



# California Association for Bilingual Education

November 27, 2023 & December 14, 2023

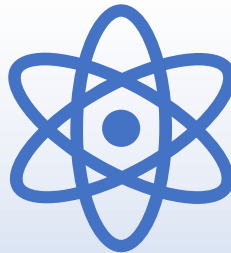
# Agenda

- Who is Veregy?
- Preliminary Energy Assessment (PEA) Review
- Orchestrate - Master Systems Integration
- Q & A, Next Steps

# We Are True Partners Benefits Beyond Savings



Over 95% of our work is with America's School Districts, nationwide.



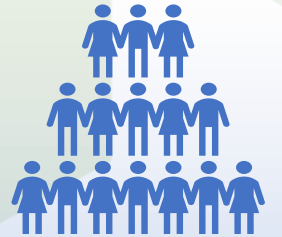
We are an Energy Solutions Company.



Enhance the learning environment, make campuses safer,  
More efficient, and sustainable.



Find funding sources for your projects.



Communication and Collaboration!

Let's Connect!



# Local and National Associations & Certifications



CALIFORNIA'S  
COALITION  
*for* ADEQUATE  
SCHOOL HOUSING<sup>SM</sup>

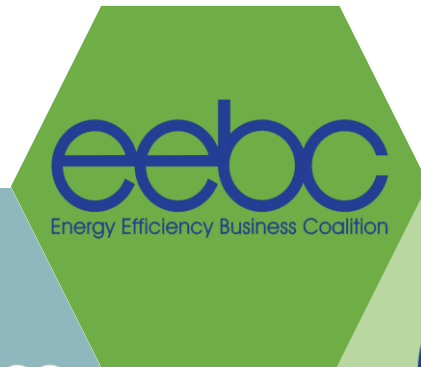
greenTECHNOLOGY   
Strategy and leadership for clean and sustainable communities



association of california  
school administrators



Our engineers, superintendents, and tradesman are licensed professionals who maintain an array of certifications, licenses, alliances and associations.




# What We Do...

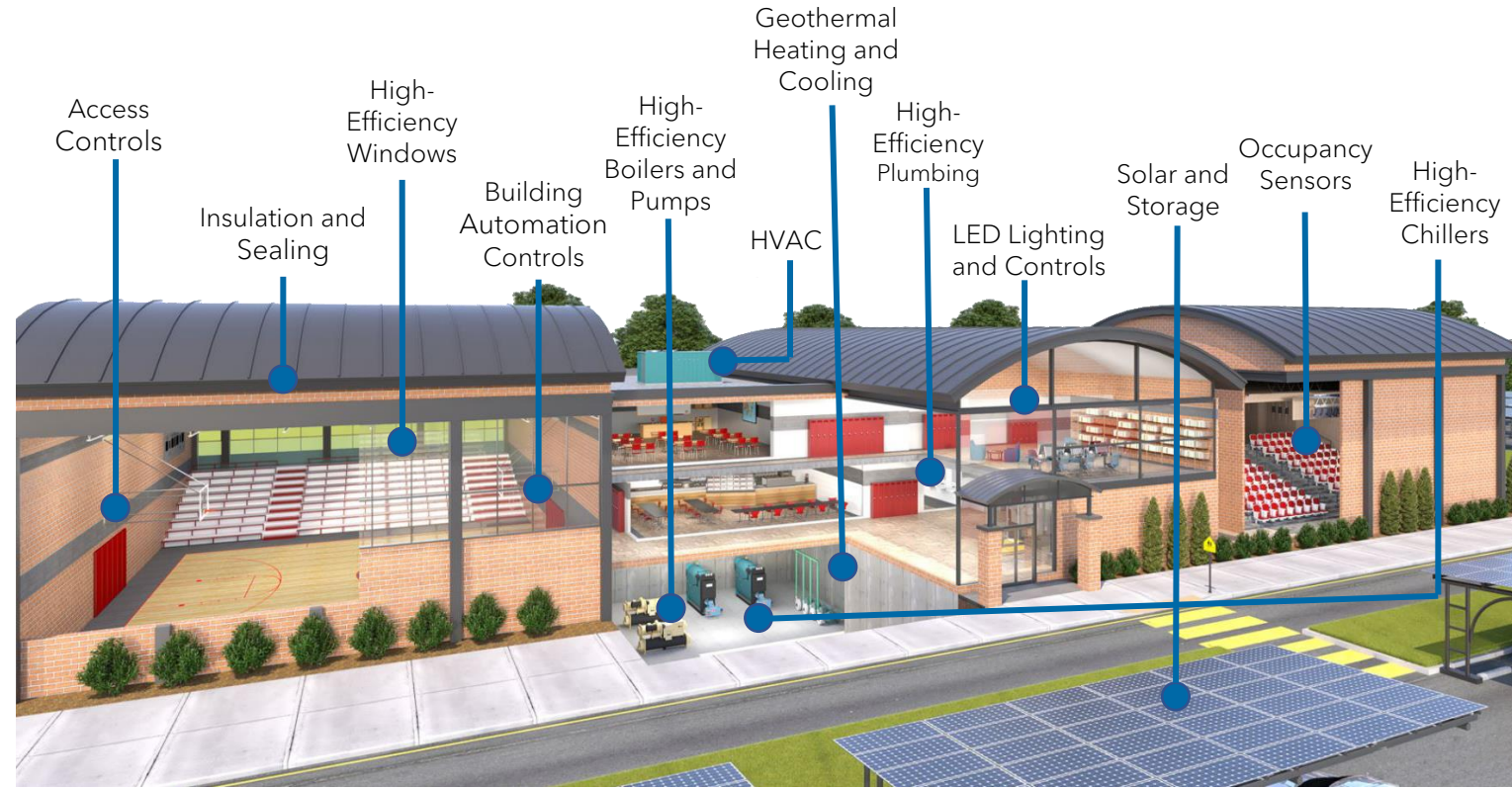
 Energy Efficient Solutions

 Facility Services

 Engineering Solutions

 Distributed & Renewable Energy

 Smart Building and Systems Integration



## Energy Efficiency: Energy Conservations Measures



Distributed Energy



Lighting



Water



Electrical Distribution



Building Envelope



Controls

## The Road Traveled So Far....

### California Association of Bilingual Education

- Initial Informal Meeting with Dr. Lampkin, at CLSBA in Long Beach: 9/29/2023
- Crossed paths with Dr. Lampkin at ALAS in San Antonio, TX: 10/5/2023
- Preliminary Energy Assessment (PEA) Walk - CABE, Walnut, CA: 10/25/2023
- Virtual Meeting Regarding CABE Annual Conference Participation: 11/27/23
- Preliminary Energy Assessment (PEA) Virtual Review: 12/14/2023

# CAEBE

## PEA Review

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2023

# Lighting

## Current Lighting Conditions

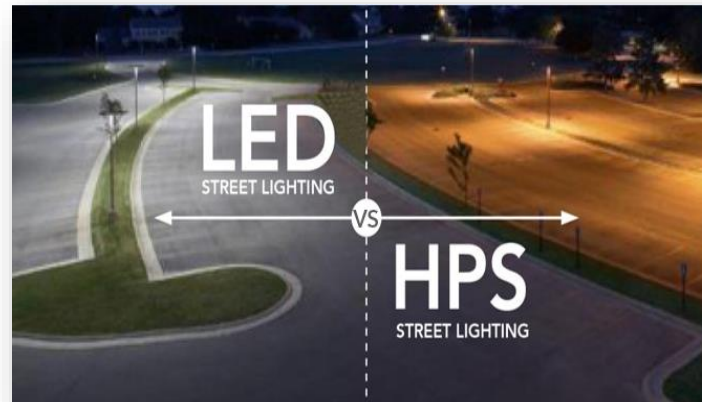
- CABE has a combination of LED, linear fluorescent, and compact fluorescent lamps throughout their sites.

## Proposed Lighting Solution

- Interior:** Where applicable, existing fluorescent lighting would be retrofitted with new LED lamps, drivers and fixtures.
- Exterior:** Where applicable, existing fixtures that are not currently LED will be replaced with new LED fixtures or retrofitted with LED lamps.

## Potential Benefits

- ✓ Standardization - Inventory
- ✓ Enhanced working environment
- ✓ 10-year warranty
- ✓ 75,000 + hours rated life - savings of not purchasing light bulbs for 25+ years





# HVAC Equipment

## Currently...

Your site currently utilize package units to meet their space cooling and heating needs. While the units were serviced regularly, many of the existing units have exceeded their useful life and are recommended to be replaced with high efficiency units.



## Proposed Solution

Under an energy efficiency program, remove and replace the old, inefficient package HVAC units with new high efficiency units.

## Potential Benefits

- ✓ Improved comfort and energy efficiency
- ✓ Right-sizing of HVAC equipment
- ✓ Standardization of HVAC equipment
- ✓ Improved Indoor Air Quality (IAQ)
- ✓ Improved Learning Conditions

# Water

## Currently...

A variety of different toilet and urinal fixture types were identified throughout the sites. Many toilet fixtures are designed at 1.6 GPF but often exhibit flush rates up to 3.5 GPF. Many urinal fixtures are designed at 1.0 GPF but exhibit flush rates up to 2.0 GPF. A variety of different faucet fixtures were identified during walk-throughs. Faucets identified contained their original aerators, which often exhibit flow rates up to 2.5 GPM.

## Proposed Solution

- The domestic water efficiency opportunities discovered and proposed include domestic **plumbing improvements** such as:
  - Low-flow toilets (0.8-1.28 GPF)
  - Faucet retrofits/replacements (0.5 GPM)
  - Urinals (0.125 GPF)



## Potential Benefits

- ✓ Standardization of equipment
- ✓ Lowers maintenance calls
- ✓ Largest savings measure



# Baseline Utility Consumption

Total Utility Cost: \$17,086

Potential Savings: \$3,500 - \$5,125

Operational Savings: TBD

Grants and Rebates: \$4,750

Potential Project: \$35k – \$120k

Total Square Footage: 15,000 (estimated)

KPI – Key Performance Indicator:

Energy Use Index (EUIe): 3.9 kWh/ft<sup>2</sup>

*Goal: 1.5 – 2.0 kWh/ft<sup>2</sup>*

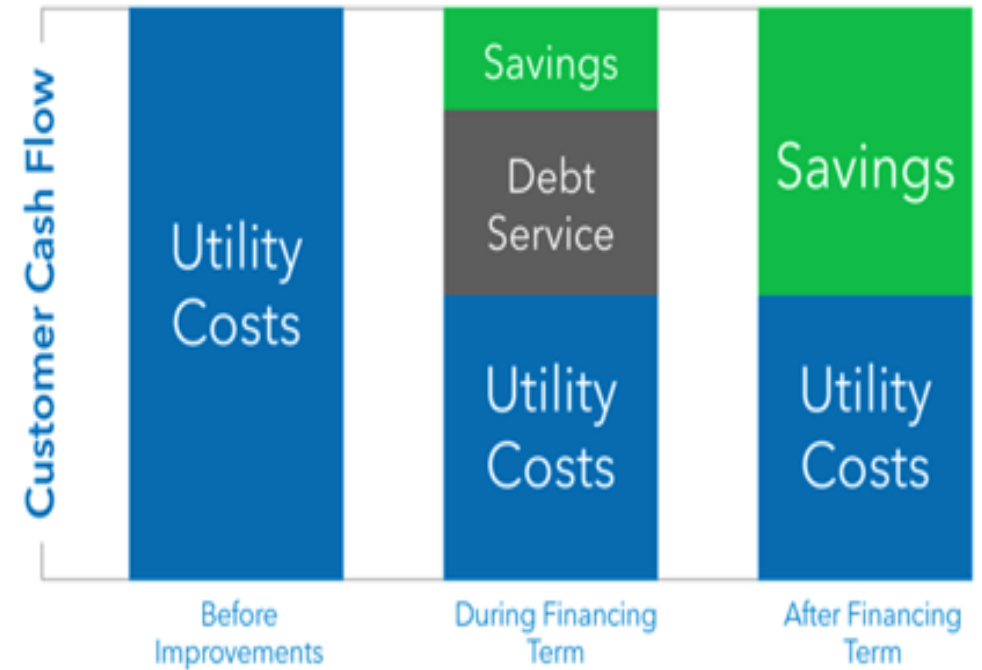
Utility Cost : \$ 1.14 /ft<sup>2</sup>

*Goal: >\$1.00/ft<sup>2</sup>*



# Potential Savings Summary

|   |   |
|---|---|
| Potential Project                                     | \$35,000 – \$120,000                        |
| Potential Utility Cost Savings (1 <sup>st</sup> Year) | \$3,400 – 5,125                             |
| Potential Grants/Rebates/Savings                      | \$3000 – Lighting<br>\$1750 – Miscellaneous |



# Master Systems Integration Orchestrate

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2023

# Problem: Facility Systems Overload



# Purpose and Goal

Why are we here?

How do we do it?

What do we do?



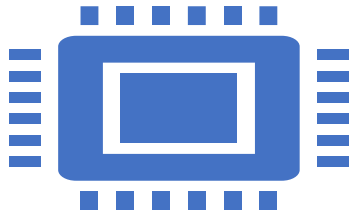
ORCHESTRATE  
BY VEREGY

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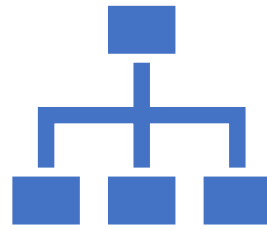
> 20 - 30%

# Overview - Master Systems Integration - (MSI)

A MSI will ...



Integrate systems into a **single user interface** and **common platform** allowing systems to anticipate, **communicate** and **operate as a single smart building**.



**Design** and **implement** a **facility plan**.



Provide **future readiness**, **reduced maintenance costs**, **energy savings**, and **higher operational efficiency**.



# Orchestrate = Connecting Everything

## Applications



# Building Automation Systems & Potential Integrations

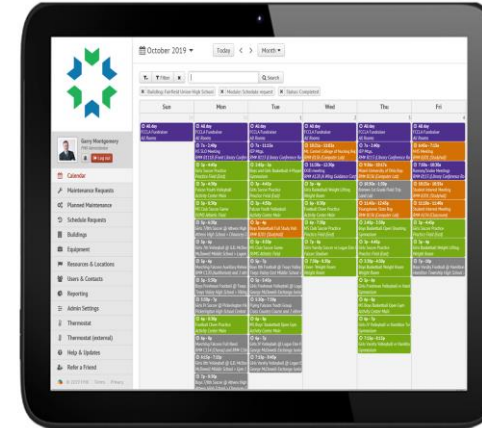
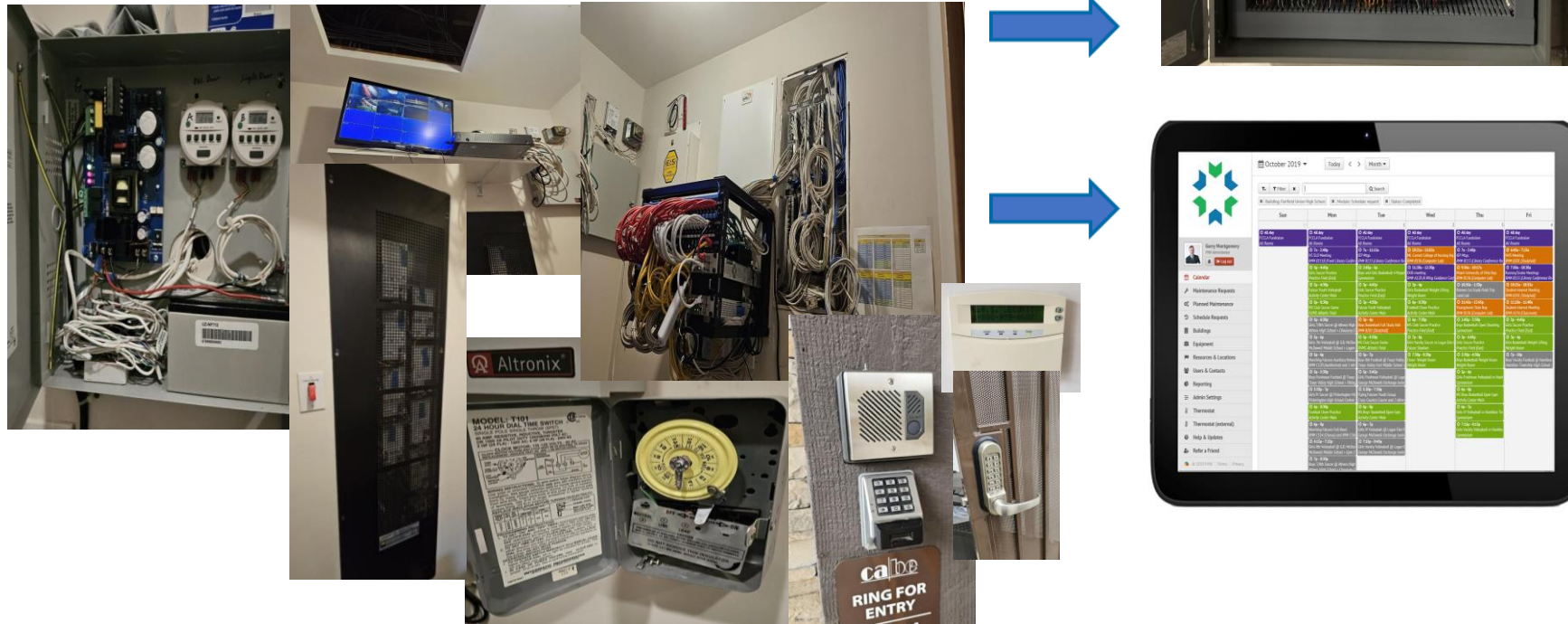
## Summary

- CABE does not currently utilize a Building Automation System (BAS).
- Currently, CABE does not have a Utility Management, Demand Management, or Leak Detection system.
- All HVAC controls in the district are done by wall, programmable thermostats.



## Proposed Solution & Potential Benefits

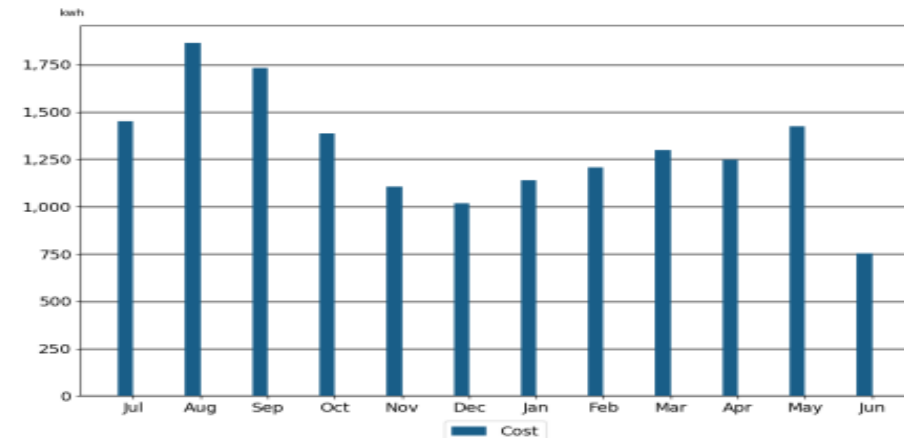
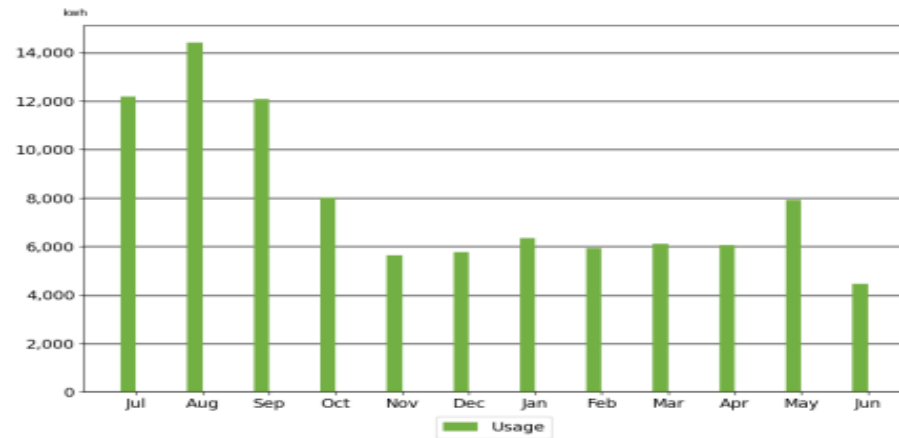
- Suite of Veregy's cloud-based software solutions.
- Standardization of equipment
- Improved work-flows
- Energy savings
- Lower maintenance calls/tickets/work orders
- Integrated systems



# Orchestrate Dashboard

## District Office Electric

| Date        | Jul 2021 | Aug 2021 | Sep 2021 | Oct 2021 | Nov 2021 | Dec 2021 | Jan 2022 | Feb 2022 | Mar 2022 | Apr 2022 | May 2022 | Jun 2022 | Total  |
|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------|
| Usage (kwh) | 12.18K   | 14.40K   | 12.09K   | 8.02K    | 5.65K    | 5.77K    | 6.35K    | 5.93K    | 6.12K    | 6.07K    | 7.90K    | 4.47K    | 94.94K |
| Demand (kw) | 49.74    | 48.38    | 44.39    | 34.08    | 21.99    | 22.06    | 23.23    | 21.34    | 23.80    | 24.97    | 33.94    | 18.97    | 49.74  |
| Cost (\$)   | 1.45K    | 1.86K    | 1.73K    | 1.39K    | 1.11K    | 1.02K    | 1.14K    | 1.21K    | 1.30K    | 1.25K    | 1.43K    | 752.45   | 15.63K |
| S/kwh       | 0.12     | 0.13     | 0.14     | 0.17     | 0.20     | 0.18     | 0.18     | 0.20     | 0.21     | 0.21     | 0.18     | 0.17     | 0.16   |



# Review, Q & A, Next Steps

2023