

ECO- SUSTAINABILITY OFFICE

Greening Schools and Climate Resilience Committee Meeting

Christos Chrysiliou, FAIA, LEED AP
Chief Eco-Sustainability Officer

March 26, 2025





Agenda

ESO Updates

- Solar Program Update
- Eco-Sustainability Plan
- Climate Literacy Updates



Canoga Park High School Solar Photovoltaics



LAUSD Eco-Sustainability Mission and Goals

Mission

The Los Angeles Unified School District is committed to being the most sustainable and environmentally-friendly large urban school district in the country.

Goals

Clean Energy

Transition LAUSD to 100% clean, renewable, energy resulting in healthier students and more sustainable, equitable, communities

Green Schools for All

Establish a minimum standard of 30% green space for all campuses

Climate Literacy

Enact a comprehensive Climate Literacy Program for LAUSD



Solar PV Program – Current

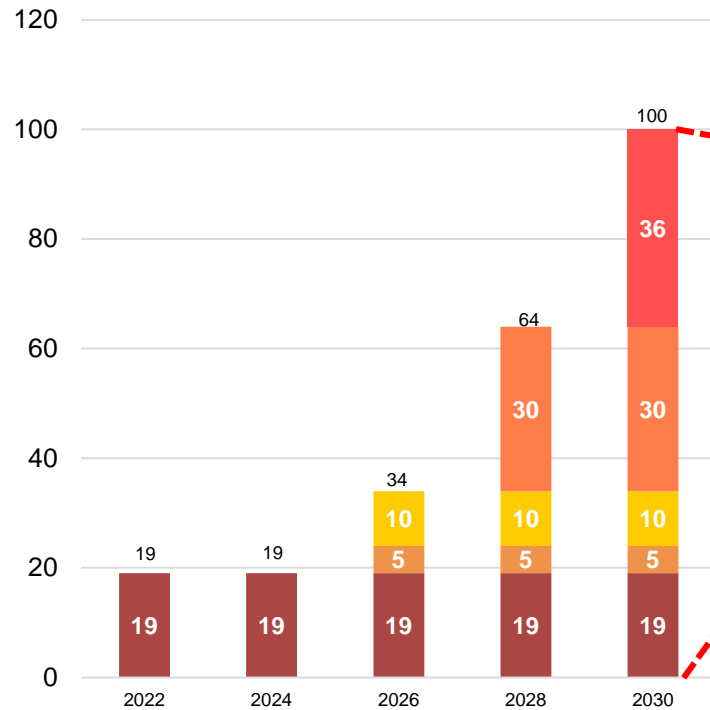
Overview

- School Sites: **63**
- Total System Capacity: **19 MW**
- Cumulative Energy Production (FY14-24): **240,244,703 kWh**
- General Fund Cost Avoidance (FY14-24): **\$47.8 m**
- PV System Types:
 - Carport
 - Shade Structures
 - Rooftop



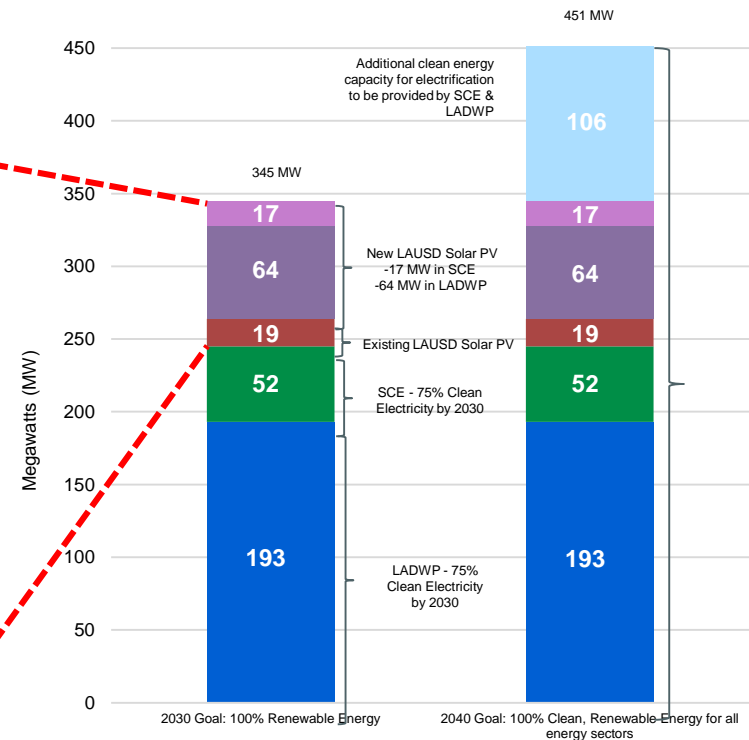
San Pedro High School Olguin Campus

Clean Electricity Plan 2030 - New Solar



Existing Solar PV
Phase 1 - Solar PV Projects
Phase 2 - Solar PV Projects
Phase 3 - Solar PV Projects
Pilot - Solar PV Projects

LADWP 2035 Goal & LAUSD 2040 Clean Electricity Goal



LADWP Clean Electricity (75%)
SCE Clean Electricity (75%)
LAUSD Existing Solar
LAUSD New Solar
LAUSD New Solar (SCE)
LAUSD 100% Renewable by 2045



Solar PV Program

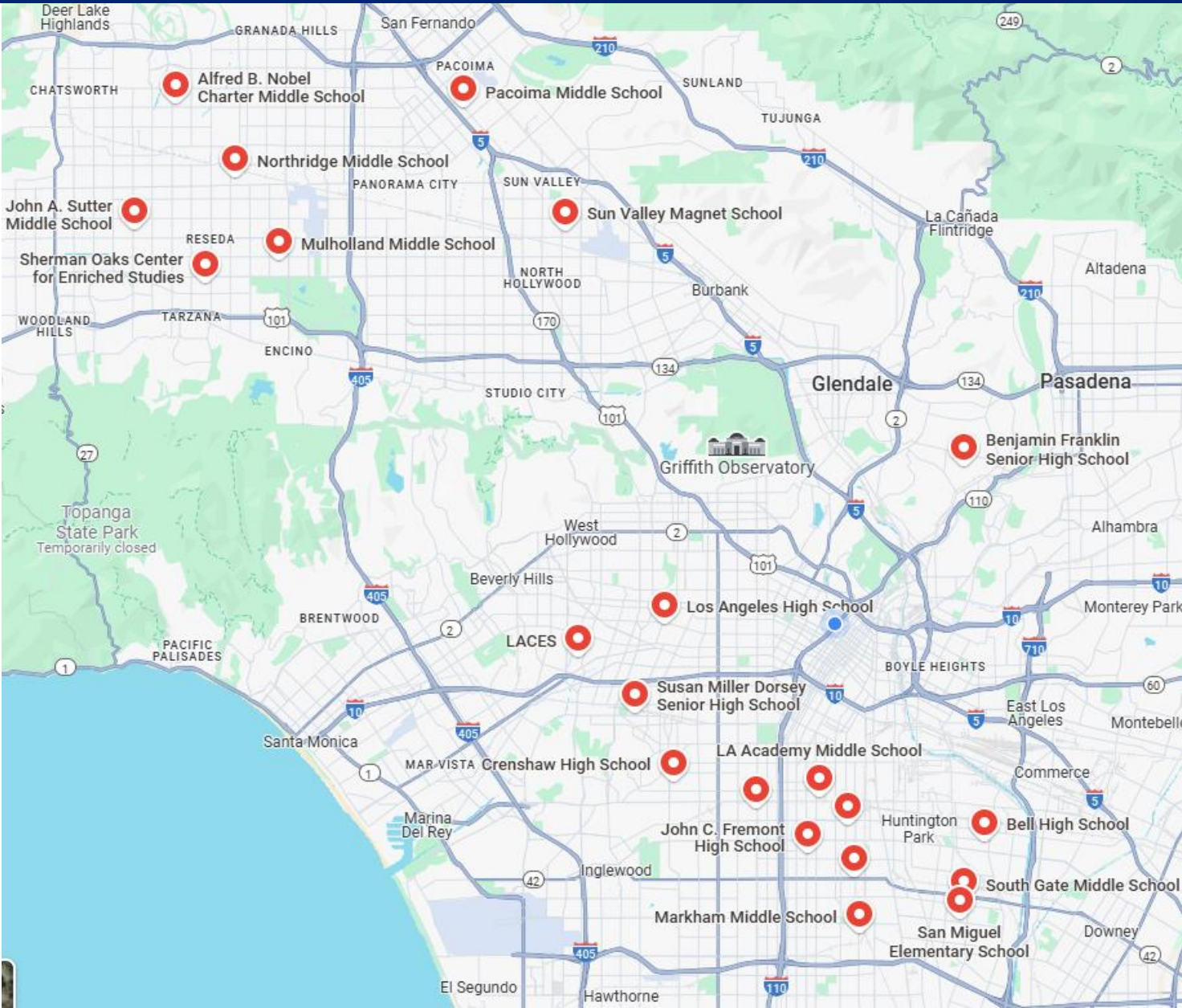
Program Updates

On February 11, 2025, the Board of Education authorized the design and installation of 21 Solar Photovoltaic (PV) projects. These projects will:

- Enable the District to significantly offset its energy costs over the 25-year equipment life of the PV systems
- Support District's goal to achieve 100% clean, renewable energy in its electricity sector by 2030 and in all energy sectors, including heating, ventilation, air conditioning (HVAC), cooking, and transportation, by 2040
- Installed within two different utility provider service areas, LADWP and SCE, to determine various delivery methods that could offer the greatest benefit for the PV system installations
- Provide an educational opportunity for students to learn about clean renewable energy technologies and real-world energy issues thereby furthering STEM education at these campuses



Solar PV Program – 21 School Sites



Overview

- Total System Capacity: **15 MW**
- Capital Budget: **\$122.4 m**
 - Design, Construction, Management
- General Fund Budget: **\$9.9 m**
 - O&M Services, Performance Guarantee
- Energy Production (25 Yrs.): **\$178 m**
- Net Cost Avoidance (25 Yrs.): **\$45.7 m**
- General Fund Cost Avoidance (25 Yrs): **\$168 m**

Scope

- Rooftop, Carport and Shade Structures
- Level 2 EV Chargers at 13 sites
- Sites with new roofs or upcoming roof projects



Solar PV Program – Scope, Budget, Schedule

#	BD	REGION	School	PV* System Size (MW)	EV* Qty.	Project Budget	Est. 25 Yr. **Net Cost Avoidance	Est. 25 Yr. **General Fund Cost Avoidance	Const. Start	Const. End
1	5	East	Bell HS	0.959	0	\$7,274,924	\$4,453,097	\$11,728,021	Q4-25	Q3-26
2	1	South	Crenshaw Magnet HS	1.207	12	\$9,300,587	\$5,237,009	\$14,537,596	Q4-25	Q3-26
3	1	South	Dorsey HS	0.846	0	\$6,862,632	\$2,582,505	\$9,445,137	Q3-26	Q1-27
4	7	South	Drew MS	0.691	8	\$5,723,453	\$2,086,869	\$7,810,322	Q4-26	Q3-27
5	7	South	Edison MS	0.631	9	\$5,215,047	\$2,205,976	\$7,421,023	Q4-26	Q3-27
6	2	East	Franklin HS	0.763	0	\$6,529,607	\$2,533,690	\$9,063,297	Q4-25	Q3-26
7	7	South	Fremont HS	1.390	17	\$10,296,032	\$5,187,324	\$15,483,356	Q4-26	Q3-27
8	7	East	Los Angeles Acad. MS	0.791	0	\$6,117,889	\$2,707,075	\$8,824,964	Q4-26	Q3-27
9	1	South	Muir MS	0.612	0	\$4,855,984	\$1,944,445	\$6,800,429	Q3-26	Q1-27
10	3	North	Northridge MS	0.674	2	\$4,888,613	\$2,084,279	\$6,972,892	Q3-25	Q2-26
11	6	North	Pacoima MS	0.588	2	\$4,237,615	\$2,080,710	\$6,318,325	Q3-25	Q2-26

*PV = Photovoltaic; EV = Electric Vehicle Chargers/Infrastructure

**Net Cost Avoidance considers Bond funded project costs and General Fund Cost Avoidance does not.



Solar PV Program – Scope, Budget, Schedule

#	BD	REGION	School	PV* System Size (MW)	EV* Qty.	Project Budget	Est. 25 Yr. Net Cost Avoidance	Est. 25 Yr. General Fund Cost Avoidance	Const. Start	Const. End
12	4	North	Sherman Oaks CES	0.527	2	\$4,235,022	\$1,631,772	\$5,866,794	Q4-25	Q3-26
13	6	North	Sun Valley Magnet	0.423	2	\$3,038,334	\$1,722,549	\$4,760,883	Q4-25	Q3-26
14	4	North	Sutter MS	0.510	2	\$4,265,486	\$1,326,346	\$5,591,832	Q4-25	Q3-26
15	1	West	LACES	0.865	4	\$7,416,368	\$2,536,602	\$9,952,970	Q4-25	Q3-26
16	1	West	Los Angeles HS	0.982	0	\$7,707,349	\$2,471,494	\$10,178,843	Q1-26	Q4-26
17	7	South	Markham MS	0.706	5	\$7,093,801	\$1,052,827	\$8,146,628	Q3-26	Q1-27
18	3	North	Mulholland MS	0.556	13	\$5,973,080	\$508,097	\$6,481,177	Q1-26	Q4-26
19	3	North	Nobel Charter MS	0.590	0	\$5,032,329	\$1,039,133	\$6,071,462	Q1-26	Q4-26
20	5	East	San Miguel ES	0.264	0	\$1,681,284	\$264,340	\$1,945,625	Q3-26	Q1-27
21	5	East	South Gate MS	0.441	11	\$4,660,987	\$183	\$4,661,170	Q1-26	Q4-26
TOTALS:				15.016	89	\$122,406,423	\$45,656,323	\$168,062,746		

*PV = Photovoltaic; EV = Electric Vehicle Chargers/Infrastructure.

**Net Cost Avoidance considers Bond funded project costs and General Fund Cost Avoidance does not.



Solar PV Program – Sample Project Site

Markham Middle School – 706 kW (90% offset of electricity consumption)



Project Budget: \$7,093,801

25-Year Cost Data:

Energy Production: \$8,458,019

Net Cost Avoidance: \$1,052,827

General Fund Cost Avoidance: \$8,146,628



Solar PV Power Impact at LAUSD

25-Year Solar Power Generation

21 school sites to generate 15MW of solar energy or approximately 23 million kWh per year.

25-Year Total Avoided Energy Consumption:
556 million kWh

25-Year Total Avoided Greenhouse Gas Emissions:
280,000 MTCO₂e



That's Like:



Annually

Removing **2,766 personal vehicles** from the road

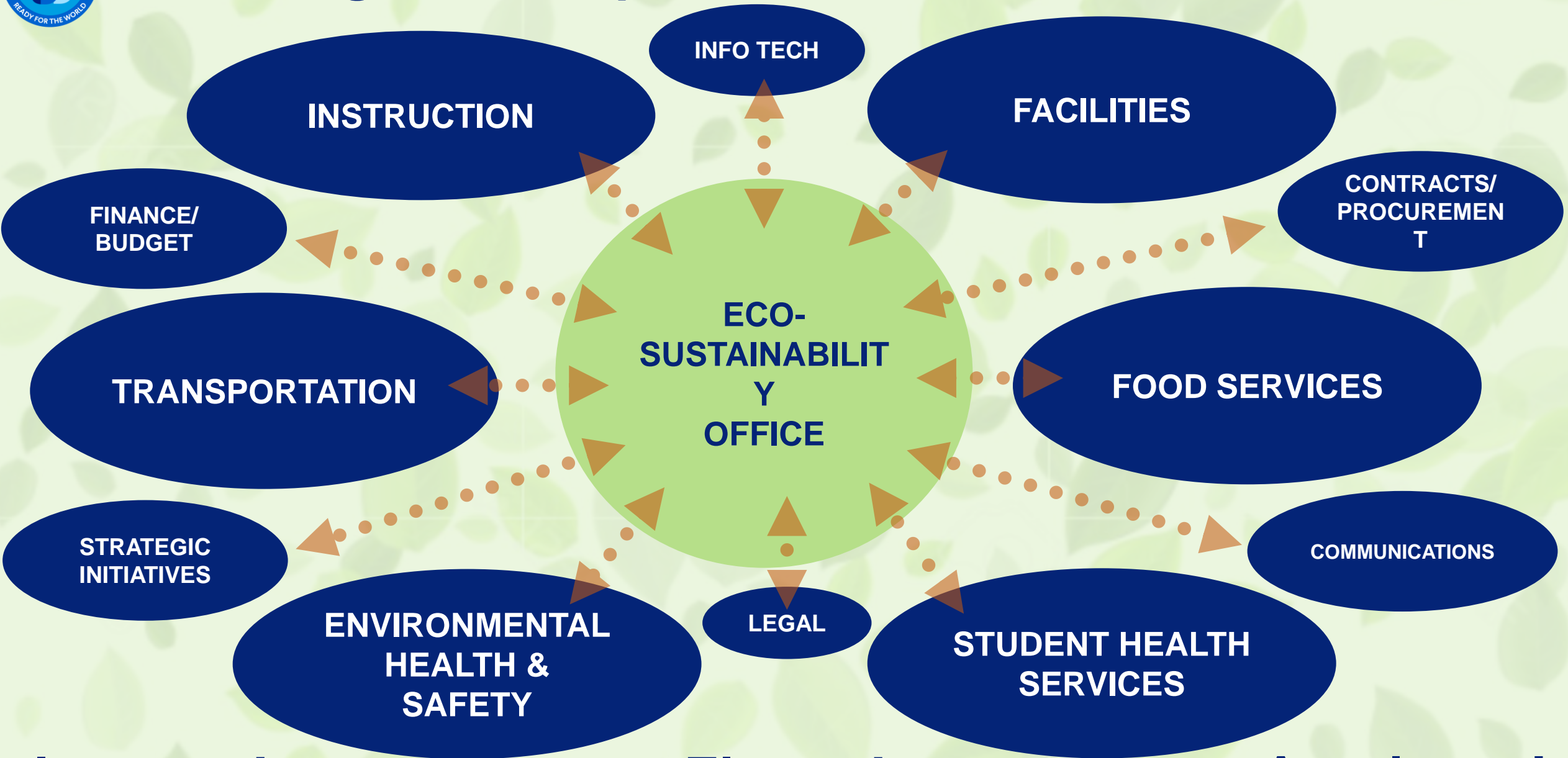
Enough to power **2,138 homes**

Diverting **4,190 tons of waste** from landfills

The amount of GHG emissions sequestered by **11,895 acres of forestland** or ~3 Griffith Parks



An Integrated Response Across LAUSD Divisions



Innovate!

Elevate!

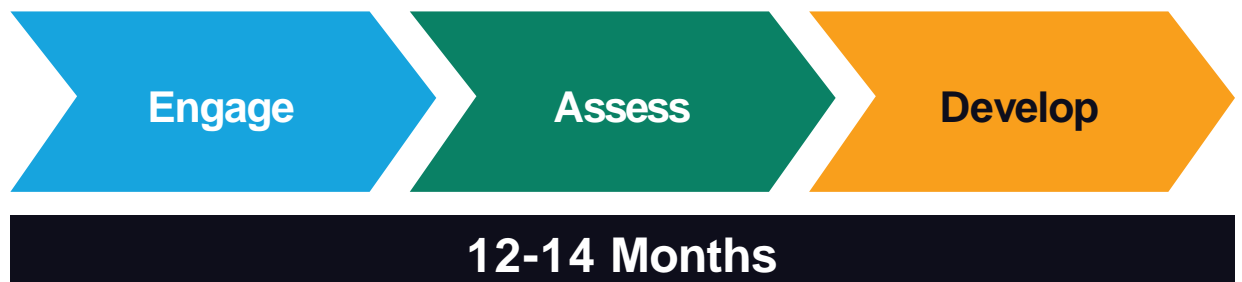
Accelerate!



LAUSD Comprehensive Eco-Sustainability Plan

Supports the development and implementation of sustainable and renewable energy initiatives to reduce the District's carbon and water footprint and to achieve the District's operational efficiency and sustainability goals in alignment with the LAUSD Strategic Plan.

Sustainability Planning Process



Proposals Received and Under Evaluation:
Anticipated Board Approval: May 2025

Engagement: Spring/Fall 2025

Assessment: Summer 2025

Plan Development: Fall 2025 – Spring 2026





An Eco-Sustainability Plan for all LAUSD

Scope:

- **ASSESS:** Collect and review District data
 - Establish a baseline of information and provide a gap analysis.
 - Identify climate risks and cascading risks
 - Identify infrastructure needs for all sustainability sectors
- **ENGAGE:** Stakeholder Engagement
 - Formulate engagement workplan
 - School/community engagement workshops at school sites
 - Involvement of all LAUSD Divisions
- **DEVELOP:** Development of Comprehensive LAUSD Eco-Sustainability Plan
 - A holistic plan with integrated, actionable solutions for all sustainability sectors. Measures that provide the greatest opportunities for resilience, emissions reductions, and student learning will take the highest priority.
 - Confirmation of Vision, Objectives, Goals, and Criteria for the plan
 - Roadmaps to address LAUSD's high-priority Eco-Sustainability goals and objectives





Eco-Sustainability Sectors

1

Curriculum Integration

- Incorporate sustainability topics into general education and STEAM curriculum and into CTE programs

Climate Literacy

- Develop a comprehensive framework for a Climate Literacy curriculum

Academic
Excellence

2

Healthy Food Initiatives

- Procurement of sustainable and locally sourced food
- School gardens

Outdoor Education + Greening

- Outdoor learning spaces, gardens, and nature trails to connect students with the environment and foster a sense of stewardship

Air Quality

- Low/No VOC product standards
- Low emission vehicles and fuels
- CO2 Monitors

Climate Resilience

- GHG Emissions Inventory
- Climate Action & Adaptation Plan
- Resiliency Plan
- Environmentally Preferable Purchasing

Joy +
Wellness

3

Student Leadership

- Empower students to take on leadership roles as climate champions and environmental stewards

Community Engagement

- Partner with local organizations, businesses, government agencies, and the broader community to support sustainability initiatives at schools

Engagement
Collaboration

4

Energy + Water Infrastructure

- Energy Efficiency Projects
- Renewable Energy and Electrification
- Water Efficiency Upgrades
- Stormwater and Grey Water management

Transportation

- Conversion of fleet to hybrid and electric vehicles
- Subsidized transit passes
- Encourage walking, biking, carpooling

Waste Reduction

- Recycling and composting programs
- Minimize single-use plastics + packaging
- Surplus property repurposing/auction
- Construction waste diversion

Monitoring + Evaluation

- Metrics and assessments to track progress towards sustainability goals
- Green Building certifications

Operational
Effectiveness

5

Professional Development

- Provide training and resources for teachers and staff on sustainability practices and incorporate sustainability into professional development programs

O + M Staff Training

- Green Cleaning Program
- Native Landscape Maintenance Training
- O&M Best Management Practices

Investing in
Staff



Working Group Representatives

Eco-Sustainability Sectors	Suggested Stakeholders/ Areas of Influence
Climate	Energy Services
	Transportation
Air Quality	Transportation
	Environmental Health and Safety
Energy	Energy Manager
	Facilities Director
Water	Utilities Management
	Wastewater Compliance
	Stormwater Compliance
Solid Waste	Solid Waste
	Facilities
Transportation	Transportation
	Fleet Manager
Food & Nutrition	Food Services
	Kitchen Staff
Procurement/Labor Compliance	Purchasing
	Contract & Budgeting Office
Education/ Engagement	Education Services
	Student Council Advisors
Construction	Facilities Management
	Capital Planning
Operations & Maintenance	Operations
	Facilities Management





Eco-Sustainability Priorities Survey

A roadmap to address LAUSD's high-priority eco-sustainability sectors

Sector	Category	Ranking
Climate	• Gas Emissions	
	• Climate Adaptation	
	• Climate Resiliency	
Air Quality	• Indoor Air Quality	
	• Air Pollutant Emissions (i.e.NOx)	
Energy	• Purchased Utilities	
	• On-Site Generation (Co-Generation, Generators, Solar)	
Water	• Potable Water	
	• Wastewater	
Stormwater/ Wastewater	• Stormwater Management	
	• Wastewater	
Solid Waste	• Municipal Solid Waste (Trash, Recycling, Organics)	
	• E-Waste	
	• Hazardous Waste	
	• Construction + Demolition Waste	
Transportation	• School Buses	
	• Fleet Vehicles (white fleet)	
	• Employee Commuting	

Sector	Category	Ranking
Food + Nutrition	• Food Sourcing	
	• Nutrition Standards	
	• Nutrition Education	
Procurement	• Product Specifications	
	• Service Requirements	
	• Contracts	
Education / Engagement	• Sustainability Curriculum	
	• Staff Training	
	• Community Engagement	
Construction	• Sustainable Design Criteria	
	• Green Building Certification (i.e., CHPS, LEED, etc.)	
	• Green Construction Standards	
Operations + Maintenance	• Preventative Maintenance	
	• Building Management Systems	
	• Standard Operating Procedures	
	• Green Cleaning	

Climate Literacy Updates

Overview

- Climate Literacy Task Force Update
- Climate Literacy Task Force Report
- Campus Greening Highlights
- Earth Month 2025



HEROES for Zero 2023-24 Semi-Finalists, Ernest Lawrence Magnet 7th Grade Class



Ernest Lawrence Gifted Magnet 7th Grade Students



Climate Literacy Task Force



Climate Literacy Task Force Timeline

- **Meeting 1** - December 13, 2023 via Zoom
 - Introductions and reviewed Climate Literacy Resolution and LAUSD-UTLA MOU
 - Determined next steps for review of tasks and roles
- **Meeting 2** - February 27, 2024 @ Los Angeles Cleantech Incubator (LACI)
 - Tour of LACI and presentations from partners
- **Meeting 3** - April 16, 2024 @ Sotomayor Magnet
 - Tour of the Agriscience Program and updates on Task Force member findings
- **Public Meeting** – June 12, 2024 via Zoom
 - Shared preliminary recommendations & took comments
- **Meeting 4** – September 25, 2024 via Zoom
 - Draft report outline was shared and task force members began drafting their sections
- **March 2025** - Recommendations Report being finalized
 - For meeting details visit the CLTF website at lausd.org/cltf



Climate Literacy Task Force Report



Climate Literacy Champions '23-'24 professional development at the Tree Peoples Coldwater Canyon site.



CLTF Report Content

- Drafted in collaboration with the DOI & United Teachers of Los Angeles
- Division of Instruction Climate Literacy Champions program and Climate Literacy Leadership Team
- LAUSD Climate Literacy Schoology Group
- Social Emotional Learning (SEL) Programs and Resources
- Career Technical Education (CTE) Pathways
- Eco-Sustainability Office Programs
- Facilities Services Division
- K-12 Linked Learning
- Division of Adult & Career Education
- Stormwater & Water Quality
- Transportation, Solar, & EV Chargers
- Recommendations

Next Steps

- Detailed Report update to be provided at the May 2025 Greening and Climate Resilience meeting
- Issue Date: June 2025



Campus Greening Highlight



Aeroponic Tower Gardens

- The Aeroponic Tower Garden Pilot Program is funded by the Los Angeles Department of Water and Power
- There are eight participating schools:
 - 20th St. ES
 - 107th St. ES
 - Alta California ES
 - Lake Balboa College Prep Magnet
 - Marina Del Rey MS
 - Polytechnic HS
 - Sotomayor Magnet HS
 - Valley Academy of Arts and Sciences
- The program supplies teachers with:
 - Materials for operating the tower gardens for three years
 - Training and technical support
 - Lifetime curriculum license integrating tower garden plant growth into multi-disciplinary lessons



Earth Month - April

EARTH MONTH

—2025 CAMPAIGN—

LAUSD's Eco-Sustainability Office (ESO) and Division of Instruction (DOI) are hosting an Earth Month campaign this year! Resources will be provided on the website below for educators including a map with local Earth Month community events and activities and a showcase of the amazing work of our schools, teachers, and students. The Earth Month campaign will culminate with an in-person event at the LAUSD Arts Festival. Be sure to stop by and check out the mini forest! Families can cultivate a living legacy by adopting a tree to celebrate the Earth.

Earth Month

What: Activity Challenge Campaign

When: April 2025

Where: Online & All Around



Arts Fest

What: Interactive Tabling w/ Tree Adoption

When: 9 am - 4 pm Saturday, May 3

Where: The Music Center & Gloria Molina Grand Park
200 N Grand Avenue
Los Angeles, CA 90012



Ensuring ALL Our Students Graduate **READY FOR THE WORLD**

Questions? Please contact:
Jerry Song
STEAM Coordinator
jerry.song@lausd.net



Questions? Please contact:
Sylvia Palomera
Sr. Sustainability Specialist
sylvia.palomera@lausd.net



Want to learn more? Check out the website with the QR code:



Earth Month 2025 Campaign promotional poster

Earth Month 2025 Campaign

Digital ecosystem for environmental education

- website curriculum & activity hub with LAUSD and partner resources
 - student showcase of sustainability efforts
 - empowering educational videos for all grade levels
- **Kick off April 1, 2025**
 - **The campaign will culminate in a vibrant, in-person celebration at the LAUSD Arts Festival: Saturday, May 3, 2025**
 - ESO and DOI will feature a climate literacy area with an opportunity for students to draw a school garden and families to adopt a tree!

Climate Literacy Creator Highlight

- Incorporating feedback from 2024 to be more engaging
 - Videos about LAUSD and green careers are being created by an **LAUSD John F. Kennedy High School alumnus**. This work contributes to the District's **Climate Literacy** goal, aimed at increasing climate literacy and ensuring all students are 'READY FOR THE WORLD'.



Thank You!



Christos Chrysiliou, FAIA, LEED AP
Chief Eco-Sustainability Officer

