity % of total	94%
	M	Dec-16	2,975,872	16,396	\$253,625	39,954	\$36,945	Electricity cost per kWh	\$0.09
	A	Jan-17	2,707,301	16,297	\$245,461	46,902	\$43,242	Gas cost per therm	\$0.95
	M								

Actions Full Energy benchmarking report

Apr 2017

COMPARISON WITH REGIONAL SCHOOL DISTRICTS

The bar graph below compares your school district's overall energy use (kBtu/sq.ft) to other districts in your regional area only. Your district's overall energy use index (EUI) is highlighted in yellow. Lower EUI bars indicate lower energy use / better performance.



Judson Benchmarking report

Apr 2017

TARGETING SCHOOLS FOR FURTHER ASSESSMENT

The following conceptual chart shows the energy performance opportunity for each of your K-12 schools. The size of each bar indicates the percentage range of each school, and the color represents the energy performance measured to the middle. For example, a large red bar indicates a large school that is consuming significantly more energy and requires further assessment, which would make it a logical school to target for further assessment.

Targeting schools for further assessment

See our website to learn more and how we can assist in energy performance.





Thank You

