

# Energy Conservation Program Board Update

## Alameda Unified School District

June 2016 – January 2019

# A Day in the Life of an Energy Specialist

- Perform 20-30 unoccupied and occupied audits per week – over 3,600 audits to date
- One-on-one training with Cenergistic staff
- 130 visits from Cenergistic Engineers and Consultants to date
- EMS operation and matching conditioning times to occupied times
- Work with Maintenance Team and contracted technicians
- Continuous communication to teachers and staff
- Promote an “energy conservation culture”
- Continually assess and reassess the program

# Energy Program Success

## Success Factors

1. **Teamwork** — All organization personnel
2. **Data analysis** — Energy Specialist
3. **On-site training and expertise** — Cenergistic
4. **Energy Conservation and Comfort**  
Diagnose comfort issues and work to resolve the root cause — not just the symptoms
5. **Comprehensive facility audits** —  
Expert identification of energy conservation opportunities throughout system facilities

## Program Benefits and Features

1. **Budget** — Dollars retained for educational purposes
2. **Environmental** — Conservation of natural resources
3. **Self-funding program** — Conservation activities generate savings which pay for the program
4. **Comfort** — Program reduces comfort complaints
5. **Longevity** — Program designed to be ongoing

# 2018 Energy Use Analysis

Jan 2018 – Dec 2018

Expected KBTU Use	48,112,256
Actual Use	33,966,556
Program Savings	14,145,700
Savings Percentage	29.4%

## Expected Energy Use

- Amount organization would have used on energy without energy program
- Base year usage adjusted for changes in weather, energy loads and prices

## Actual Energy Cost

- Actual energy usage for electricity, water, sewer, and gas as a result of energy program

## Program Savings

- Program implementation resulting in behavior changes
- Cenergistic training and support
- Reductions in equipment run times

# Alameda Unified School District Yearly Reductions In Usage

**2016 = 16%**

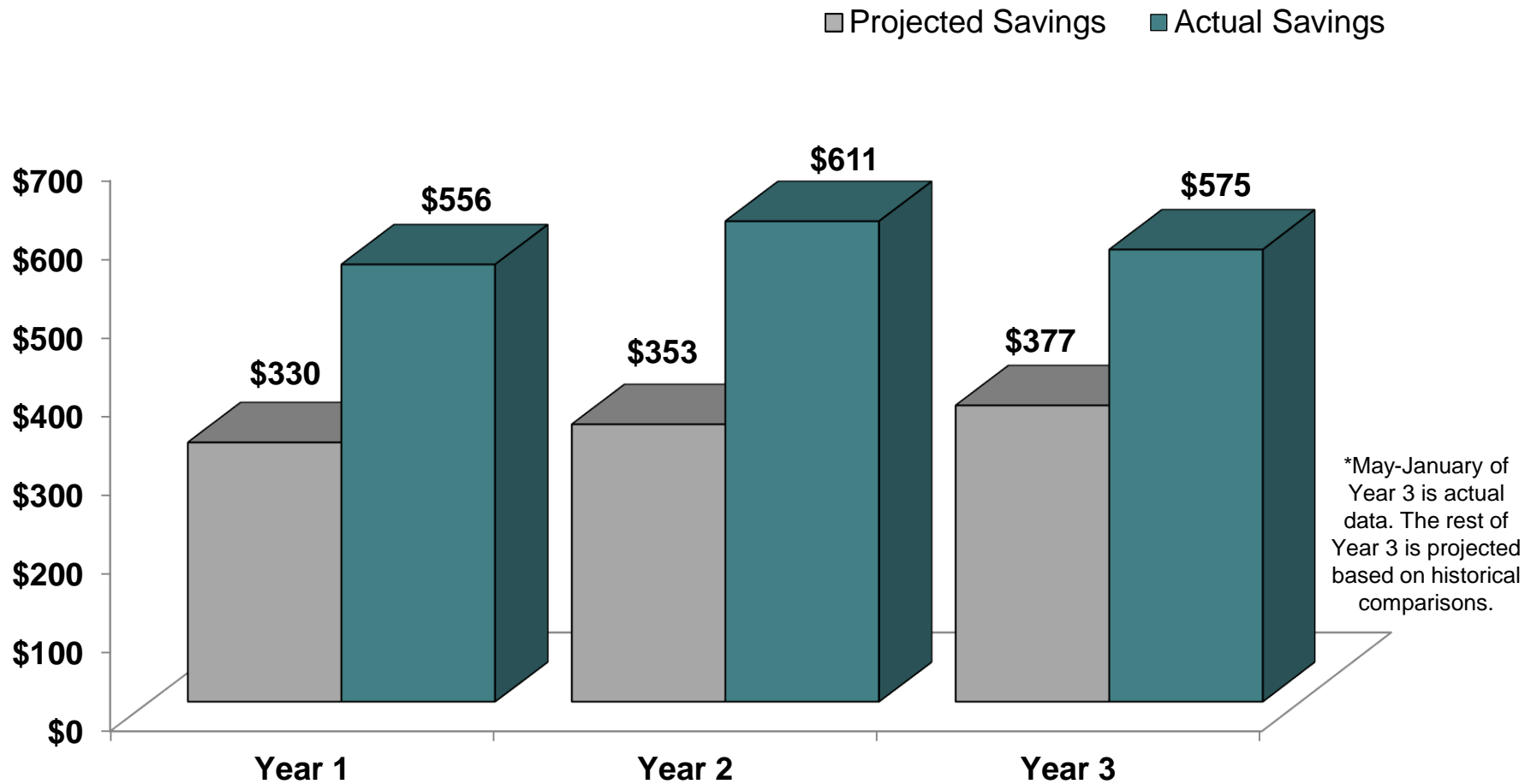
**2017 = 23%**

**2018 = 29%**

**Electricity** is **51%** of entire commodities cost

- In **2018** there was **26.1%** avoidance
- A **4%** increase in from 2017

# Projected vs Actual Savings



# Alameda Unified School District

Energy Savings To Date:

**\$1,452,131\***

**26%**

32 months into energy program

\* Dollar savings figure includes QuickStart period, February 2016 – May 2016.  
Performance Period is June 2016 – January 2019.

# Energy Program Environmental Impact

**34,046,118 KBTUs Avoided**



**Equivalent to one of the following:**

**Greenhouse gas reduction (metric tons) CO<sub>2</sub>      1940**

**Tree seedlings planted, grown for 10 yrs.      49,745**

**Passenger cars not driven one year      404**

# The Future of Our Energy Program

- Standardize energy saving concepts to future construction
- Implement drought standards in irrigation use
- EMS Training for our new Alameda High School system
- Prepare for Summer Shutdown to achieve greater savings
- Continue to work with maintenance to resolve comfort issues  
— comfortable buildings improve student learning, help staff productivity, boost worker morale

# Teamwork

*The success of the program depends on everyone!*

**Special thanks go to:**

- **School Board** for proactively implementing our program
- **Maintenance Staff** for executing changes in the heating and cooling systems
- **Principals** for coordinating efforts in their schools
- **Office Managers** for driving change at their sites
- **Teachers** for reducing energy waste in their classrooms
- **Custodians** for their continued support during each break