



**OAKLAND UNIFIED
SCHOOL DISTRICT**

Community Schools, Thriving Students

Energy Conservation & Infrastructure Improvement Project

California Schools Healthy Air, Plumbing and Efficiency (CalSHAPE)



Presented by Preston Thomas, Chief Systems and Services Officer
Gabe Johnson, Syserco Energy Solutions

Presented to OUSD Facility Committee

March 21, 2024

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Overview

Objective

- Present detailed project overview for CalSHAPE + Energy Conservation Project to Facility Committee
- Establish a level of familiarity and understanding of the project, including Scope of Work, project costs (*including all funding sources*), and potential financial savings
- Address all questions and concerns by Facility Committee

Desired Outcome

- Overall endorsement and support of project by Facility Committee for key areas.
- Recommendation by Facility Committee to request approval by Board of Directors to enter into a Project Implementation Agreement with Syserco Energy Solutions when it comes to Board in April for approval
- Establish a timeline for project approval that allows maximum amount of work to be completed in Summer of 2024



Background

In June 2021, District Staff engaged with Syserco Energy Solutions (SES) to proceed with detailed engineering and final project development for a comprehensive Energy Services Project. The purpose of this work is to develop a project that will make a District-wide impact, resulting in the following:

- Infrastructure improvements including HVAC, lighting, mechanical, electrical, plumbing, and refrigeration systems
- Reduced ongoing utility costs
- Carbon and greenhouse gas reduction / climate protection
- Carbon dioxide monitoring in classrooms and learning spaces
- Future capital cost avoidance
- Leveraging outside funding sources, demonstrating fiscal responsibility



CalSHAPE

**OUSD has
been awarded
\$7,346,916 in
CalSHAPE
Grant Funding
to address
HVAC,
ventilation and
water
plumbing**

- CalShape funding is allocated toward HVAC ventilation, air quality improvement, and water/plumbing improvements
- Projects and all reporting must be **completed** by September 7, 2025 in order to secure grant funding
- Grant-funded projects will provide a deep assessment of 83 schools and allow OUSD access to other state funding.

CalSHAPE Only Sites



School Name	CalSHAPE HVAC Ventilation Assessment + CO2 + \$1.1M HVAC Improvements	CalSHAPE Plumbing/Water Conservation
United for Success (Calvin Simmons)	X	X
Chabot	X	X
Oakland International HS	X	X
Prescott	X	X
Westlake MS	X	X
Dewey	X	X
Metwest	X	X
Roosevelt MS	X	X
Garfield	X	X
International Community School	X	X
Acorn	X	X
Bridges	X	X
Brookfield	X	X
Burckhalter	X	X
Castlemont	X	X
Community Day	X	X
CCPA	X	X
East Oak Pride	X	X
Fremont HS	X	X
Frick	X	X

CalSHAPE Only Sites (continued)



School Name	CalSHAPE HVAC Ventilation Assessment + CO2 + \$1.1M HVAC Improvements	CalSHAPE Plumbing/Water Conservation
Greenleaf	X	X
Howard ES	X	X
Rudsdale	X	X
Markham	X	X
Esperanza (Stonehurst)	X	X
Hoover	X	X
Parker	X	X
McClymonds	X	X
Carl B Munck	X	X
Claremont Middle	X	X
Cleveland ES	X	X
Community United	X	X
Crocker Highlands	X	X
Edna Brewer MS	X	X
Emerson ES	X	X
EnCompass Academy	X	X
Franklin ES	X	X
Korematsu	X	X
Hillcrest ES	X	X
Home and Hospital	X	X

CalSHAPE Only Sites (continued)



School Name	CalSHAPE HVAC Ventilation Assessment + CO2 + \$1.1M HVAC Improvements	CalSHAPE Plumbing/Water Conservation
Sojourner Truth (Independent Study)	X	X
Joaquin Miller	X	X
LIFE Academy	X	X
Lincoln ES	X	X
Montclair	X	X
Montera	X	X
Peralta	X	X
Piedmont	X	X
Ralphe Bunche	X	X
Reach Academy (Cox Academy)	X	X
Redwood Heights	X	X
Rise Community	X	X
Sankofa United	X	X
Sequoia ES	X	X
Street Academy	X	X
Think College Now	X	X
Thornhill ES	X	X
Urban Promise	X	X
Melrose Leadership (Maxwell Park)	X	X
Oakland School of Language	X	
Gateway to College (Laney)	X	
Glenview ES	X	
Infant and Preschool		X

Energy + CalSHAPE Sites



School Name	CalSHAPE HVAC Ventilation Assessment + CO2 + \$1.1M HVAC Improvements	CalSHAPE Plumbing/Water Conservation
Allendale	X	X
Bella Vista	X	X
Bret Harte	X	X
Elmhurst	X	X
Fruitvale	X	X
Lockwood (Futures)	X	X
Global Family	X	X
Grass Valley	X	X
Horace Mann	X	X
Laurel	X	X
Madison Park	X	X
Madison Sobrante	X	X
Manzanita (Community + CDC Seed)	X	X
MLK	X	X
New Highland	X	X
Oakland HS	X	X
West Oakland MS	X	X
Oakland Tech	X	X
Skyline	X	X
La Escuelita	X	X



Energy Conservation Investments

Energy Efficiency Infrastructure Upgrade Projects to be Implemented at 22 Schools

- Staff identified schools with demonstrated needs and opportunity for maximum cost savings (*remaining schools to be completed in subsequent phases*)
- Energy Conservation Measures (ECMs) include **LED lighting upgrades**, **refrigeration controls**, **transformer replacements**, and **plug load controls**
 - Improved light quality will improve learning conditions
 - Refrigeration controls will save energy and reduce chance of food loss
 - Transformers will save energy 24/7/365
 - Plug Load Controls will eliminate over-night parasitic load
- Potential \$899,085 annual reduction in utility and operational costs



Funding Sources for Energy Efficiency

Multiple Funding Sources

PG&E On-Bill Financing (OBF)

\$4 million awarded to District for Energy Efficiency Measures (ECMs)

(in progress with PG&E)

Measure Y Energy Efficiency

\$7,644,508 District contribution toward project to implement energy efficiency upgrades in lighting, plug load and transformer replacements across multiple school sites.



Energy + CalSHAPE Sites

School Name	Plug Load Controls	Lighting LED Retrofit	Transformer Replacement	Refrigeration Controls	CalSHAPE HVAC Ventilation Assessment + CO2 + \$1.1M HVAC Improvements	CalSHAPE Plumbing/Water Conservation
Allendale	X				X	X
Bella Vista	X				X	X
Bret Harte	X	X			X	X
Elmhurst	X			X	X	X
Fruitvale	X	X			X	X
Lockwood (Futures)	X	X		X	X	X
Global Family	X				X	X
Grass Valley	X	X			X	X
Horace Mann	X				X	X
Laurel	X	X			X	X
Madison Park	X	X		X	X	X
Madison Sobrante	X	X			X	X
Manzanita (Community + CDC Seed)	X	X		X	X	X
MLK	X	X			X	X
New Highland	X	X			X	X
Oakland HS	X	X	X	X	X	X
West Oakland MS	X				X	X
Oakland Tech	X		X		X	X
Skyline	X		X	X	X	X
La Escuelita	X		X	X	X	X

Potential Environmental, Health, and Safety Impacts



- Greenhouse Gas Reduction = 1732 tons
 - Equivalent to 4,441,231 miles driven or 194,943 gallons of gasoline
- Improved LED lighting conditions in classrooms and learning spaces
 - Occupancy controls, solid-state lighting (vs. CFL)
- Air quality assessment and improvements in classrooms and learning spaces
 - Improved HVAC ventilation
 - Monitoring of carbon-dioxide levels for classroom safety
- Replacement of aged electrical transformers to improve safety
- Upgraded refrigeration controls for improved temperature control and alerts in the event of failure of the “door-open” status



Project Financials

Total Project Cost (NTE)	\$18,991,424
<CalSHAPE Grant Funding>	<\$7,346,916>
<PG&E OBF 0% Financing>	<u><\$4,000,000></u>
Measure Y Energy Efficiency	\$7,644,508
Year 1 Utility & Operational Savings	TBD
NET 20-Year Savings to District	TBD

* Based on the following annual escalations:

- Utility = 5.7%
- Water = 3%
- Natural Gas = 4.9%
- Operational = 3%

Project Timeline

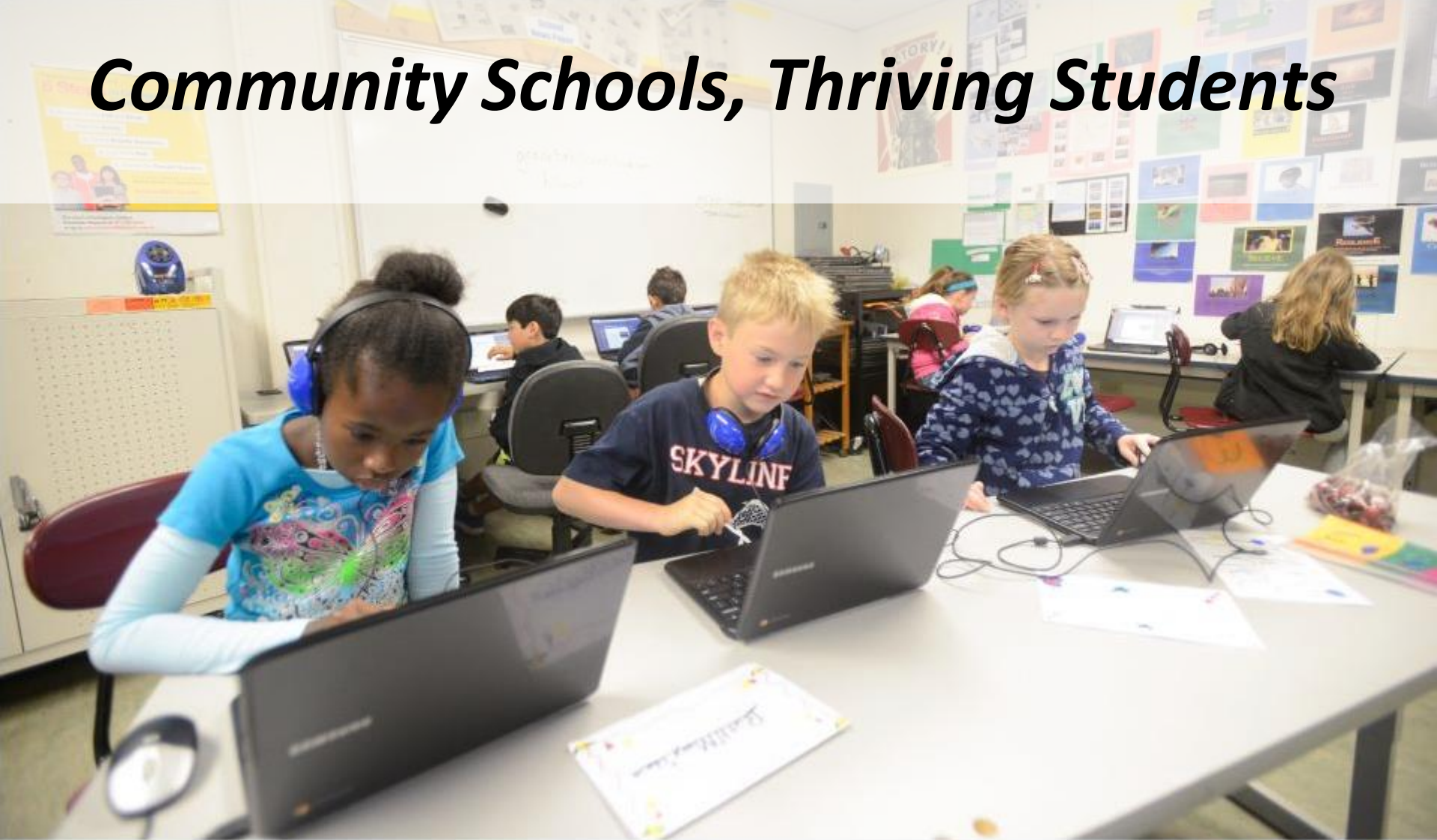
Board Consideration of Project Approval	April 2024
Execute Contract / Begin Project Implementation	April 2024
Complete CalSHAPE Scope of Work	December 2025
Complete Energy Efficiency Scope of Work	December 2025

Estimated Final Completion is December 2025

Next Steps:

1. Finalize OUSD analysis of energy savings from Syserco proposal
2. Validate energy savings and costing through a independent 3rd party assessment of cost avoidance and potential savings.
3. Bring contract to the Board for approval in April of 2024

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