

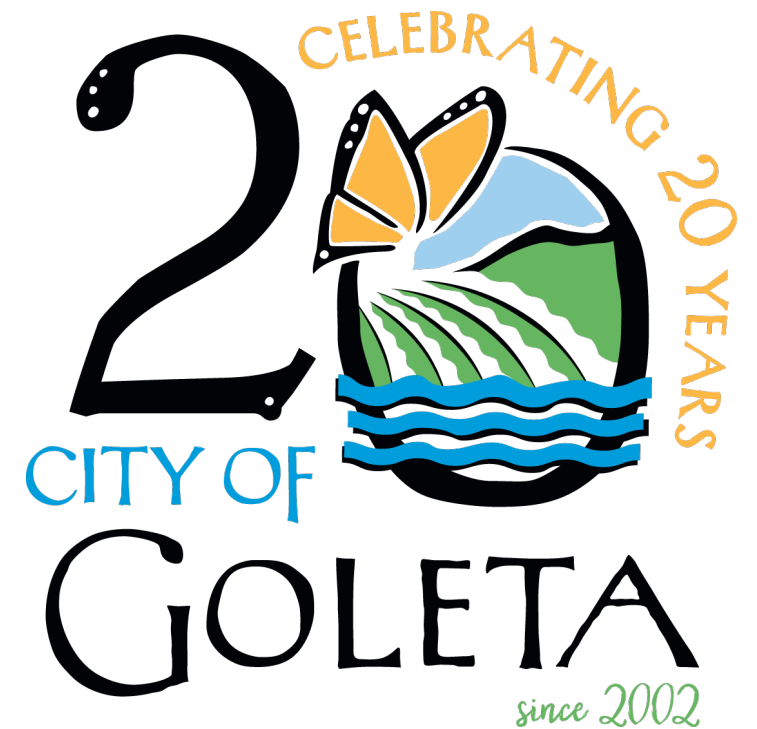
Item II: City Hall Electric Vehicle Charging Infrastructure & SCE Charge Ready

Presentation to Green Issues Standing Committee
October 12, 2022

Presentation by:

Dana Murray, Sustainability Manager

Angeline Foshay, Sustainability Management Assistant



Presentation Overview

1. Purpose &
Timeline

2. Program
Participation

3.
Conceptual
Design

1. Purpose & Timeline

Purpose of Today's Discussion:

- Update on City Hall EV Charger project and SCE Charge Ready
 - Identify changes since March Green Committee meeting
- Consider Green Committee Recommendations to City Council:
 - Authorize participation in the SCE Charge Ready program (sign Participation Agreement)
 - Allocate ~\$50,000 from the General Fund Unassigned Balance to cover professional services of an EVSE vendor to execute a 17-port EVSE “turn-key” package
 - Support RFP process and staff selection of EVSE vendor
 - Support staff efforts to apply for EVSE grants and rebates to offset City general fund contributions

City Plans & Programs

- Goal 1.1.3 in Strategic Plan: Support for EV infrastructure at City facilities
- 2022-23 PER Annual Work Program: EV Readiness Planning



Demand for EV Infrastructure

- Transportation accounts for over half of County's GHG emissions
- State goal: 250,000 EV Chargers to support 1.5 million ZEVs by 2025
- Santa Barbara County estimated need for public Level 2 Chargers by 2025: 972
 - Current Level 2 Chargers: 328

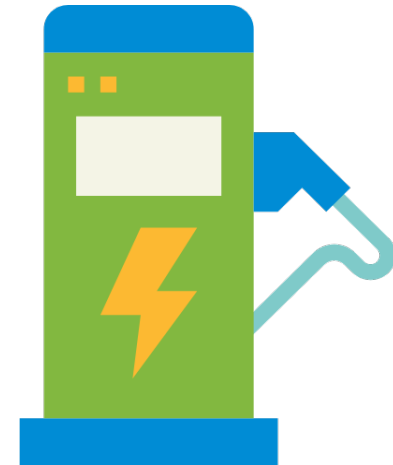
Timeline

- August 2021 – Staff submitted applications to SCE
- Nov-Dec 2021 – Preliminary approval for City Hall site & initial conceptual design drafted
- February 2022 – Conceptual design presented to Green Committee
- March 2022 – Recommendation by Green Committee for EV port increase (from 12 to 17)
- July 2022 – City receives updated conceptual design from SCE
- Aug-Sept. 2022 – City review of design, preparation of RFP

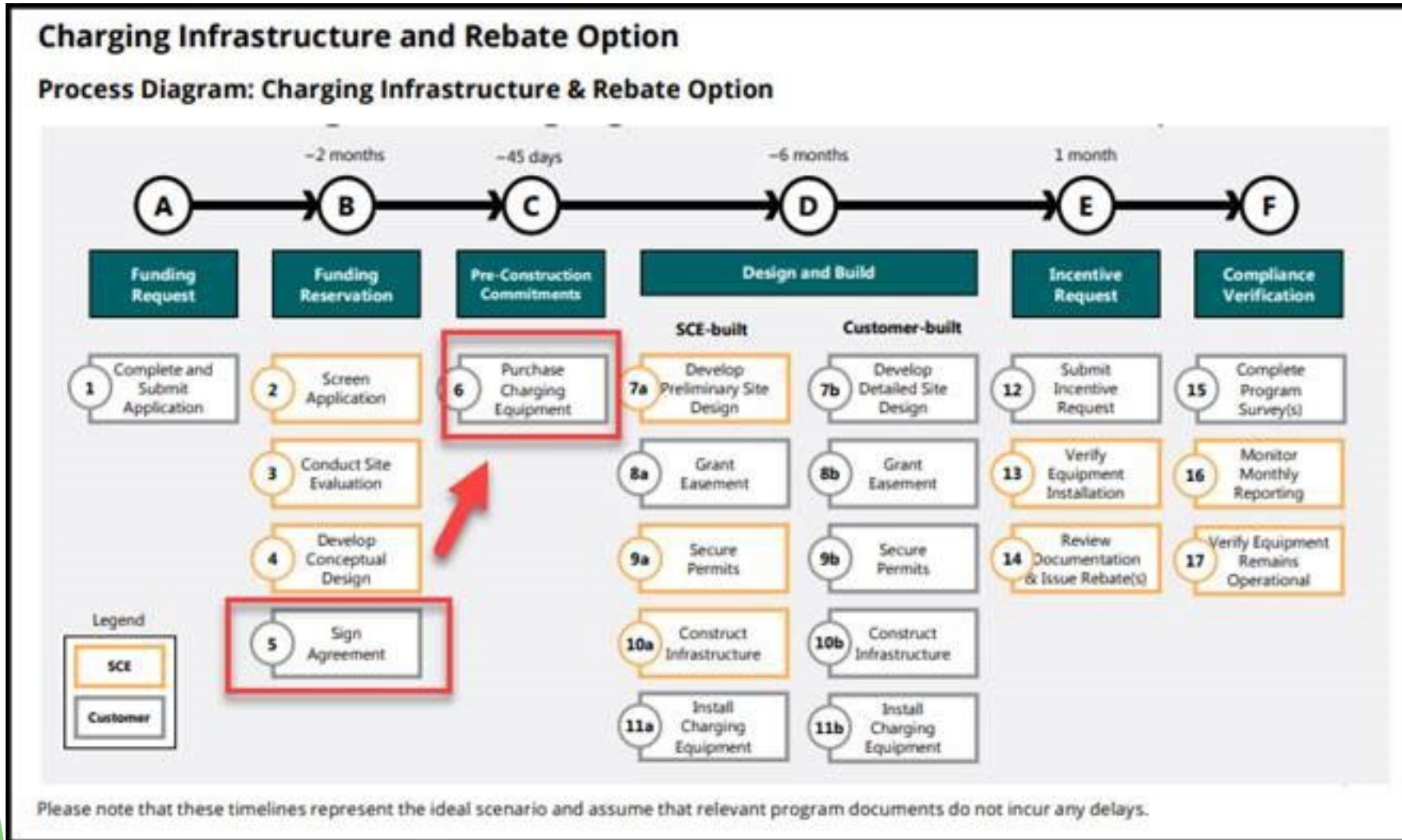
2. Program Participation – SCE Charge Ready

Charge Ready Program Terms

- 10-Year Participation Agreement
- Grant of Easement
- SCE Charge Ready Provides:
 - Designs and installs the "make-ready" infrastructure for free
 - Addresses ADA compliance
 - Rebates for EVSE per port
- City Responsibilities
 - Purchase and installation of EVSE
 - Networking for all chargers for program term
 - Operations and maintenance for program term
 - Enrollment in Demand Response Program



Program Process



Next Steps

- Sign Program Participation Agreement
- Upon execution by SCE, 45 days to demonstrate proof of purchase of EVSE
- Staff currently evaluating vendors via RFP process



Costs & Budget

- Should Council approve participation agreement, staff requests ~\$50,000 from General Fund for 17 EVSE.
- Project has changed from 12 EVSE to 17, and from an estimated cost of \$30,000 to \$65,000 (increased cost due to installation, maintenance, warranties, and inflation).
 - Note: Cost is before any rebates and incentives (3CE, APCD, SCE, etc.)
- Staff will provide more accurate cost when EVSE vendor is selected through RFP process.

Budget Request

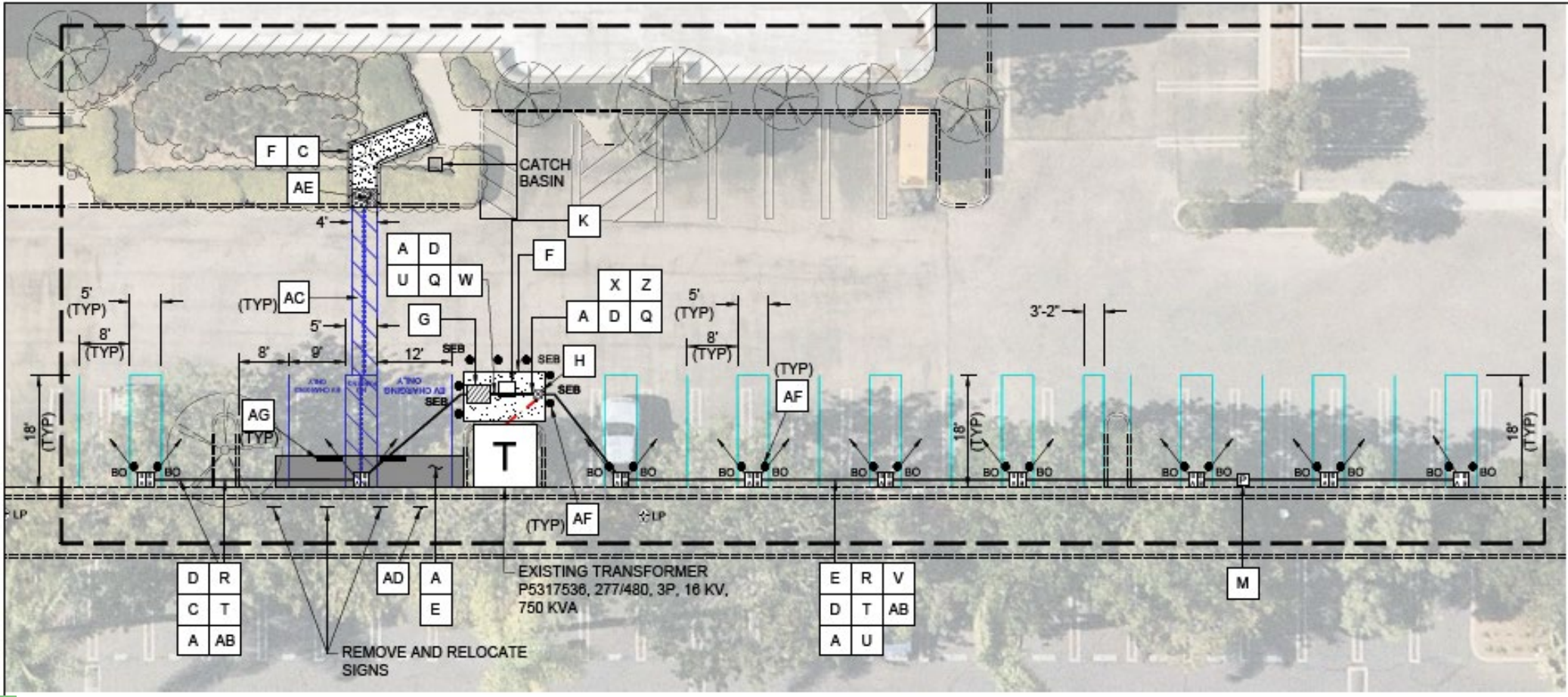
Goleta City Hall EV Charger Project, FY 22/23						
Fund Type	Account	FY 22/23 Current Budget	YTD Actuals	Appropriation	Total Available Budget	
General Fund	101-40- 4500-57010	\$15,000	\$15,000	\$50,000	\$65,000	
Total		\$15,000	\$15,000	\$50,000	\$65,000	

3. Conceptual Design

Key Elements

- 17 EV Chargers – 8 Dual Port & 1 Single Port
- 2 ADA Accessible Spaces – 1 Van & 1 Standard
- ADA accessibility improvements to the south entrance to City Hall
- Restriping will result in a net loss of 7 parking stalls
- SCE's work will be complete ~9-12 months after participation agreement signed

Conceptual Design



Recommendations Needed

- Staff seeks Committee direction on the inclusion of specific features that vary between EVSE vendors. These features include:
 - Cable retractors at ~\$300 premium per charger (***Recommended by staff***)
 - EV charger card readers at ~\$370 per charger plus \$270 per year for operations and maintenance (***Recommended by staff***)

Recommendations Needed

Staff recommends that the Green Committee receive this update on the City Hall EV Charger project and SCE Charge Ready program, and:

1. Recommend that the City Council authorize participation in the SCE Charge Ready program and the City Manager sign the program's Participation Agreement;
2. Recommend a budget allocation of ~\$50,000 from the General Fund Unassigned Balance for the professional services of an EVSE vendor to execute a 17-port EVSE “turn-key” package;
3. Support RFP process and staff selection of the best fit EVSE vendor for the proposed Charge Ready project at Goleta City Hall; and
4. Support staff efforts to apply for EVSE grants and rebates to offset City costs.

Questions and Input

Item III: Green Fleet Policy

Energy and Green Issues Standing Committee

October 12, 2022



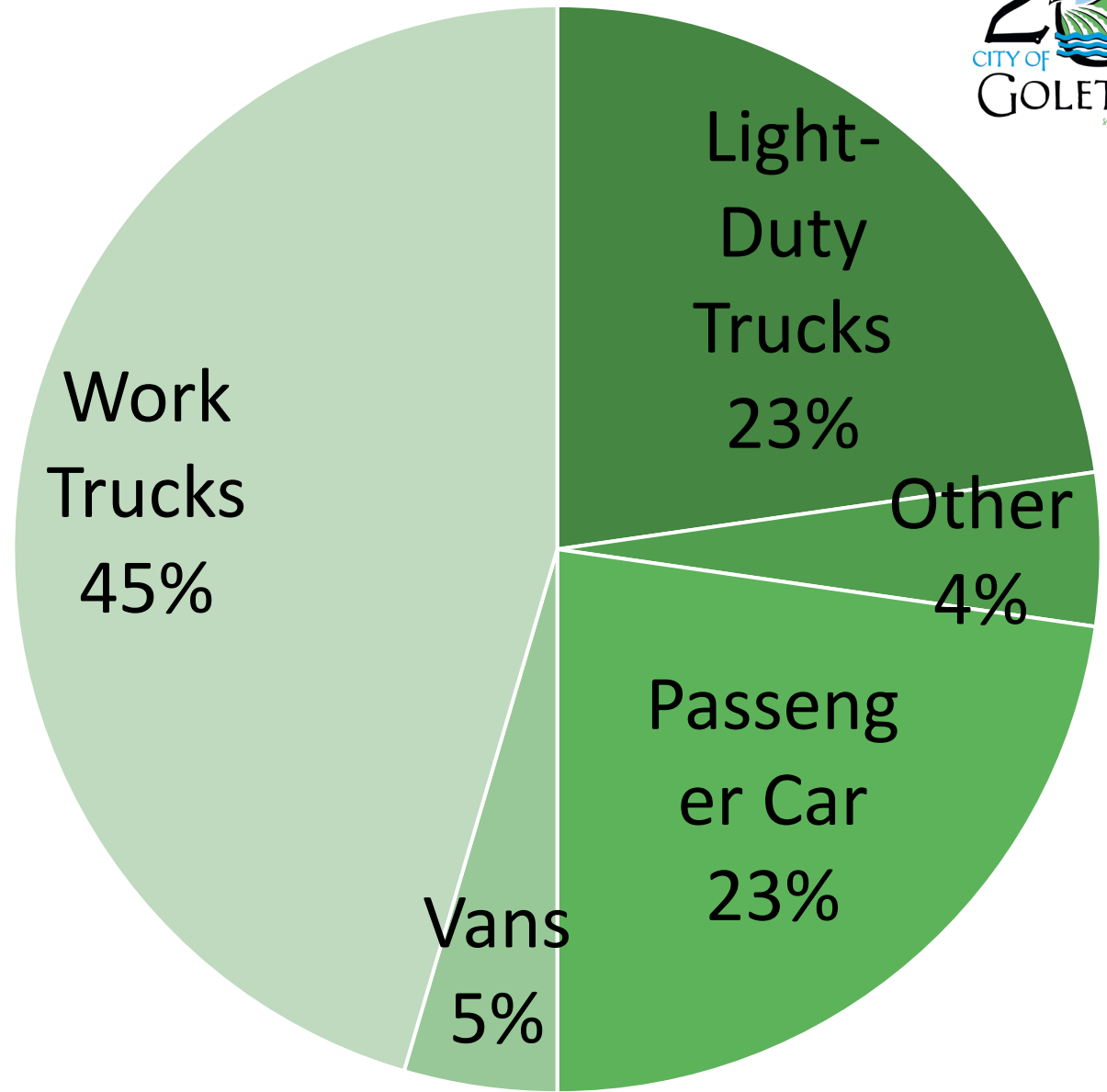
Presentation by:

Matthew R. Fore, General Services Director

Cassidy Le Air, Management Analyst

Current Fleet

- 13% Hybrid/EV
- 22 Vehicles
 - 10 Work Trucks
 - 10 Light-Duty Cars/Trucks
 - 1 Parking Enforcement
 - 1 Van



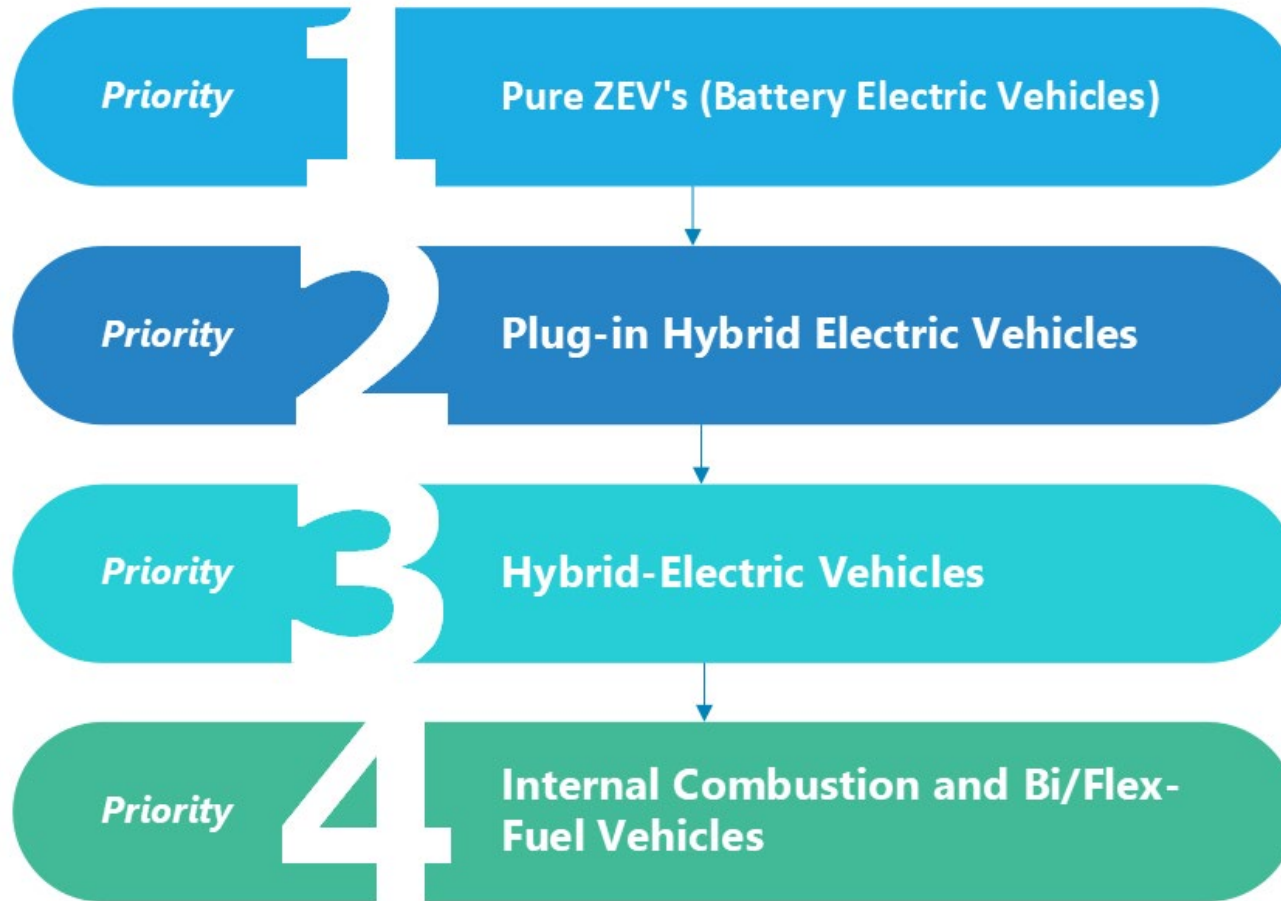
Current Landscape

- Aged fleet
- New positions
- Impacted supply chain
- Charging infrastructure
- Regulatory changes

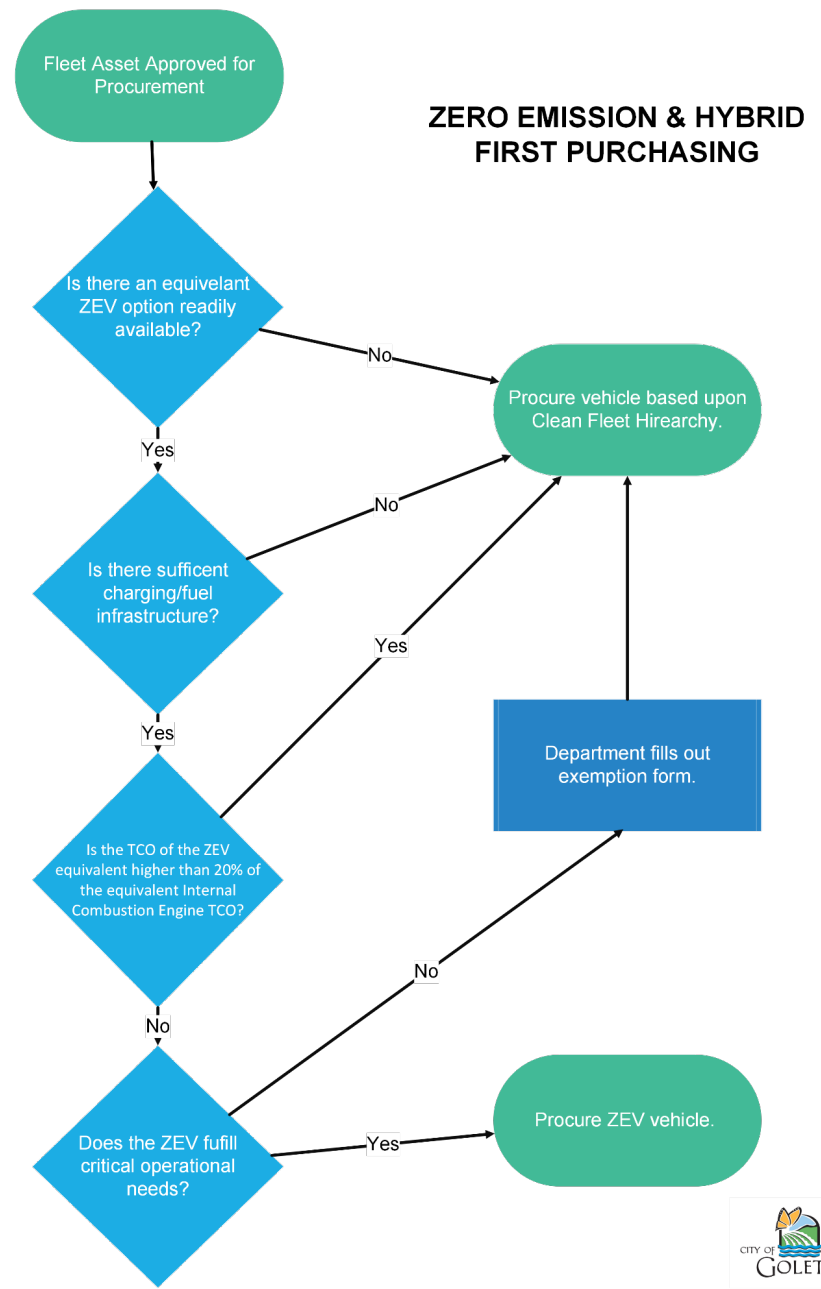
Green Fleet Policy

- Fiscal priorities and sustainability
- Guide immediate and future procurements
- ZEV & hybrid first purchasing
- Fleet expansion
- Fleet replacement

Clean Fleet Hierarchy



Decision Tree



Immediate Purchase Recommendations

Vehicle	User	Critical Specification	Staff Purchasing Recommendation	Infrastructure Needed to Support EV Option
SUV	Pool Vehicle	5 Passenger	Plug-in hybrid electric; Toyota Rav-4 (<i>or similar</i>)	Level 2 Charging
Light-Duty Truck	Public Works	Toolbox, Light bar	Battery-electric; Ford Lightning F-150 (<i>or similar</i>)	Level 2 Charging
Sedan	Pool Vehicle	Light bar	Plug-in hybrid electric; Toyota Prius Prime (<i>or similar</i>)	Level 2 Charging
Aerial Lift	Public Works	Aerial lift	Trailer mounted lift to be towed with existing vehicle	N/A
Service Trucks (4)	Public Works, General Services	Service body, Towing capacity	Procure “standard” (internal combustion) vehicle; continue to expand charging infrastructure to support future vehicles	Level 2/3 Charging

Next Steps

- Council to consider adoption of Green Fleet Policy
- Execute immediate vehicle purchase recommendations
- Plan and pursue additional charging infrastructure
- Adapt policy as EV markets develop and charging infrastructure expands
- Right size City fleet

Questions & Input

ITEM IV: REACH CODE AND BUILDING ELECTRIFICATION

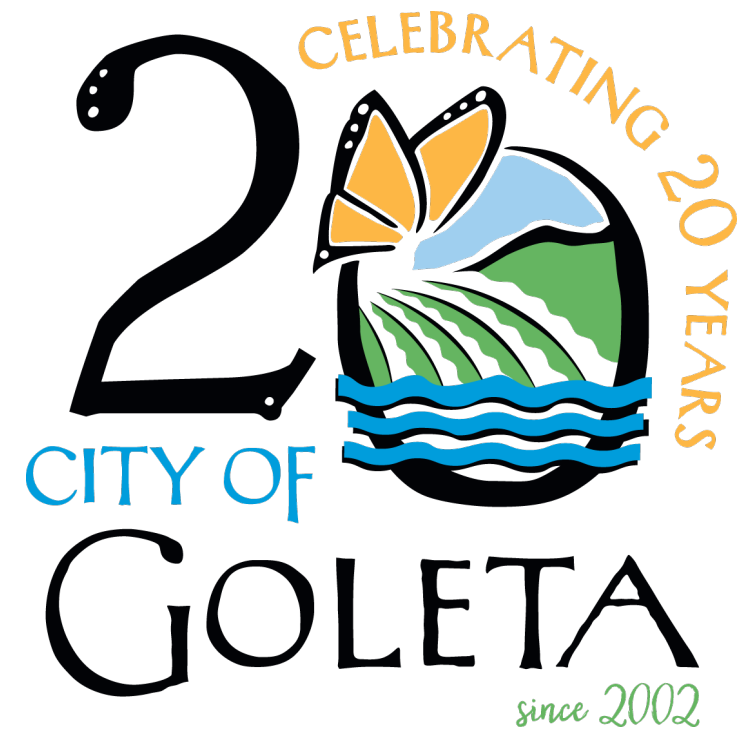
Presentation to the Energy Green Issues Standing Committee
October 12, 2022

Presentation by:

Angeline Foshay, Sustainability Management Assistant

Dana Murray, Sustainability Manager

Peter Imhof, Planning and Environmental Review Director



Overview

1.
Purpose &
Background

2.
Reach Code
Pathways

3.
Electric Vehicle
Components



Reach Codes & Building Electrification

- Purpose of item discussion:
 1. Committee receives background on Reach Codes and Regional Collaboration.
 2. Provide recommendation on policy pathway to pursue a reach code requiring all electric new construction.
 3. Provide recommendation on whether to pursue an EV reach code.
- Significance of an All-Electric Reach Code and EV Reach Code:
 - Catalyze the electrification of new buildings
 - Reduce the use of fossil fuels in buildings
 - Improve indoor air quality
 - Decrease hazards to public safety in buildings
 - Support the electrification of the transportation sector

City Plans & Programs

- 2021-23 Goleta Strategic Plan
 - 1.1.4. Explore adoption of a "Reach" Building Code
 - 1.1.5. Continue to work with the Santa Barbara County Regional Climate Collaborative to share resources to address climate change
- "Reach Codes" identified by Council as the top priority for Sustainability's upcoming projects during the 2022-23 PER Annual Work Program process



State Law



- Senate Bill 32: California set targets to reduce statewide GHG emissions to:
 - 40% below 1990 levels by 2030
 - 80% below 1990 levels by 2050
- California Air Resources Board's 2022 Scoping Plan provides an implementation pathway to meet the State's carbon reduction goals
 - Recommends all-electric buildings for residential construction starting in 2026 and non-residential construction starting in 2029



Building Emissions

- Buildings are responsible for ~25% of CA's GHG emissions; 40% of Goleta's community-wide emissions
- CA cities rapidly implementing plans to cut pollution from homes and buildings to meet the State's energy targets for new construction, aiming to achieve zero-net-energy (ZNE) for all:
 - New residential and municipal buildings by 2025
 - New non-residential buildings by 2030
- ZNE is netting out a building's annual energy usage to zero by providing offsetting renewable energy and energy efficient buildings.
- Policy mechanism to achieve ZNE:
 - California Energy Code - energy efficiency and renewable energy requirements
 - California Green Building Standards Code - requires that builders use energy-efficient technologies and construction practices.



Regional Collaboration

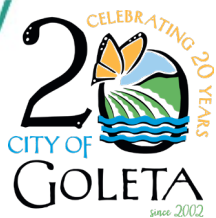
- Jurisdictions Developing Policy



- Technical Assistance

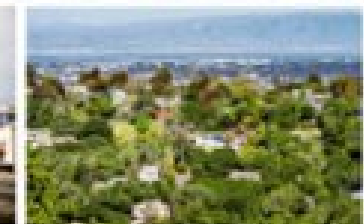
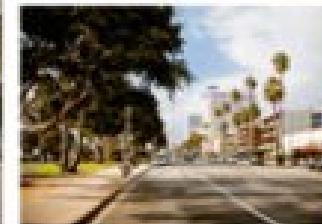
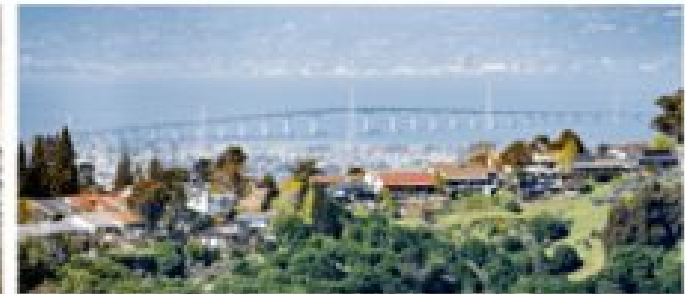


NegaWatt



Reach Codes

- A local building energy code that "reaches" beyond state minimum requirements for energy use in building design and construction
- Designed to encourage low-cost all-electric new construction of healthier, efficient, safer, and zero emission buildings.



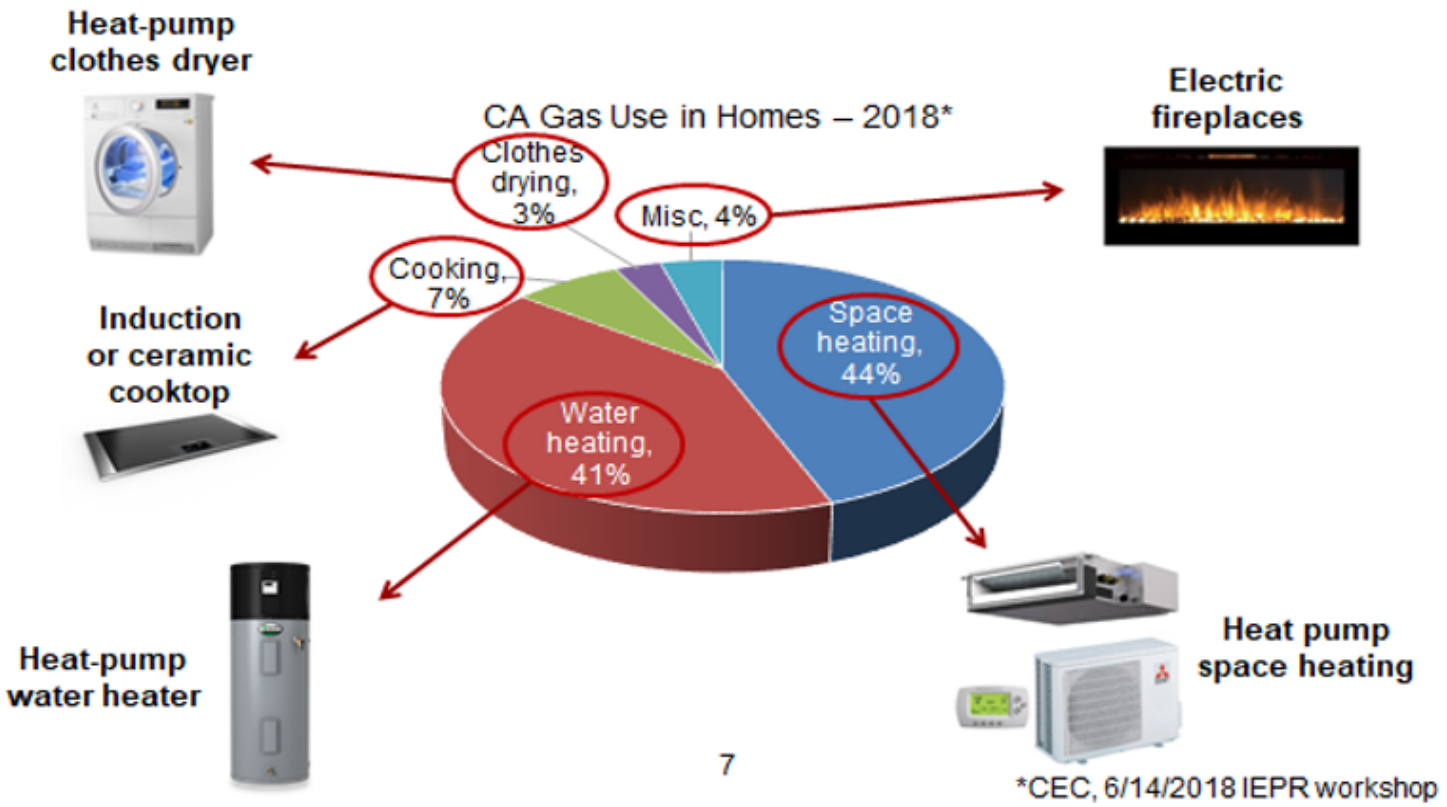
Benefits of Electrification

- Significantly reduced GHG emissions
 - Compounded further by the greening of state electricity systems
- Improved indoor air quality
 - 60% of homes in the state that cook at least once a week with a gas stove produce toxic levels of nitrogen dioxide, formaldehyde, and carbon monoxide, which would exceed even outdoor air quality standards.
- Reduced hazards in the event of natural disasters
- Reduced construction costs



Efficient Electric Appliances

High-efficiency electric alternatives to gas use in residential buildings



Reach Code Pathways

Pathway 1: Electric-Preferred Policy

- Would amend the California Energy Code to incentivize all electric new construction, and require mixed fuel buildings to maintain higher efficiency than the base 2022 CBSC
 - More challenging to implement
 - Would require cost effectiveness study
 - After adoption by City Council, this amendment would require approval from the California Energy Commission
 - Would require renewal every 3 years per the changing CBSC
 - Lower GHG emission savings



Pathway 2: All-Electric Policy via CALGreen

- Develop a reach code via amending CALGreen standards, requiring all-electric fuel sources for new construction of buildings
- After adoption by City Council, this amendment would require approval from the California Energy Commission
- Would require renewal every 3 years per the changing CBSC



Pathway 3: All Electric Policy via Municipal Health & Safety Amendment

- Utilizes jurisdictional authority to amend Goleta Municipal Code Chapter 8 Health & Safety to prohibit any new gas infrastructure (hookups or piping) for new construction
 - Longest lasting option, would not require renewal and can be adjusted over time
 - Would not require CEC submission and approval
 - Would create regional consistency with City of Santa Barbara (in process), County of Santa Barbara (adopted), and City of Carpinteria (in process)

Staff Recommendation



Options for Adoption

New Construction Ordinance Approaches

		Option #1	Option #3	Option #2	
	Efficiency	Electric-Preferred	Electric Only		Electric Only Plus Efficiency
			Natural Gas Moratorium	Electric Only	
Mechanism	Energy Code	Energy Code	Jurisdictional authority (e.g., Health and Safety)	CALGreen	(Jurisdictional authority or CALGreen) plus Energy Code
Requirements	All new construction exceeds minimum energy code	Only mixed fuel buildings exceed minimum energy code	No new gas infrastructure (Hookups or Piping)	All new construction is electric only	All new construction is electric only AND exceeds minimum
Considerations	Simplicity Preserves choice Specific measures	Preserves Choice Lower GHG Savings	Longest Lasting	Must be renewed	Biggest impact Must be renewed



Electric Vehicle Charging Reach Code

Electric Vehicle Charging Requirements

- Would help Goleta further electrify our transportation sector, which accounts for over 55% of City's emissions
- Increased EV infrastructure requirements in a reach code can provide critical charging infrastructure for housing and workplaces, meeting the growing gap in EV charging demand and availability
- Pathway: Amend CALGreen minimum requirements for EV capable, EV ready, and EVSE spaces in new construction
 - Would require CEC approval and re-adoption every three years



Image from County of Santa Barbara

Levels of EV infrastructure

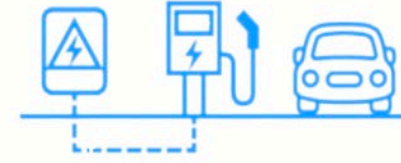
EV READINESS



EV Capable



EV Ready



EV Installed

Image from Southern Alliance for Clean Energy

- **EV Capable Space:** a parking space that has an installed electrical panel capacity with a dedicated branch circuit and a continuous raceway/conduit from the panel to the future EV parking spot.
- **Level 2 EV Ready Space:** a parking space that has installed electrical panel capacity, raceway/conduit and wiring to terminate in a junction box or 240-volt charging outlet such that Electrical Vehicle Charging Equipment (EVSE) can be directly plugged into it without additional work.
- **Electric Vehicle Charging Station (EVSE):** a parking space that includes an installed and operable Level 2 EV charging station.

2022 Building Code Requirements for EV Infrastructure in New Construction

- Residential Single-Family homes (1-2 family homes and townhomes with garages):
 - **New Construction:** all spaces must be "EV capable"
- For 3+ multi-family dwellings, hotels, and motels:
 - **New Construction:**
 - 10% of parking spaces must be EV capable
 - 25% must be EV Ready with low power Level 2 receptacles
 - 5% of parking spaces in buildings with 20+ units require Level 2 EVS installed

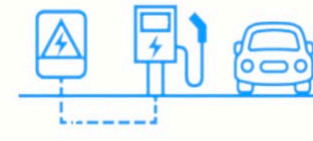
EV READINESS



EV Capable



EV Ready



EV Installed

Pursuing EV Reach Codes in Goleta

- Recommend staff research EV Reach Codes and develop options for Goleta
 - Many jurisdictions have adopted different EV-specific reach codes to encourage the adoption of EVs in new construction
 - Ex: Berkeley, San Luis Obispo, Encinitas, Palo Alto, Los Angeles, Santa Monica, etc.
 - Can adopt an EV reach code by making CALGreen Tier 1 or Tier 2 "voluntary provisions" mandatory for EV infrastructure in new construction
 - Simpler approach, provisions already developed
- Present options and findings to Green Committee for recommendations at December meeting

Recommendations Needed

- Green Committee provide recommendations on Reach Codes, specifically:
 1. Recommend building electrification policy pathway.
 - Staff recommends that the City pursue the municipal health and safety ordinance policy pathway to prohibit natural gas infrastructure in new construction, additions, and major alterations (Option 3).
 2. Recommend that the City pursue an electric vehicle charging component of the Reach Code to encourage transportation electrification.

Questions & Input

October 12, 2022 Green Issues Standing Committee Meeting