



# Operations Division

ENERGY MASTER PLAN

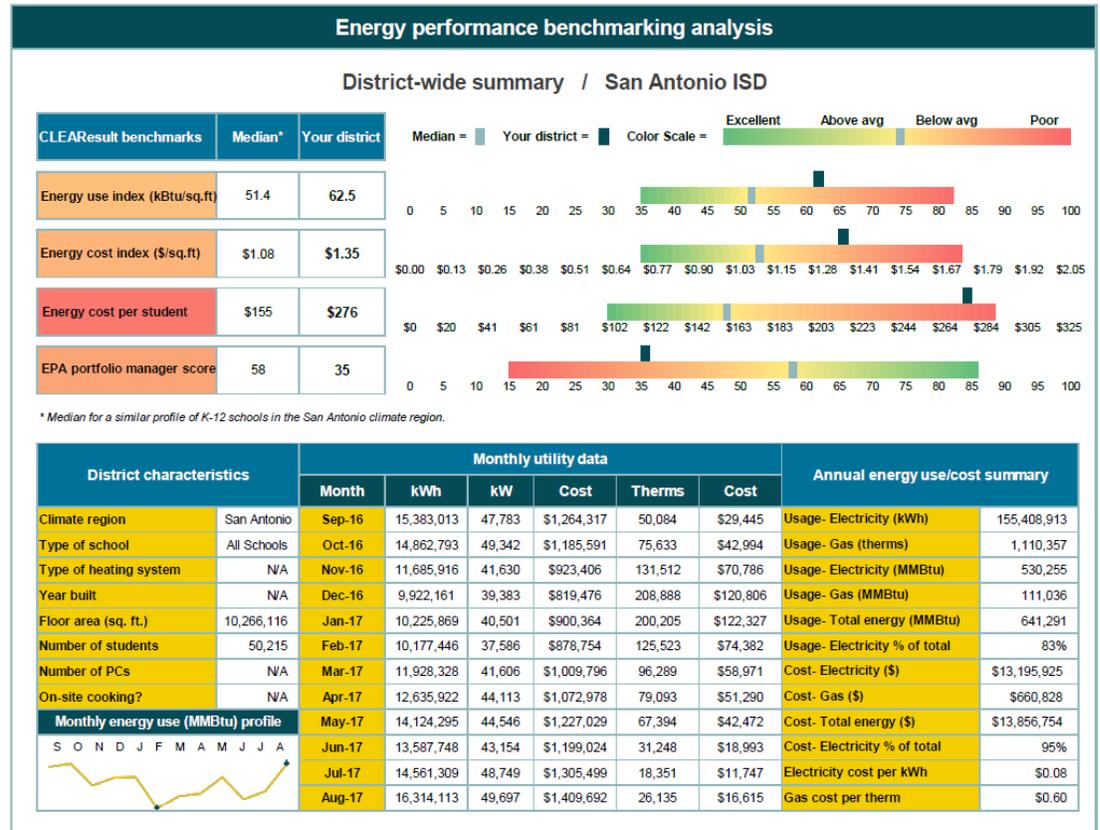
PRESENTED BY

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CHIEF OPERATIONS OFFICER

# Districtwide Energy Costs

- Almost \$14 million/year in energy alone
- Above average energy use/square foot
- Many opportunities exist to reduce energy consumption through behavioral changes and equipment upgrades

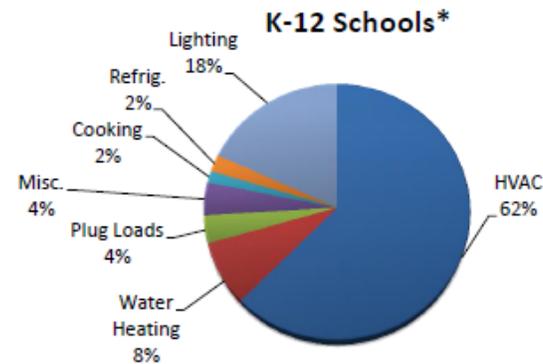


# Energy End Usage in K-12 Schools

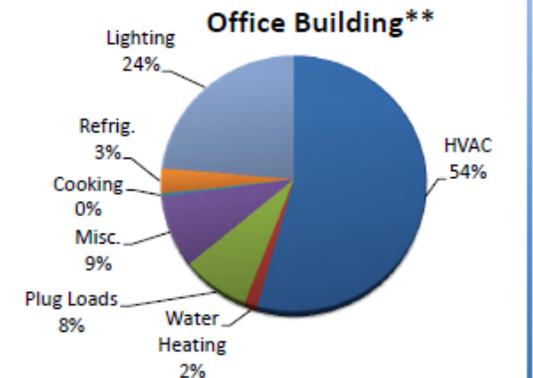
- HVAC drives our energy budgets
- Retrofits will target highest energy users
- Focus will also be on improving learning/working environment

## Preliminary Energy Assessments

### Energy Consumption Breakdown



\* DOE EIA 2003 CBECs - K-12 Schools in West South Central Region (TX, OK, AR, LA)



\*\* DOE EIA 2003 CBECs - Offices in West South Central Region (TX, OK, AR, LA)

Source Website: <http://buildingsdatabook.eren.doe.gov/CBECs.aspx>

# Projects Accomplished & Planned

## Retro-Commissioning

- Low-\$ system tune-ups
- 5-10 campuses/yr
- 8-10% energy savings



## Interior Lighting

- LEDs, controls
- 8 sites completed
- \$10K annual savings



## Boiler Controls

- Reduce cycling
- 80+ Campuses
- 15%+ gas savings



## Chillers & DX Units

- Eff. equip. w/ control
- 7 sites underway
- Longer payback periods



Immed.

1yr

3yr

4yr

5yr

9yr

25yr



## A/C Tune-Ups

- Preventive Maintenance
- 420+ Units/ No cost
- \$90K annual savings



## PC Energy Mgmt

- Software solution
- All schools and offices
- Save up to \$40/PC



## Window Film

- Reduce solar heat gain
- Target single-pane glass
- 4-5 yr payback



## Exterior Lighting

- LEDs, controls
- Target all campuses
- 60%+ Energy Savings



# Energy Master Plan

- Based on feedback from EMP Workshop
- 30% energy savings goal
- \$4.157 million annual savings\*
- Also includes goals for maintenance, equipment replacement, outreach, and funding for Energy Efficiency
- Staff requests Board endorsement

\*Savings under current utility costs; savings will increase with the cost of energy



**San Antonio ISD**  
**Energy Master Plan**  
Sponsored by CPS Energy • Provided by CLEAResult • June 21st, 2018

SAN ANTONIO ISD EFFICIENCY OPPORTUNITY:

<b>30%</b>	<b>\$4,157,026</b>	<b>7,226</b>
<small>Energy reduction for facilities benchmarked through the SCORE® Program</small>	<small>In combined annual energy cost savings</small>	<small>Passenger vehicles taken off the road annually <small>(environmental benefits equivalent)</small></small>

**Additional opportunities include:**

- Utility-paid cash incentives for implementing energy efficiency projects
- Improved usability and comfort in offices, classrooms and other campus buildings
- Positive public relations in the community, including press releases and incentive check presentations for any projects completed in the SCORE® Program

Questions?

