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# MJUSD + SiteLogIQ Partnership Summary



SEP  
10  
2024





1. District History
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3. Financing
4. SitelogIQ Partnership
  - a. HVAC
  - b. Lighting
  - c. Solar
  - d. Energy Management
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6. Payments vs. Savings

AGENDA

# District History

- Unable to pass a general obligation bond
- Modernize district facilities without impacting the general fund
- Utilize supplemental funding sources
- Greater district-wide equity
- Compliance with current and future State Building Codes and Legislation

# Program Objectives

- Self-funded program savings pay for the project - budget neutral or cash flow positive
- Lower operating cost
- Improve operational efficiency
- Improve the learning environment
- Aid the district in strategic planning for today and in the future

# Financing

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- General obligation bonds
- Certificate of participation COP
- Tax exempt municipal lease
- Grants, incentives and rebates
- \$354k in CalSHAPE for thermostat upgrades
- \$240k unspent Prop 39 funds
- Anticipating \$6M in Phase 1 and \$1M in Phase 2 from IRA
- A bond was attempted in March 2024 but it did not pass

# HVAC

## HVAC Equipment Upgrades

- School sites using inefficient equipment past useful life
- Lindhurst central HVAC plant failing/pending grand jury indictment
- Total of 322 new high efficiency HVAC units installed (1,425 tons)
- Put district into Title 24 compliance

## Pelican Thermostats

- District had outdated mechanical controls, some containing mercury
- 725 wifi-enabled smart thermostats installed
- Control custom daily HVAC schedules
- Allow for holiday scheduling and remote control

## COVID Air Purification

- 1,500 GPS bi-polar ionization units installed district-wide starting April '21
- Reduce airborne particles, odor, and pathogens
- 99.4% efficient in inhibiting and eradicating COVID-19



## Lindhurst High HVAC Before



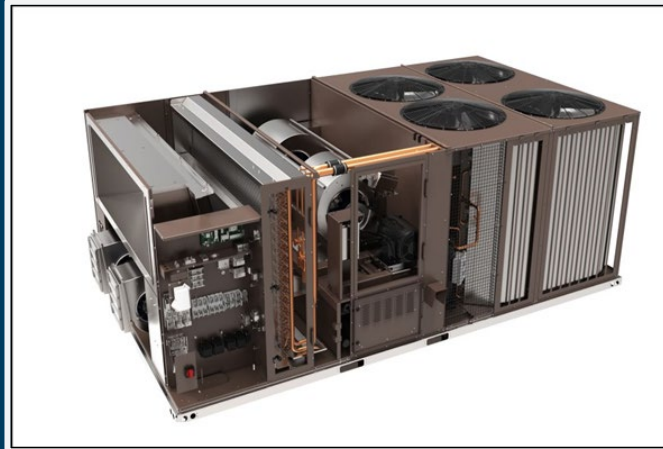
## Lindhurst High HVAC After



## End-of-life HVAC

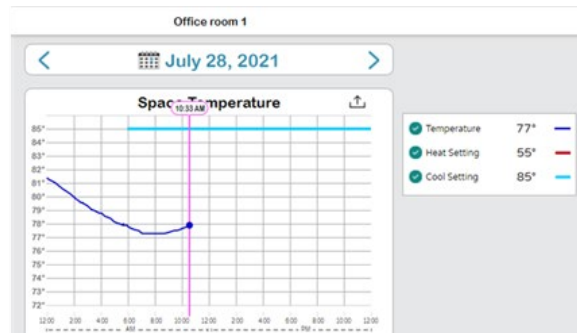
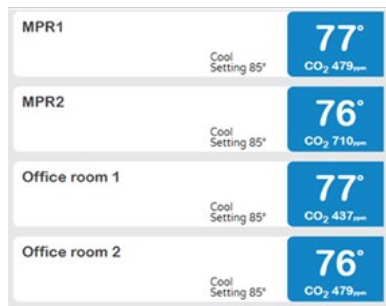


## Example Of New High Efficiency Package Unit





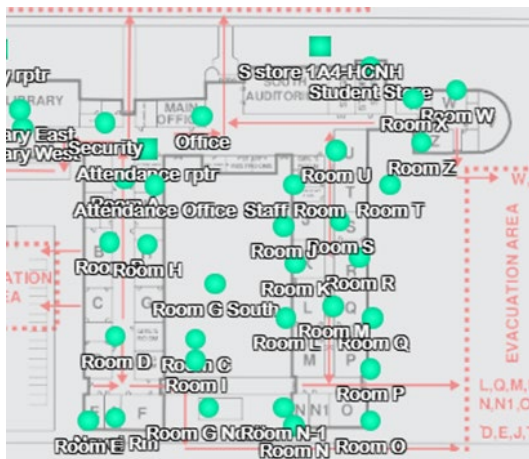
## Computer Interface for New Thermostats



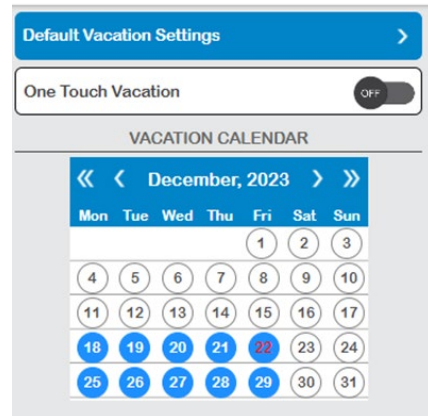
## New Thermostats



Wireless Repeater  
(WR400)



## Vacation Settings



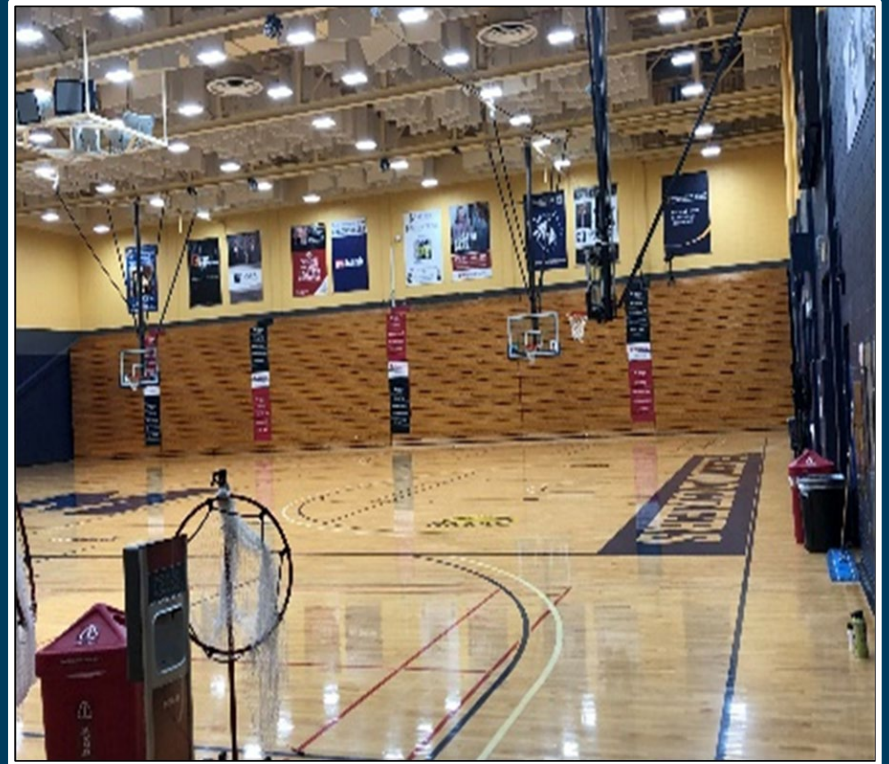
# Lighting

- Lighting upgrades
  - Inefficient magnetic ballasts and fluorescent lamps retrofitted with high efficiency, low wattage electronic ballasts and LED lamps
  - 7,910 new lighting fixtures installed at 19 sites from April to July '21
- Emergency lighting
  - Installed at 19 sites

Lindhurst High Before



Lindhurst High After



# Solar

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- Solar array installation
  - Allows for on-site, zero-emission electricity generation at a lower cost than purchasing from the utility company

## Phase 1

12 sites, 4,103 kW

1<sup>st</sup> site online: Feb '22  
All sites online: Jan '23

## Phase 2

3 sites, 396 kW

1<sup>st</sup> site online: Feb '24  
All sites online: Apr '24

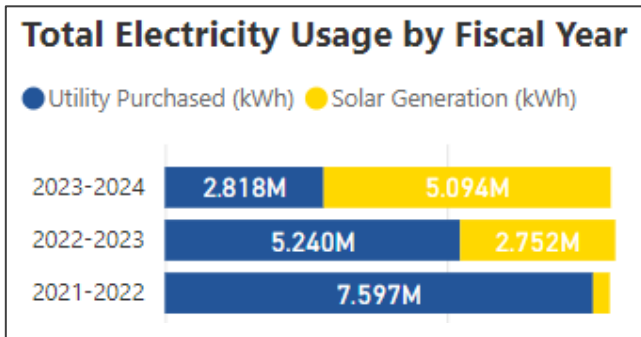
## Phase 3

2 sites, 373 kW

Construction ongoing  
Est. completion: '25

# Solar

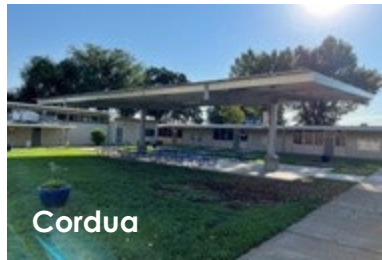
- Solar production
  - Over 64% of '23/'24 electricity from solar
  - Expected to surpass 87% of district electricity in '24/'25 (Phase 1&2) and 93% in '25/'26 (Phase 1-3)
- Battery storage
  - 150 kW/558 kWh battery energy storage system to be installed at Foothill
  - Stores excess solar electricity, increases resiliency
- Ongoing solar operations and maintenance
  - Site monitoring and reporting, maintenance, and inspection services







Browns Valley



Cordua



Edgewater



Ella



Johnson Park



Kynoch



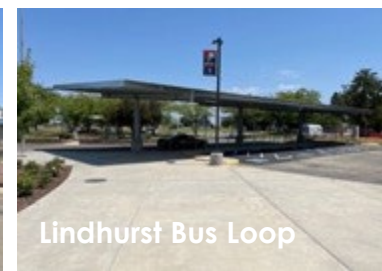
Kynoch Bus Loop



Kynoch Kinder



Linda



Lindhurst Bus Loop



Lindhurst GM



McKenney



MHS Building



MHS Bus



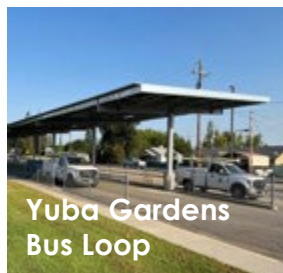
MHS Pool



Olivehurst



South  
Lindhurst



Yuba Gardens  
Bus Loop



Yuba Gardens  
Playground



Arboga



Covillaud



## Upcoming Foothill Solar and Battery Site

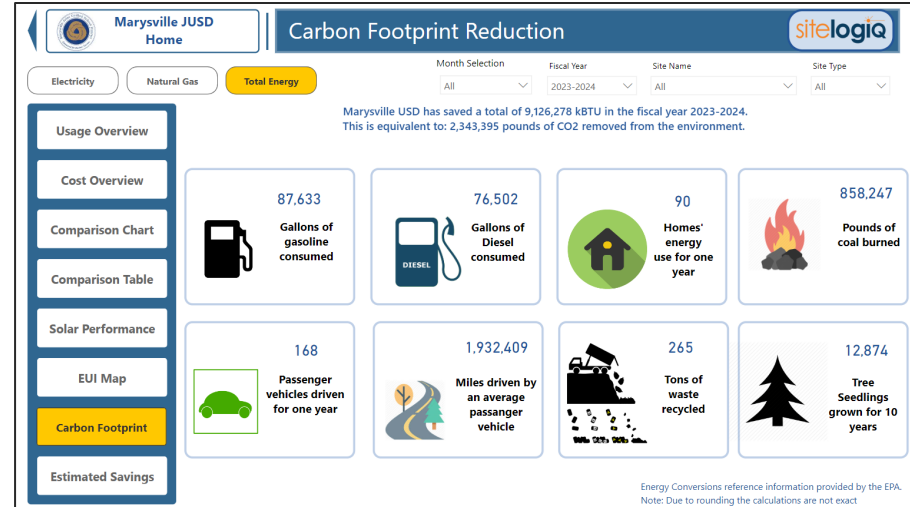
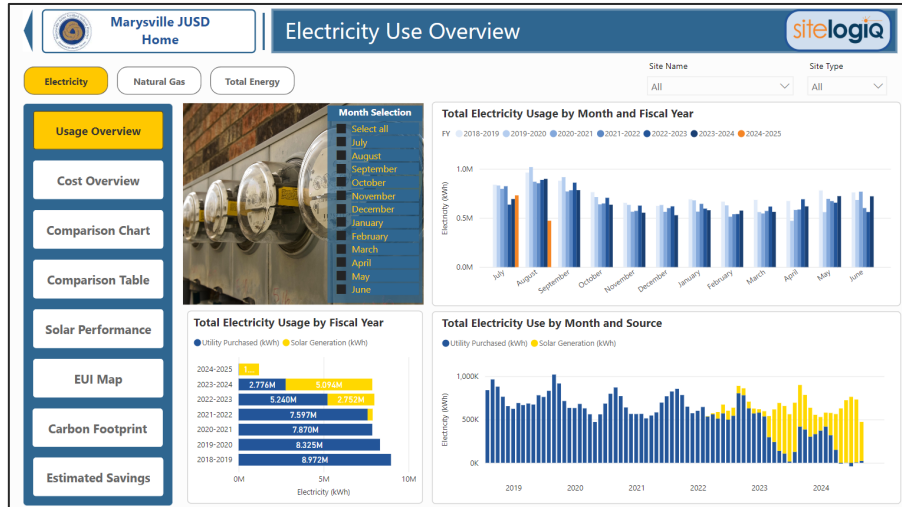


## Upcoming Cedar Lane Solar Site



# Energy Management

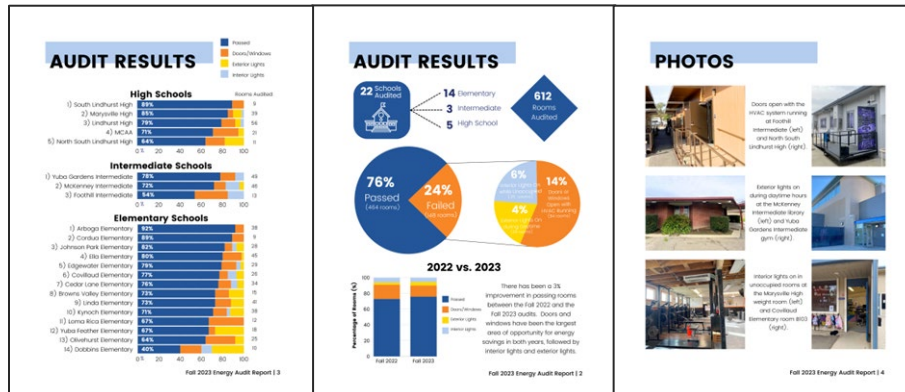
- Evaluate district energy use and implement energy savings strategies
  - Utility bills tracked monthly on [District Energy Dashboard](#)
    - *Over \$120,000 in bill credits obtained from PG&E in September '23 due a billing error*
  - Annual rate analysis to verify electric meters are on lowest rate tariffs



Energy Conversions reference information provided by the EPA.  
Note: Due to rounding the calculations are not exact

# Energy Management

- On-site Energy Audits
  - Walkthroughs during school hours to identify energy savings opportunities
  - Schools ranked based on audit results and notified of standing
- California Energy Commission Energy Star Reporting
  - 8 sites required benchmarking and were successfully submitted in '23/'24
  - Cost of non-compliance: up to \$16,000/day (\$2,000 per day per site)





# Education

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- Student and staff trainings and presentations on energy efficiency, conservation, renewable energy, and energy careers
  - Guest lectures in K-12 classrooms on energy-focused topics
  - Green Boot Camp: Hands-on STEM training for teachers
  - Earth Day: Conservation-focused events and demos for students





- Energy Management Program Communications

MJUSD Energy Management Program

November 2023

# THANKSGIVING BREAK SHUTDOWN PROCEDURE

Thanksgiving Break is one of the most important times of the year for conserving energy. As you prepare for the holiday break, please take a few minutes to ready your area for this vital shutdown.

## 1) TURN OFF

Turn off lights, computers, TVs, decorations, and any other electricity-consuming devices.

## 2) CLOSE

Close blinds, shades, windows, and doors.

## 3) UNPLUG

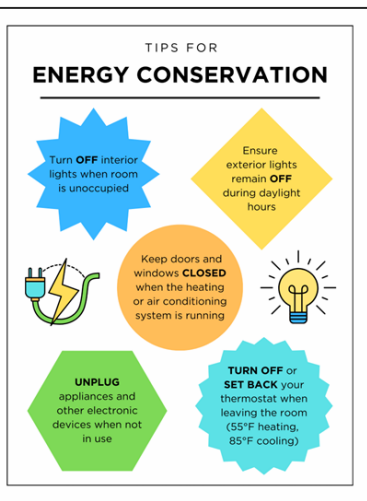
Unplug microwaves, coffee makers, projectors, smart boards, doc-u-cams, printers, and any other plug loads.

## 4) SET BACK

Set your thermostat to 55°F heating and 85°F cooling.

**Question?** Email the MJUSD Energy Manager at [emily.sechrist@stetologics.com](mailto:emily.sechrist@stetologics.com)

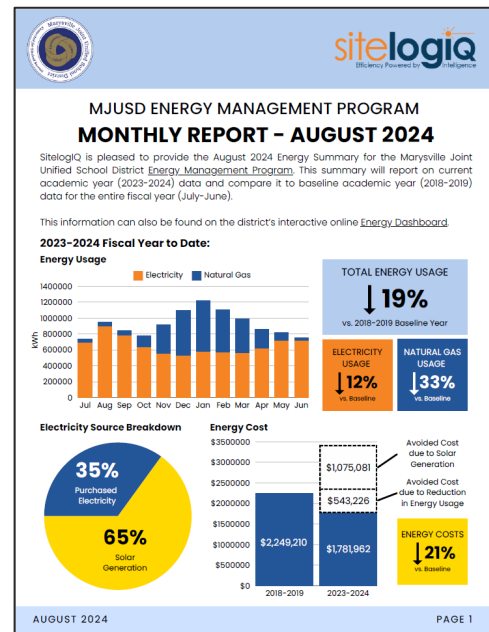
Find out more about MJUSD's Energy Management Program [HERE](#)



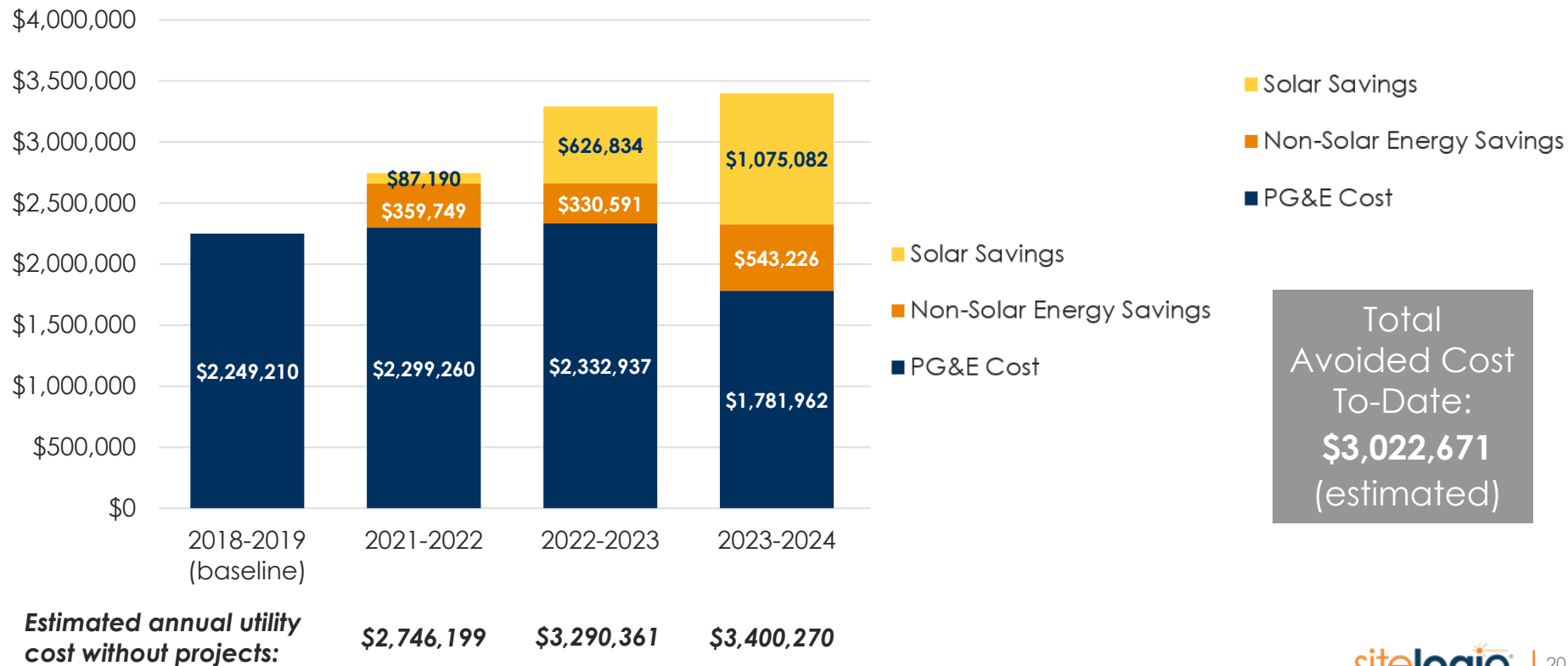
# Monthly Energy Manager Reports



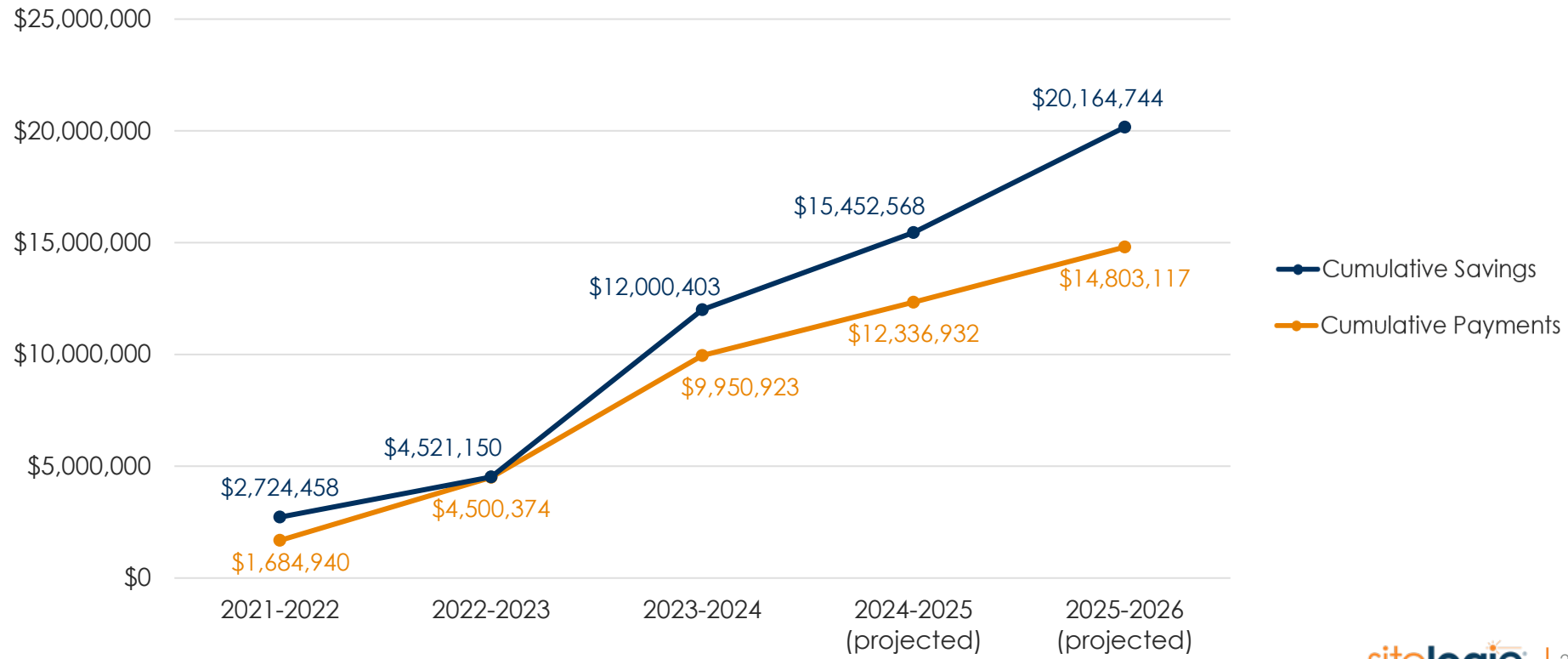
## Lights Out Decals



# Cost/Savings Summary



# Payments vs. Savings





## Thank You

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# Definitions:

- PG&E Cost:
  - Actual cost paid by district to PG&E for electricity and natural gas service
- Solar Savings:
  - Avoided cost due to on-site solar electricity generation
- Non-Solar Energy Savings:
  - Avoided cost due to reduction in energy usage from non-solar projects (HVAC, controls, lighting, energy management)
- Estimated annual utility cost without projects
  - Estimated PG&E cost without solar and non-solar energy savings
- Cumulative Payments:
  - Cost district has paid year-over-year including annual COP finance payment, Solar O+M services, and Energy Management services
- Cumulative Savings:
  - Savings district has realized year-over-year including avoided cost and maintenance savings, Prop 39, SGIP, & AB841 Contribution, IRA Incentive, solar savings, and non-solar energy savings