

ECO- SUSTAINABILITY OFFICE

Greening Schools and Climate Resilience Committee Meeting

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Chief Eco-Sustainability Officer

September 24, 2024



Glenfeliz ES SEEDS Garden



Agenda

- **Board Resolution Updates**
 - **Clean Energy**
 - **Climate Literacy**
 - **Green Schoolyards for All**
- **Funding Updates**
- **Presentations & Tours**





Mission and Vision

Mission:

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

Vision:

The Eco-Sustainability Office supports the LAUSD Strategic Plan by developing and implementing programs and policies that raise awareness of environmental stewardship and provide healthy, sustainable learning environments for all LAUSD students.



LAUSD Eco-Sustainability Board Resolutions

Clean Energy Resolution (2019)

- Transitioning LAUSD to 100% Clean, Renewable, Energy Resulting in Healthier Students and More Sustainable, Equitable, Communities

Climate Literacy Resolution (2022)

- Enacting a comprehensive Climate Literacy Program for LAUSD to help address the escalating climate crisis. Climate Literacy covers education about environmental justice, green jobs and correcting misinformation.

Green Schools for All Resolution (2022)

- Establishes a minimum standard of 30% green space for all campuses



Clean Energy Board Resolution

2040



100% Clean Energy

2030



100% Renewable Energy

2024



20% Energy & Water
Consumption Reduction

2014

Baseline

Clean Energy Resolution (2019)

- Transitioning LAUSD to 100% Clean, Renewable, Energy Resulting in Healthier Students and More Sustainable, Equitable, Communities
- 100% clean, renewable energy in its electricity sector by **2030**
- 100% clean energy in all energy sectors, including heating, ventilation, air conditioning (HVAC), cooking, and transportation by **2040**

Utility	FY22-23 Expenditure	Current Consumption	2030 Target	2040 Target
Electricity	\$137.1 M	616,324,041 kWh	0 (from fossil fuels)	0
Natural Gas	\$10.5 M	7,069,045 Therms	5,655,236 Therms	0
Total	\$147.6 M	*	*	*



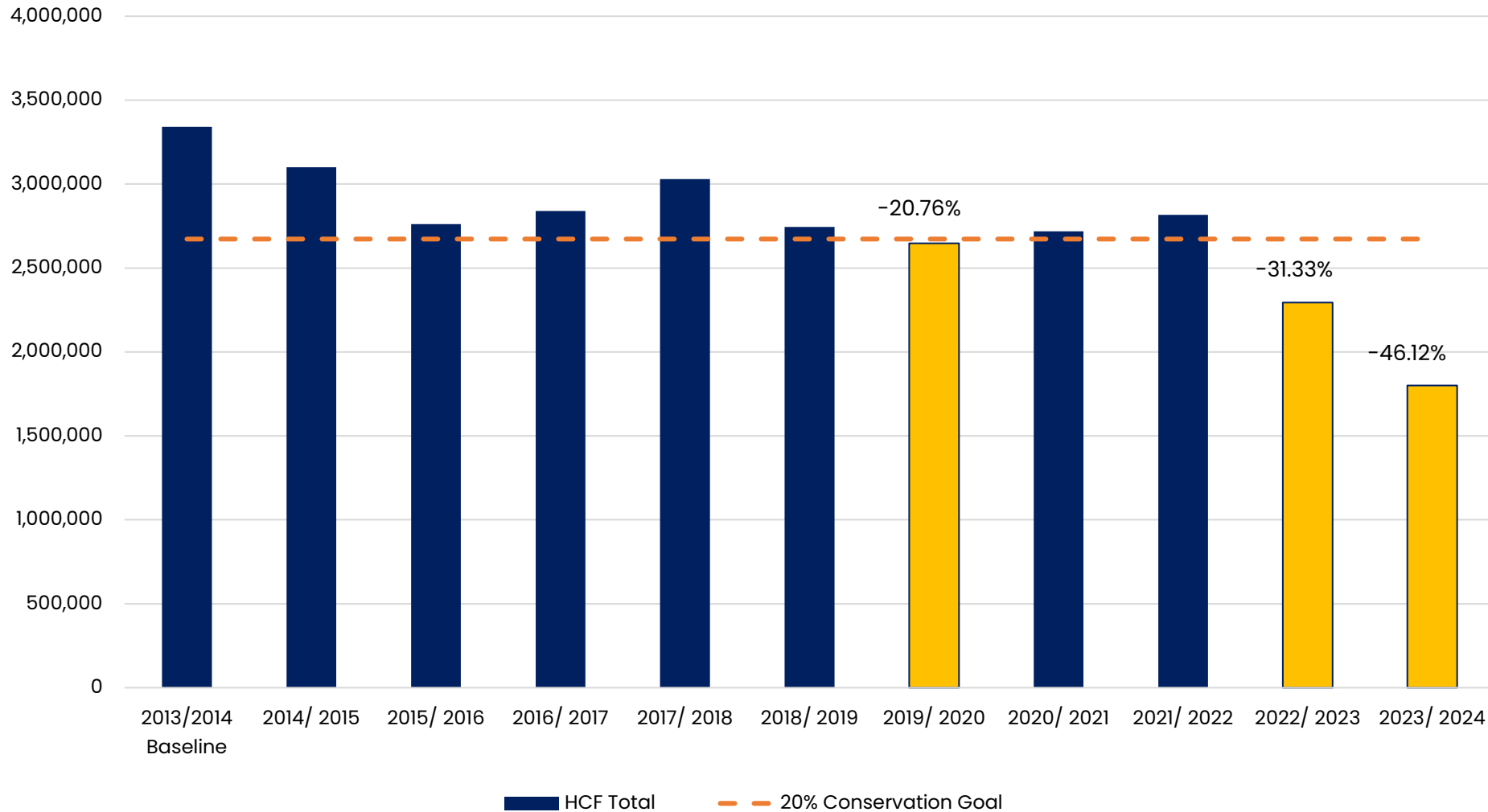
Energy and Water and Use Reduction

Reduction in Water & Energy Use

- Department of Energy – Better Buildings Challenge – LAUSD Goal to Reduce Water and Energy Usage by 20% from the 2014 baseline by 2024
 - The 20% reduction in water use was achieved from 2022 – 2024.
 - The 20% reduction in Energy will be achieved by the end of 2024.
 - District electricity use returned to historical trends after ending 24/7 ventilation post-pandemic .
- Department of Energy – Better Climate Challenge – LAUSD Goal to Reduce GHG Emissions by 50% from the 2019 baseline by 2030.
- LAUSD Strategic Plan – 100% Clean Renewable Electricity by 2030
- LAUSD Clean Energy in All Sectors by 2040



Water Usage

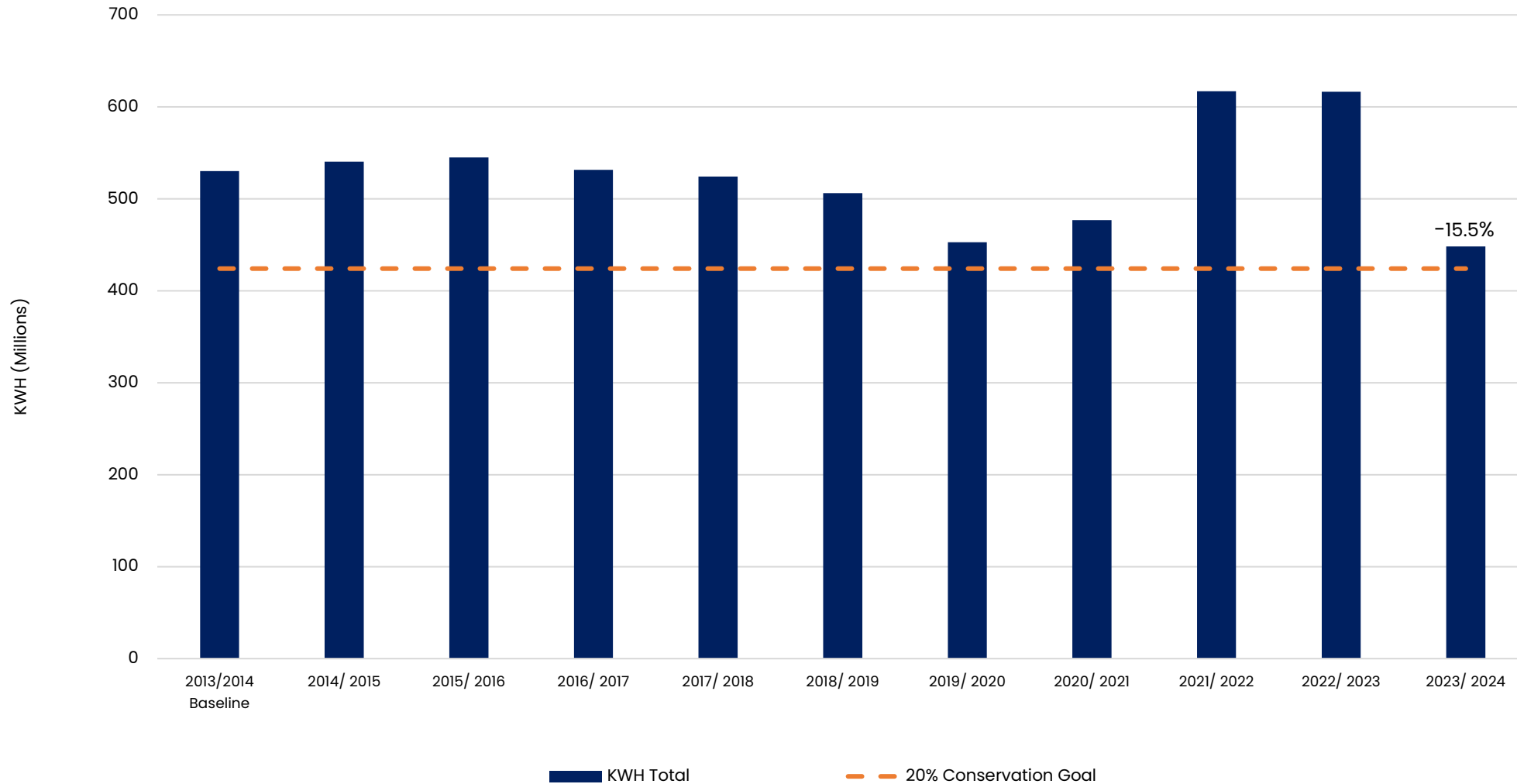


* Percentages represent changes relative to baseline, FY 2023/2024 in progress

5/31/2024



Electricity Usage

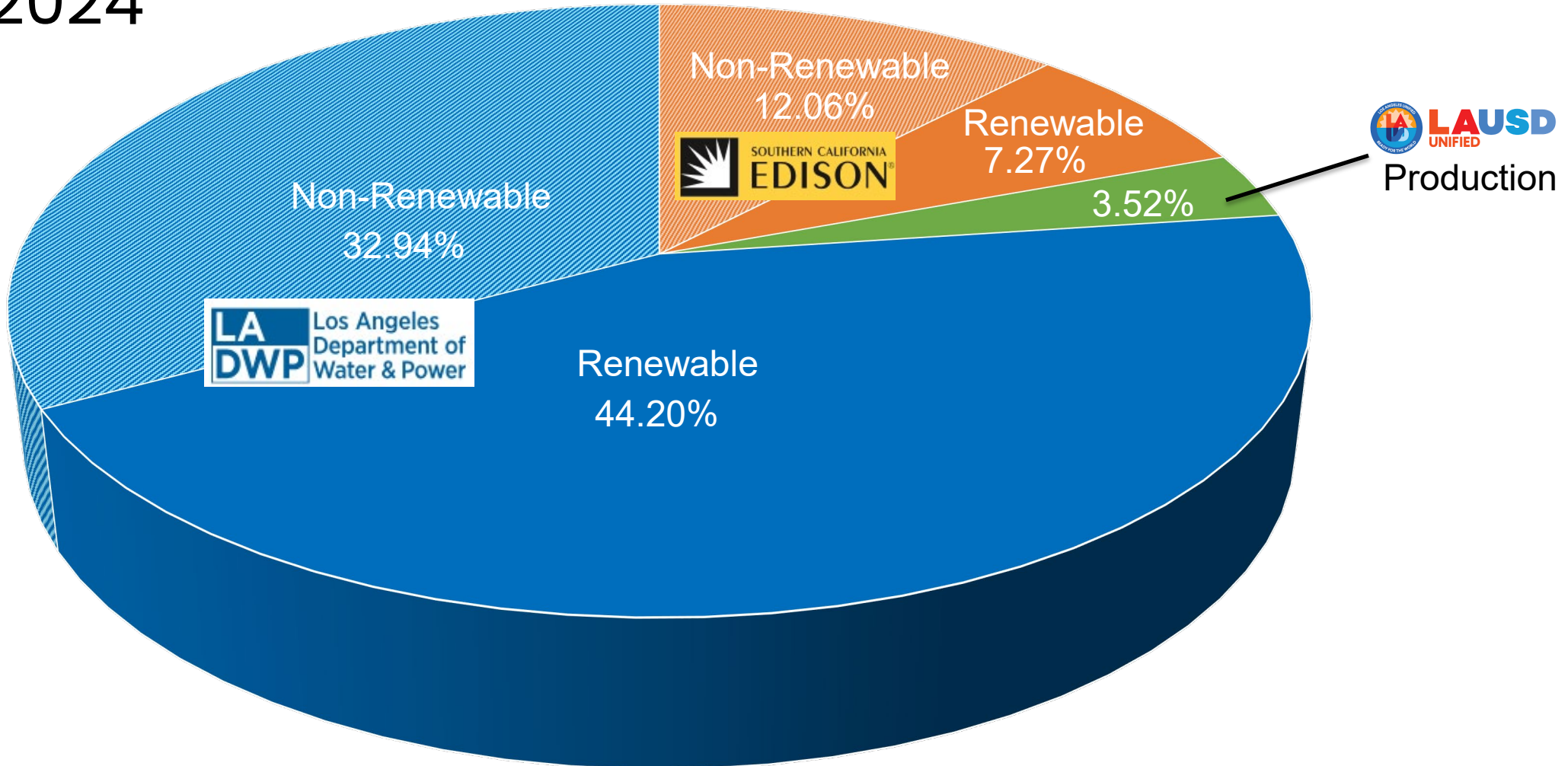


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Clean, Renewable Energy Usage

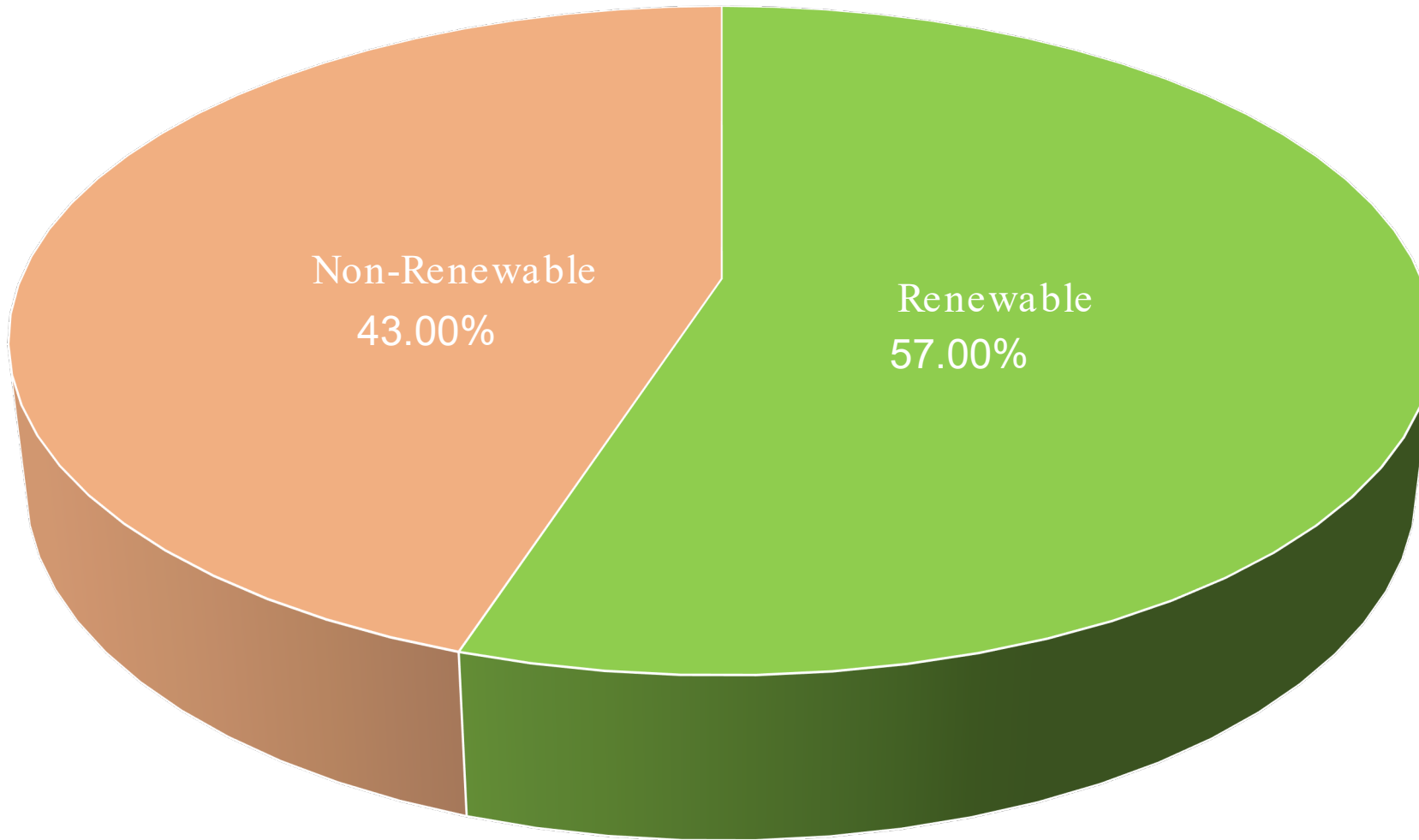
FY 2023/2024



Total MWH Use: 570,989 MWH



Total Renewable Energy Usage



2030 Goal: 100% Clean Energy



Energy Efficiency Programs Update

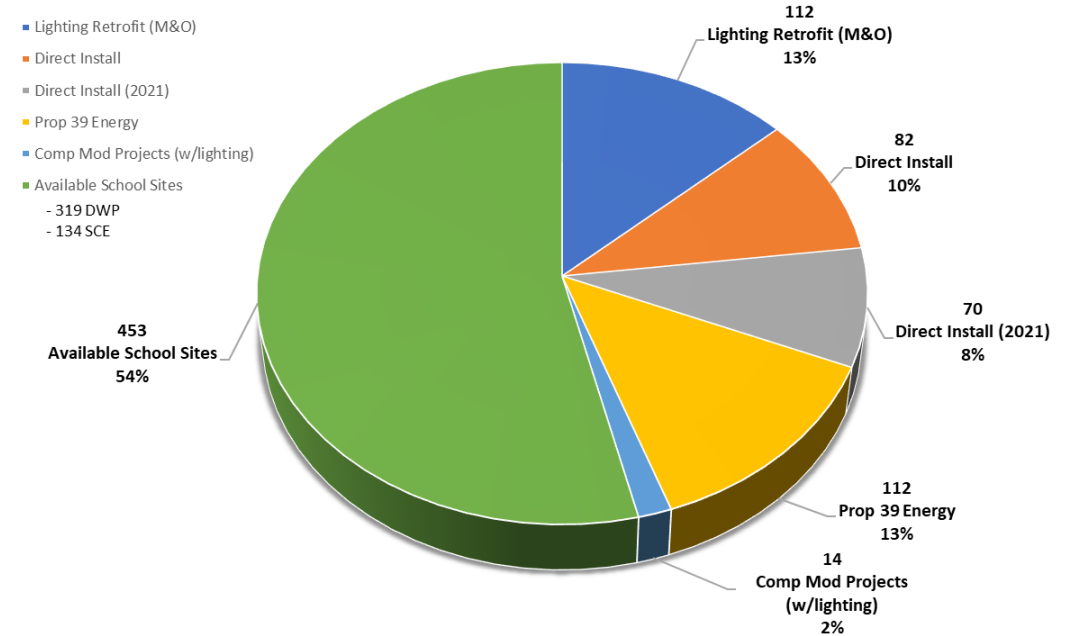
Direct Install – Lighting Programs

- **Funded by LADWP & Other Programs**
 - The District has completed direct install LED lighting programs at:
 - A total of 390 upgraded school sites with LEDs
 - Approximate 54% of LAUSD school sites need LED upgrades including:
 - 319 LADWP-serviced school sites
 - 134 SCE-serviced school sites

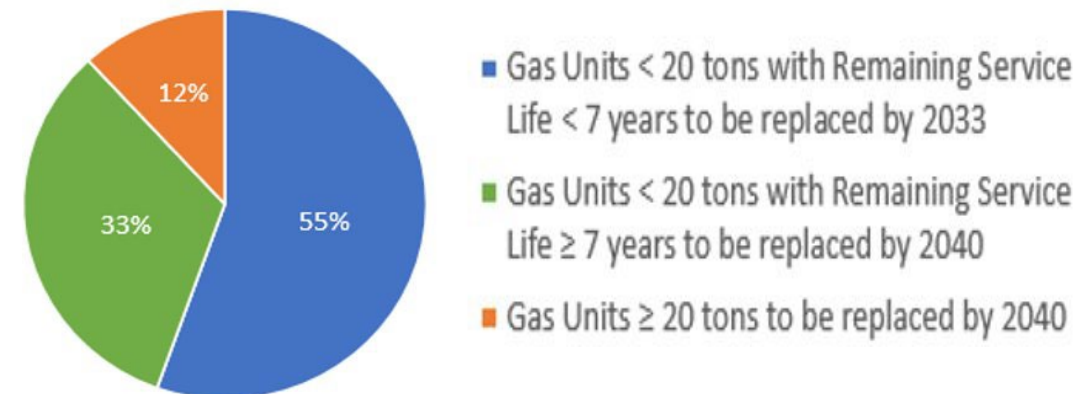
HVAC Upgrades – CalSHAPE

- **Funded by the California Energy Commission**
 - The District plans to replace as many gas-powered HVAC units as possible by 2040
 - By the end of 2025, the District will replace an additional 29 HVAC systems through CalSHAPE
 - Approximately two-thirds of District HVAC systems have been electrified

Lighting Replacement Status as of 2024



HVAC Replacement Plan 2024–2040





Clean Energy Updates

Clean Energy Updates

- LAUSD joined the U.S. Department of Energy's Commercial Heat Pump Accelerator Program
- Selected Qualified Vendors and proceeding with the Request For Proposals (RFP) for the Sun Valley Bus Yard Transportation Electrification for 180 buses. Released the RFQ for three Transportation EV charging Sites
- LAUSD has electrified all landscaping equipment by June 2024
- Planning to execute 21 solar agreements by 4Q 2024.
- Plan to release the Eco-Sustainability Plan RFP
 - Development of a Comprehensive LAUSD Eco-Sustainability Plan for all Divisions





Clean Energy: Health & Environmental Benefits

TOXIC & CARCINOGENIC EMISSIONS



Eliminated annually

- Ozone-forming compounds: 10.9 tons
- Carbon monoxide: 107.1 tons
- Fine particulates: 1.9 tons

TOXIC CHEMICALS



Substantial reductions
in toxic chemicals used
in maintenance

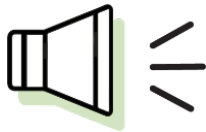
CARBON DIOXIDE



Eliminated annually

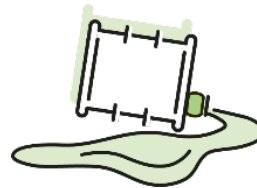
- 898 tons
- Equivalent to 177 cars off the road
- Equivalent to amount absorbed by 37,030 trees

NOISE



2-4 times quieter outdoors;
much quieter indoors

FUEL SPILLAGE



No gas or oil spillage.

NON-RECYCLABLE WASTE



Substantial reductions in non-recyclable
waste (e.g., spark plugs, filters)



Phased out all gas operations for routine landscape maintenance, handheld tools, small and large mowers



LAUSD School Bus Electrification

ELECTRIC SCHOOL BUSES (ESB)

EXISTING – 1300 BUSES

- 55 ESB
- 72 ESB BY Q4 2024
334 ESB BY Q4 2026
752 ESB BY Q4 2028

VAN NUYS BUS YARD

EXISTING – 260 BUSES
(LEASED SITE)

SUN VALLEY BUS YARD

EXISTING – 203 CNG BUSES

- 6 ESB – 6 DCFC
- 2 EVSE BY Q1 2024

PLANNED FULL ELECTRIFICATION 12/2026:

70 DCFC, 111 EVSE; 8 WHITE FLEET EVSE

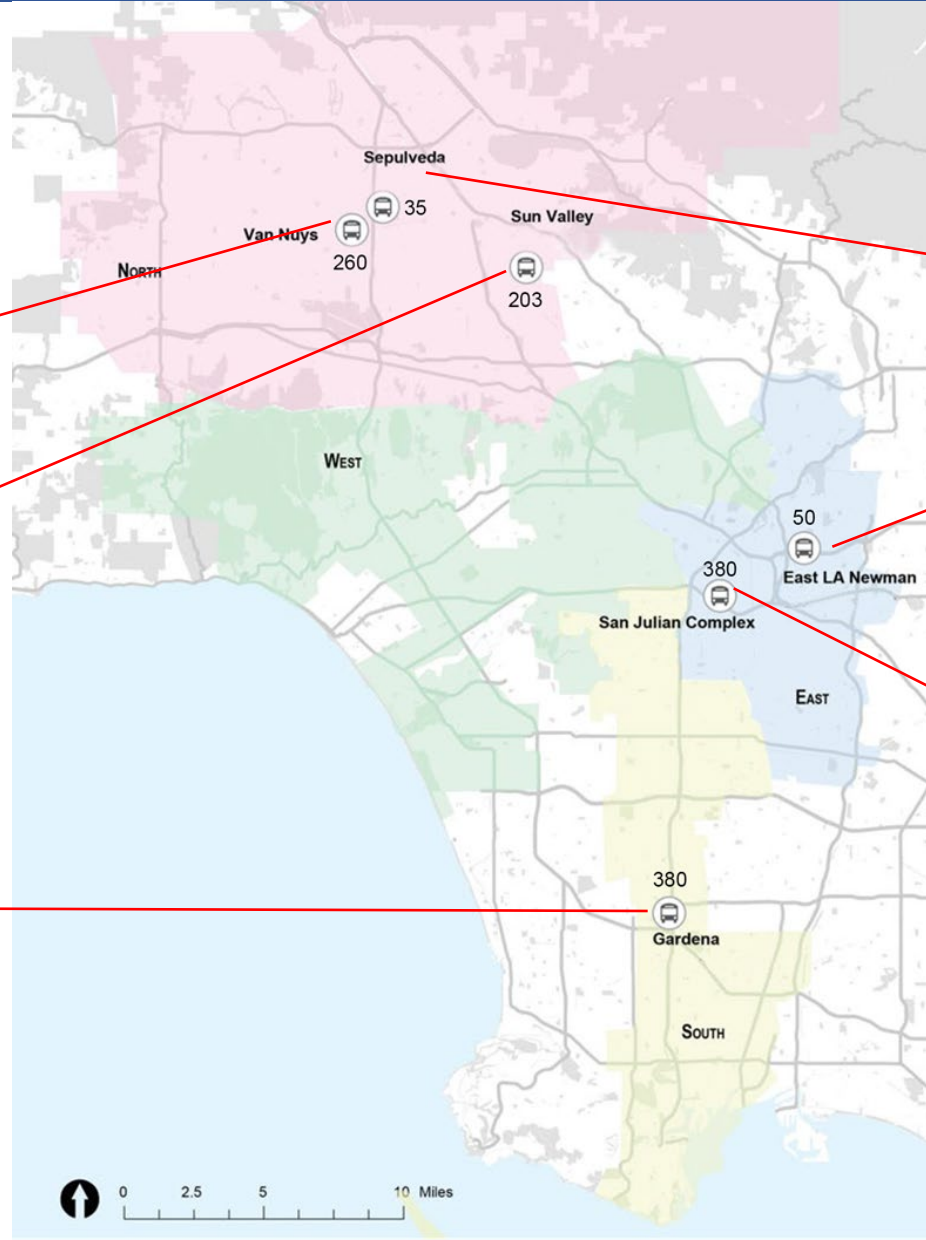
GARDENA BUS YARD

EXISTING – 400 BUSES

- 18 ESB – 18 DCFC

PLANNED FULL ELECTRIFICATION 12/2028:

384 EV CHARGERS



ELECTRIC VEHICLE CHARGERS

EXISTING – 36

- 12 LEVEL 2 EV CHARGERS (EVSE)
- 24 LEVEL 3 EV FAST CHARGERS (DCFC)

SEPULVEDA BUS YARD

EXISTING – 35 BUSES
(LIMITED SIZE LOT)

NEWMAN BUS YARD

EXISTING – 50 BUSES

- 10 ESB – 10 EVSE

PLANNED FULL ELECTRIFICATION 12/2040:
44 EVSE

SAN JULIAN BUS YARDS

LAUSD PROPERTY:

EXISTING – 165 BUSES

- 2 ESB – 2 EVSE

17 ESB – 17 DCFC BY Q4 2024

21 ESB – 21 EVSE BY Q3 2026

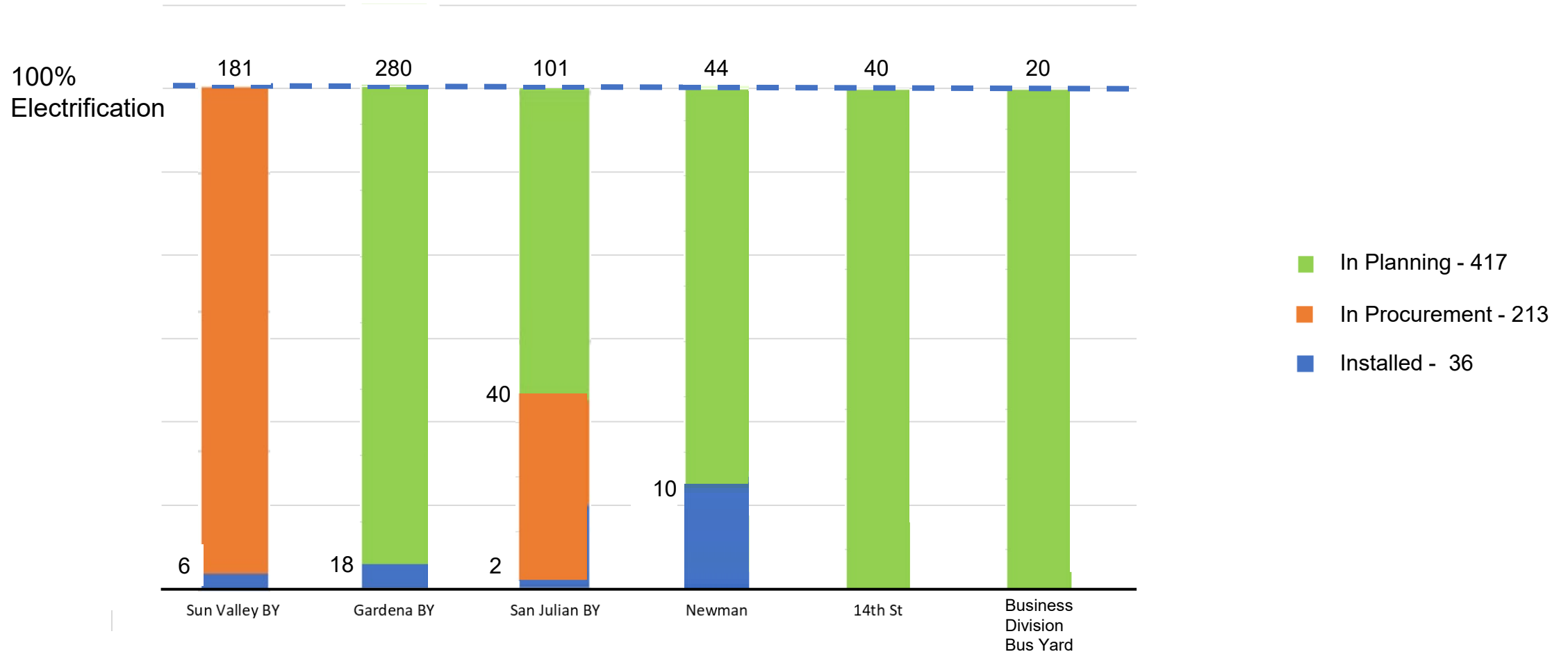
PLANNED FULL ELECTRIFICATION 12/2040:
80 DCFC; 81 EVSE

LEASED SITE:

EXISTING – 220 BUSES



EV Bus Chargers Electrification by Site





Climate Literacy Resolution



Climate Literacy Resolution (2022)

- To enact a comprehensive Climate Literacy Program for LAUSD to help address the escalating climate crisis. Climate Literacy covers education about environmental justice, green jobs and correcting misinformation.
- Quarterly meetings of the Climate Literacy Task Force, including internal stakeholders from Division of Instruction, Facilities, Transportation, and community stakeholders including climate literacy groups and the General Public





Climate Literacy Updates



Task Force @ Sotomayor Magnet Agriscience Program Tour


Themes from Public Comments



Climate Literacy Task Force

- Recommendations Report In Progress
- CLTF Meeting #4 Scheduled

Public Meeting Key Points:

1. Increase partnerships for hands-on environmental education.
 2. Enhance district support for environmental initiatives.
 3. Improve waste management infrastructure.
 4. Strengthen existing programs.
 5. Obtain funding for district-wide climate literacy
- Climate Literacy Repository  schoology®
Climate Literacy Group with over 1,400 educators
(Access Code: CFV9-FGK8-MN26S)



Climate Literacy Updates



EARTH DAY
Climate Literacy Symposium

"It was important for the kids to see how important it is to take action and protect the earth."

Students
Attended
6,775

*Based on an expected average of 25 students per classroom

Education & Awareness

- 2024-2025 HEROES for Zero Contest Registration is open.
 - Energy Dashboard Available
 - Additional Support & Resources
- EmPowered Schools
 - Increased program capacity to 60 Schools
- 2024-2025 upcoming programs with:
 - Broad Museum
 - AM Conservation
 - Aeroponics Towers with SBTG
- Coordinate and collaborate with the Division of Instruction and various departments on climate literacy curriculum and learning programs, resources and events such as Earth Day 2025



Green Schools for All Resolution



Mayall ES – SEEDS June 2024

Green Schools for All Resolution (2022)

- Establishes a minimum standard of 30% green space for all campuses
- Prioritize efforts in Early Education Centers, Primary Centers, and Elementary Schools
- Prioritize schools with the lowest green spaces/access to green spaces and in communities most affected by extreme heat and climate change



Campus Ecology Updates

Campus Greening Updates

- LAUSD became one of the first school districts in California to achieve Level 2 Certified Green Zone from the American Green Zone Alliance (AGZA)
- **Completed SEEDS projects at 4 schools**
 - Henry Gage MS
 - Mayall Academy of Arts & Technology Magnet
 - Hesby Oaks Leadership Charter
 - Walter Reed Middle School
- **Completed 8 ELOP Greening projects (+ 3 in construction)**

• 118 th St ES	• Coldwater Canyon ES
• Wilton Place ES	• Griffith Joyner ES
• Capistrano ES	• Stoner Avenue ES
• Russell ES	• 109 th St. ES
- **Ribbon cuttings for 3rd Party Greening Projects**
 - Berendo MS 9/26/2024
 - Pacoima MS 9/28/2024



Russel ES – ELOP



Campus Ecology Updates – Completed Projects



Lankershim ES – SEEDS March 2024



Hamasaki ES – ELOP July 2024



Wilton Place ES – ELOP July 2024



Victoria Ave ES – SEEDS April 2024



118th ES – ELOP July 2024



Capistrano ES – ELOP July 2024



Campus Ecology Program Update

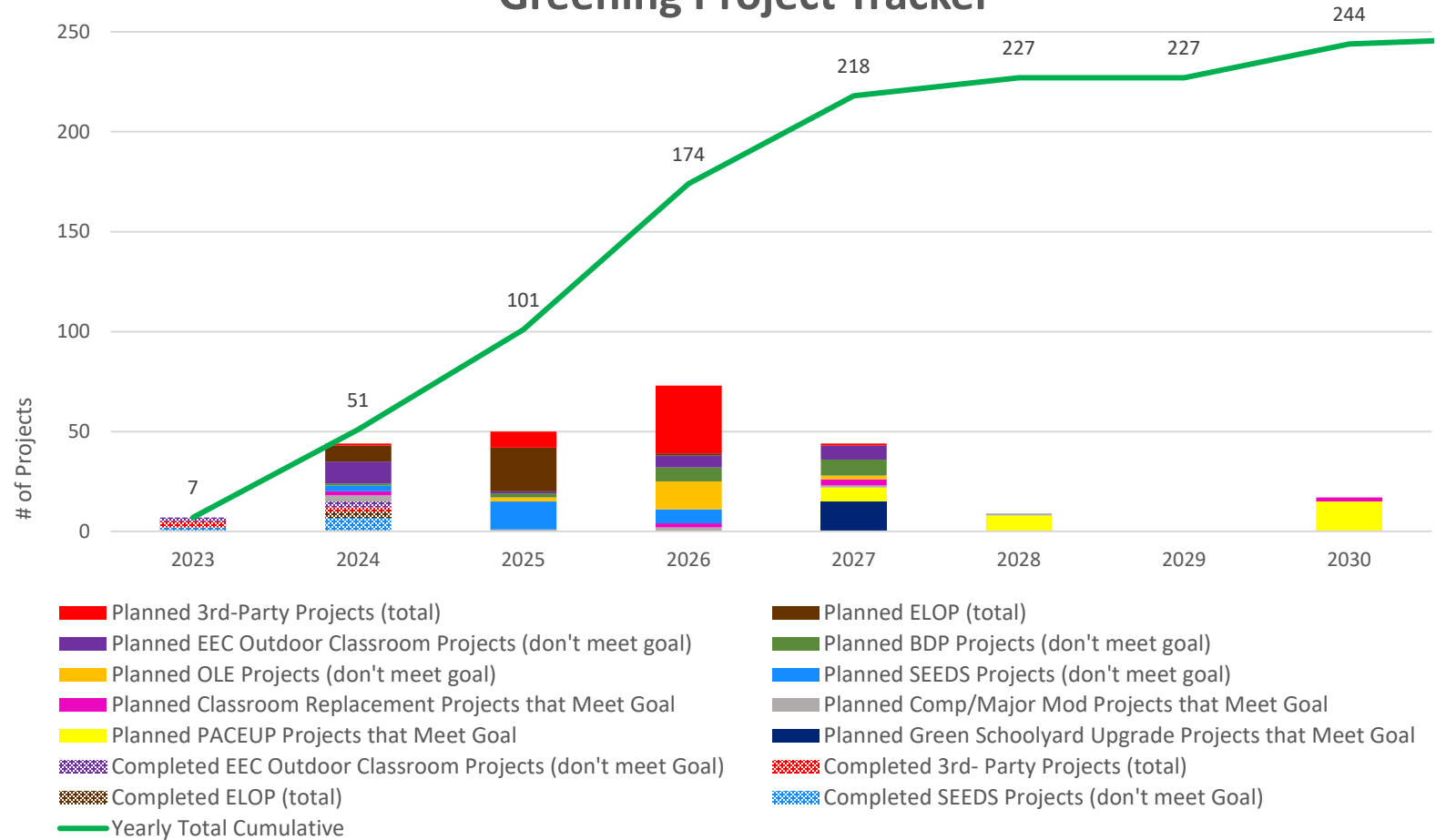


Wilton Place ES – BEFORE



Wilton Place ES – AFTER ELOP

Greening Project Tracker

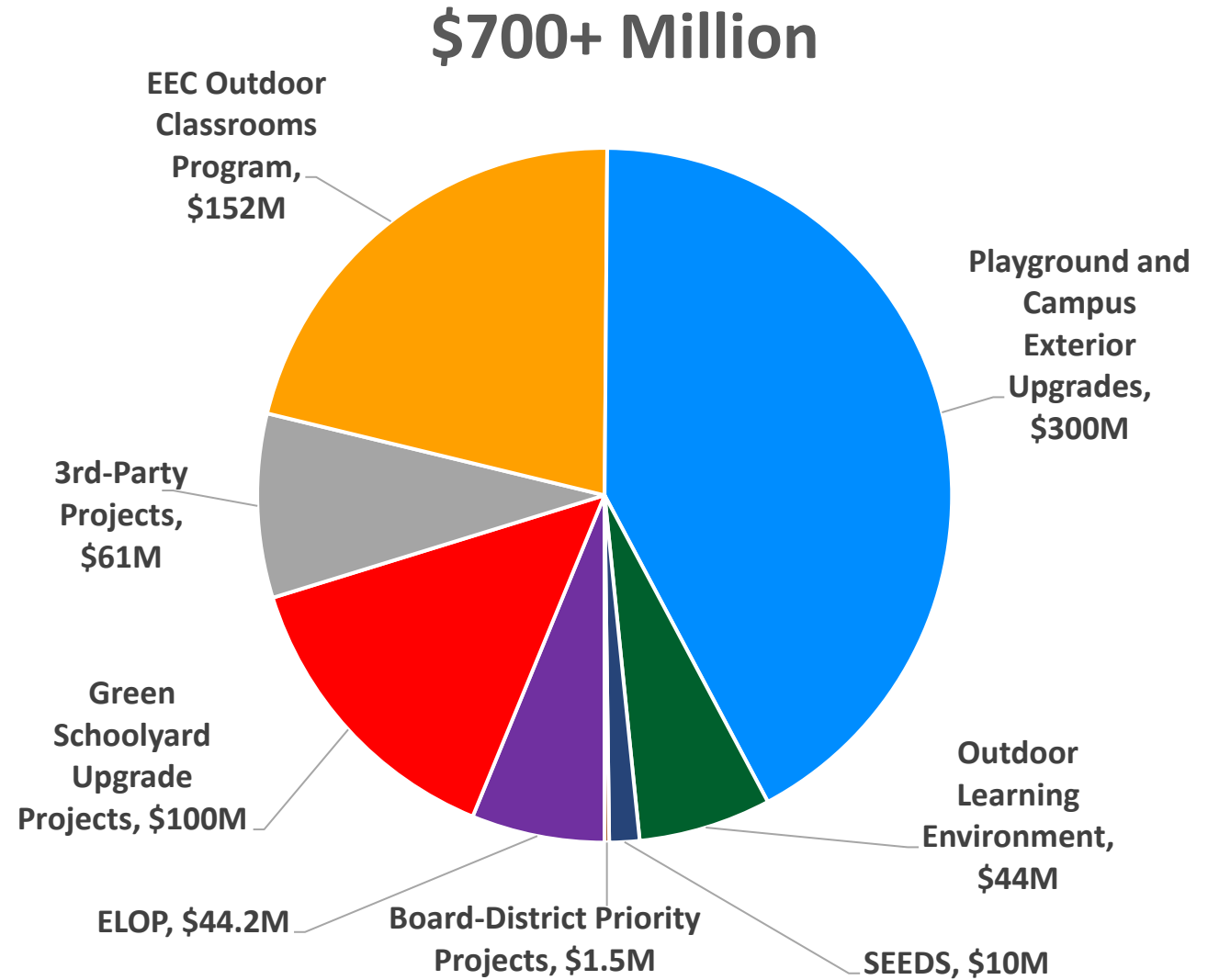


The ELOP Program will add 836 trees to LAUSD campuses

100 projects planned or completed to meet the 30% greening goal



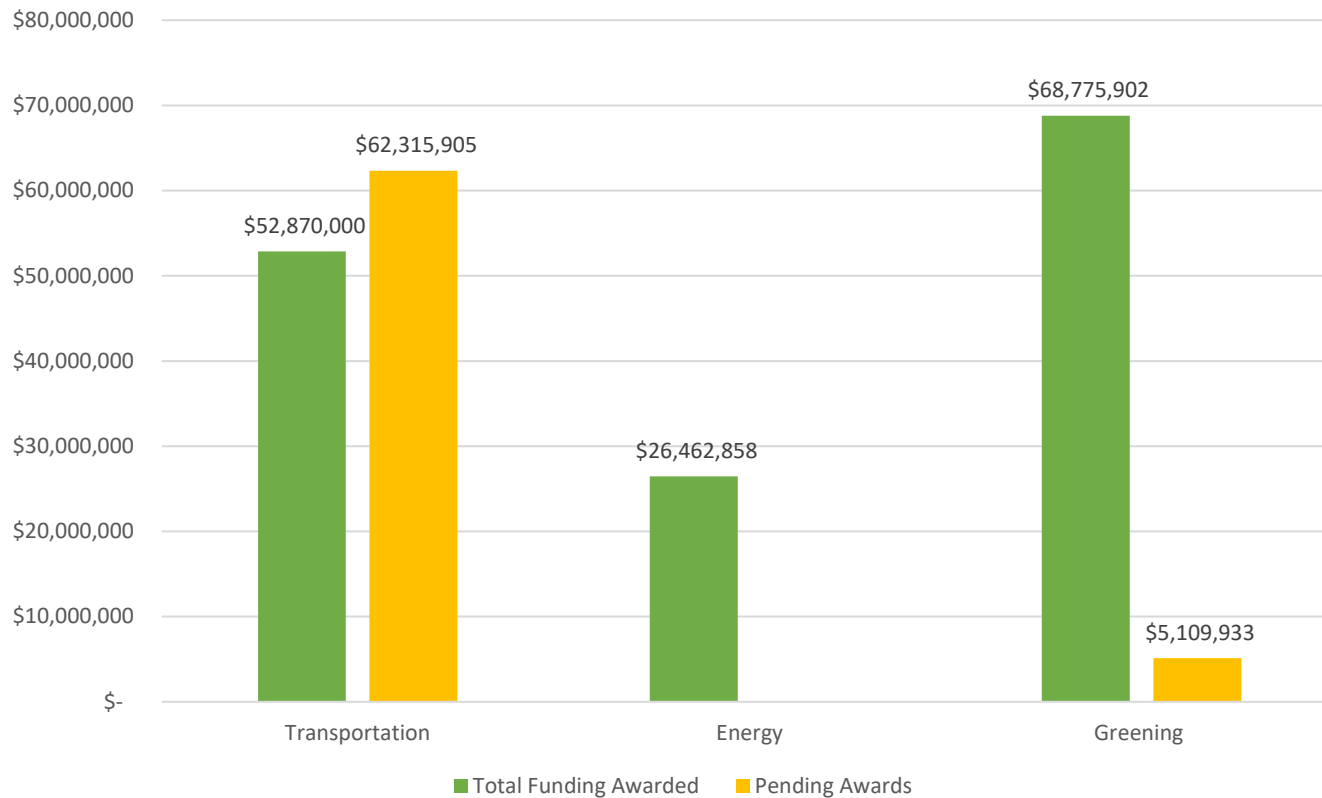
Campus Ecology Funding



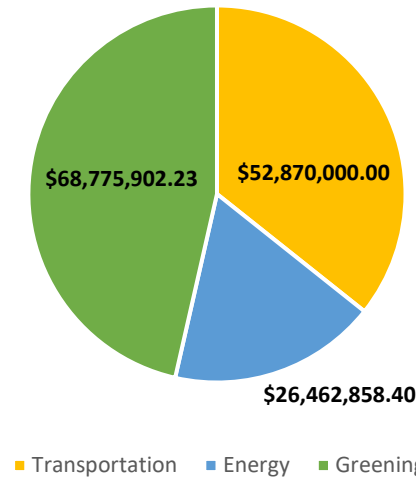


Sustainability Grant Funding and Tax Credits

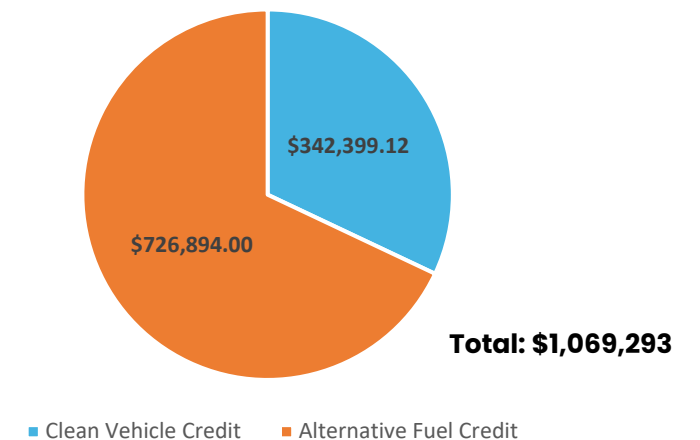
**Sustainability Awarded and Pending Grants
2021 - 2024**



**Sustainability Grants Awarded
2021-2024**



**Estimated Clean Energy Tax Credit
2020-2022**



Received \$148Min Grants to support Clean Energy and Greening Projects



Clean Energy Grant Funding

Clean Energy Grants/Incentives

- **Environmental Protection Agency** (EPA)
 - EPA Clean Heavy-Duty Vehicle Grant
- **California Energy Commission** (CEC)
- **South Coast Air Quality Mitigation District** (SCAQMD)
 - Carl Moyer EV Charging Station Grant
- **California Air Resources Board** (CARB)
 - Hybrid and Zero-Emission Truck and Bus Voucher Incentive (HVIP)
 - Zero Emission School Bus Infrastructure (ZESBI)
- **California Energy Commission** (CEC)
 - CalSHAPE Ventilation program



Infrastructure Rebates

- **Charge Up LA Program** – LADWP – Electric Vehicle Charging
 - San Julian Bus Depot, Gardena Bus Depot, LAUSD Fleet Charging Projects
- **Energize Project** – CEC
 - Energy Infrastructure Incentives for Zero Emission





Clean Energy Agreements & Tax Credits

Tax Credits

- **Inflation Reduction Act** (IRA)
 - **Investment Tax Credits** (ITC) – working with the Controller's Office to capture all eligible tax credits
 - ❖ Solar arrays
 - ❖ Battery energy storage systems
 - ❖ Electric vehicle charging infrastructure
 - ❖ Electric vehicles



Agreements

- **Conserving for Our Kids MOU** – LADWP – Energy and Water Efficiency in School Facilities – **\$87.5 Million**
- **Electric Vehicle Charging MOU** – LADWP – **\$4.8 Million**



CALIFORNIA
ENERGY
COMMISSION



Campus Ecology Grant Funding

State Greening Grants

- **CalFire Green Schoolyard Urban Forestry Grant – Planning**
- **CalFire Green Schoolyard Urban Forestry Grant – Planning & Implementation**
- **California Strategic Growth Council**
- **California Ocean Protection Council**
- **California Natural Resources Agency (CNRA)**
- **Integrated Climate Adaptation and Resiliency Program (iCARP) – May 2024**

Federal Grants

- **CalFire Urban and Community Forestry**
- **Housing Urban Development (HUD) FY24 Community Project Funding**
- **UCF – CalFire IRA Grants – Green Schoolyards – May 2024**
- **EPA – Environmental and Climate Justice Community Change Grants Program – Nov 2024.**





Presentations and Tours

Presentations

ESO presented at the EPRI Fireside Chat "Electrification in Reflection: Customer Experience over Time"- September 17, 2024

Tours

Zero-Emission School Bus Press Event August 27, 2024.
Leaders from CalEPA, the California Air Resources Board (CARB) and the California Energy Commission (CEC) Announce Funding Program for Zero Emission Buses at Sun Valley Bus Yard

The U.S. Treasury Department toured LAUSD's Sun Valley Bus Yard to view the on - going Electrification project – September 2024



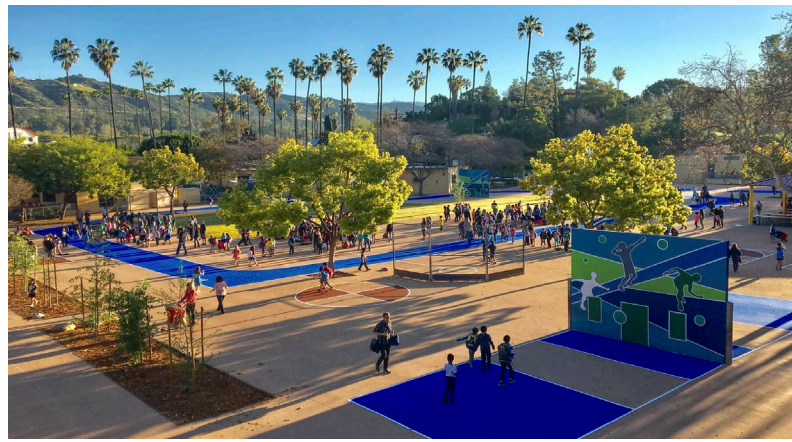


LAUSD Achievement Dashboard

- **Reduced Energy Consumption by 15% from a 2014 Baseline**
- **Reduced Water Consumption by 31% from a 2014 Baseline**
- **Using 57% Clean, Renewable Energy**
- **Received \$148M in Grants to support Clean Energy and Greening Projects**
- **Upgraded 390 school sites with LED Lights**
- **LAUSD became one of the first school districts in California to achieve Level 2 Certified Green Zone from the American Green Zone Alliance (AGZA)**



Victoria Ave ES – SEEDS April 2024



Thank You!



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