



# Operations Division

ENERGY & SUSTAINABILITY

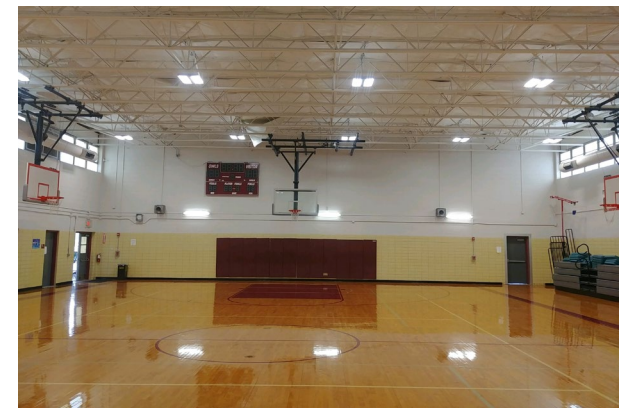
STUDENT ENGAGEMENT

# Highlands HS STEM LED Audit – Spring 2018

- STEM students from Mr. Broils' Problem Solving class were asked to assess lighting in the secondary gym as a candidate for an LED retrofit
- They reviewed construction documents and performed a site visits to collect field data, including the number & type of lights and to measure light levels
- Students researched solutions and presented their recommendation of an LED retrofit of the Secondary Gym to Operations leadership
- As a result, the lighting was converted to LEDs, resulting in energy savings, improved lighting levels, and an approximately \$1,200 rebate from CPS Energy



Picture source: April 19, 2018 insider



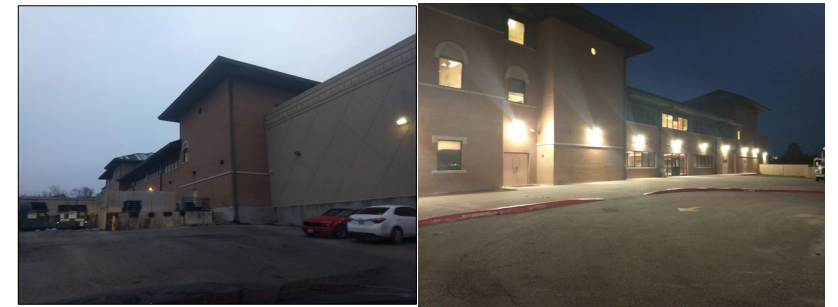
Post-retrofit gym with LED lighting

# Poe MS LED Retrofit – Spring 2019

- Campus Administration requested to have exterior lighting replaced due to a high number of inoperable fixtures
- Facilities Services determined that a complete replacement with LEDs was the best option to save energy and improve light levels
- Facilities offered to tie this project into a learning opportunity and the Principal connected staff with Ms. Rabago, who agreed to incorporate the lesson into her 6<sup>th</sup> grade AVID science class
- Students participated in a lighting experiment and also assisted in collecting field data from exterior lights
- Following the student's recommendation, all exterior lighting was replaced, resulting in brighter security lighting and a rebate of over \$5,300 from CPS Energy



Students participate in a lighting experiment



Exterior lighting before

Exterior lighting after

# CPS Energy Poster Contest – Spring 2019

- The District actively participates in CPS Energy’s Resource Management Services behavior-based energy conservation program
- One of the goals is student engagement and in February, 2019 Facilities reached out to the Fine Arts Department to enlist teachers who would encourage their students to create posters encouraging energy conservation
- One hundred and twenty-one (121) entries were received from 6 campuses in the elementary and middle school grade levels.
- Three Districtwide winners were selected as well as a winner per campus, for a total of 9 winners. Certificates were printed for all the winners and winners were recognized at the April 8<sup>th</sup> Board meeting.
- Posters from the 3 Districtwide winners were printed, courtesy of CPS Energy, and distributed to all campuses.



## POSTER CONTEST:

*Are you handy with a brush, pencil or pen? Do you like creative projects?*

Put your talents to work creating an original poster encouraging students and teachers to save energy! The winner will present their project to the school board and will have their poster printed and distributed throughout the school district.

**Who can participate?**

- Any current student.

**What are you making?**

- An original poster using charcoal, pencil, markers, pen or paint on 8 1/2" x 11" sized paper, in portrait orientation, that reminds students and teachers to help save electricity.

**Why?**

- To help save our school district's and earth's resources by encouraging students to use less energy. Using less electricity results in lower costs for our district and helps the environment.

**How & when to submit your work?**

- Submit your work in person to your school's office by Monday, March 4, 2019 with your name, school, grade level, and email address (will only be used to notify winners) clearly written on the back. Winners will be selected in each category: elementary, middle and high school. The winners' posters may be used by CPS Energy in their marketing & advertising.



This contest is sponsored by CPS Energy through your district's participation in the Resource Management Services measure. Please contact [energy@cpsenergy.com](mailto:energy@cpsenergy.com) with any questions.



Trophies were awarded to the top 3 winners



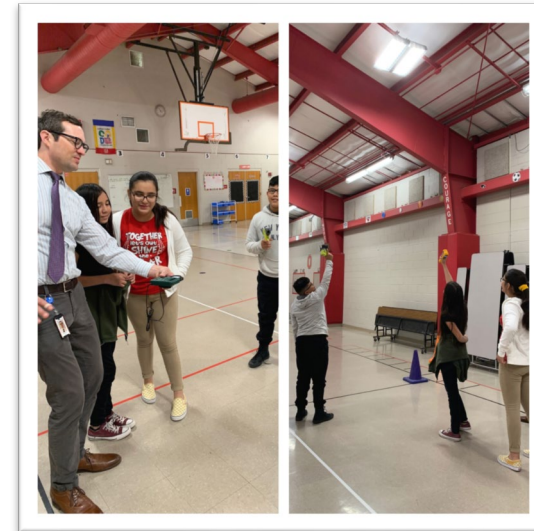
# Waste Warriors Recycling Challenge

- Grant-funded program to make single-stream recycling available to additional campuses
- 7 campuses selected and were given new recycling bins
- Facilities provided informational posters and met with campuses to explain accepted recycling practices
- Highlands HS students in Ms. Alvarado's art class designed and painted dumpsters that were used to collect recycling at the participating campuses
- Recycling efforts at these campuses will continue and the grant has paid for bins for an additional 7 campuses to begin recycling in the 2019-2020 school year



# Gym LED Retrofits – Fall 2019

- Facilities Services determined that gym LED retrofits were needed at Ogden Academy and Young Men's Leadership Academy (YMLA)
- Teachers at both schools were interested in tying the retrofits into project-based learning exercises for their students
- Students participated in a lighting experiment/lesson and also assisted in collecting field data from the gym lights
- Following the lessons, all gym lighting was replaced, resulting in better-lit athletic facilities with lower energy usage and lights that will last 10+ years!



Students participate in a lighting experiment




Gym lighting before


Gym lighting after

# Watt Watchers of Texas

- Student-led behavior-based resource conservation program
- Available for free through the State Energy Conservation Office (SECO)
- Facilities is working with Academics to tie into science curriculum
- Will likely implement a pilot/limited launch with a target start date of Spring 2020 semester
- Campuses are eligible to enroll at any time and are encouraged to assign an Energy Champion to ensure the program is successful



## Watt Watchers of Texas







Watt Watchers of Texas is a state-sponsored STEM program to help boost energy literacy for K-12 students and help schools save money by saving energy. Through the program, students, teachers, and families will have access to energy saving tips, activities, and lessons. Launched in 1985, Watt Watchers of Texas is an updated resource that builds upon the original beloved program and provides a modern look at energy, sustainability and conservation.

- Over 100 project-based lessons and activities
- Fully TEKS aligned
- Student and campus centered
- Student Patrols save your school money

So dive in and start exploring—because Texas is too good to waste!

[www.watt-watchers.com](http://www.watt-watchers.com)



# Interested in Student Engagement Opportunities?

Contact Aaron Stein,  
Director of Energy & Sustainability  
210-354-9300, ext. 54514  
[astein1@saisd.net](mailto:astein1@saisd.net)