

Municipal Clean Energy & Resilience Projects

Resiliency Advisory Board
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Lindsey Hawes
Municipal Energy Program Manager
Energy Division, Dept of General Services

Zero Emissions Targets

Municipal Energy Strategy: 2016 to 2020

Strategies	Actions
STRATEGY 1: Reduce Energy Consumption	ACTION 1: Identify and implement energy efficiency projects
	ACTION 2: Measure and manage energy performance
STRATEGY 2: Increase Onsite Renewable Energy Generation	ACTION 1: Implement renewable energy projects
	ACTION 2: Assess the impacts of a changing market
STRATEGY 3: Strive for Zero Emissions Buildings	ACTION 1: Adopt and enforce zero emissions standards and policies
	ACTION 2: Reduce embodied carbon
STRATEGY 4: Support Resiliency and Grid Stability	ACTION 1: Deploy smart, connected distributed energy resources
	ACTION 2: Secure funding for grid-interactive efficient building pilot projects
STRATEGY 5: Engage and Educate	ACTION 1: Engage and educate building occupants and patrons
	ACTION 2: Train the local workforce

Climate Action Plan: 2022

Measure 1.3: Decarbonize City Facilities

2030 Target Phase out natural gas 50% in municipal facilities	2030 GHG Reduction (MT CO ₂ e) 15,148
2035 Target Phase out natural gas 100% in municipal facilities	2035 GHG Reduction (MT CO ₂ e) 32,638

Measure 2.2: Increase Municipal Zero Emission Vehicles

2030 Target Percent of all municipal fleet vehicles to be ZEVs: Cars: 75% LDV: 50% MDV: 50% HDV: 50%	2030 GHG Reduction (MT CO ₂ e) 11,042
2035 Target Percent of all municipal fleet vehicles to be ZEVs: Cars and LDV: 100% MDV: 75% HDV: 75%	2035 GHG Reduction (MT CO ₂ e) 15,990



400

municipal
facilities
using
natural gas

4,000

fleet
vehicles on
the road

10

years to
convert to
electric
solutions

CP 900-03: Zero Emissions Municipal Buildings & Operations Policy (ZEMBOP)

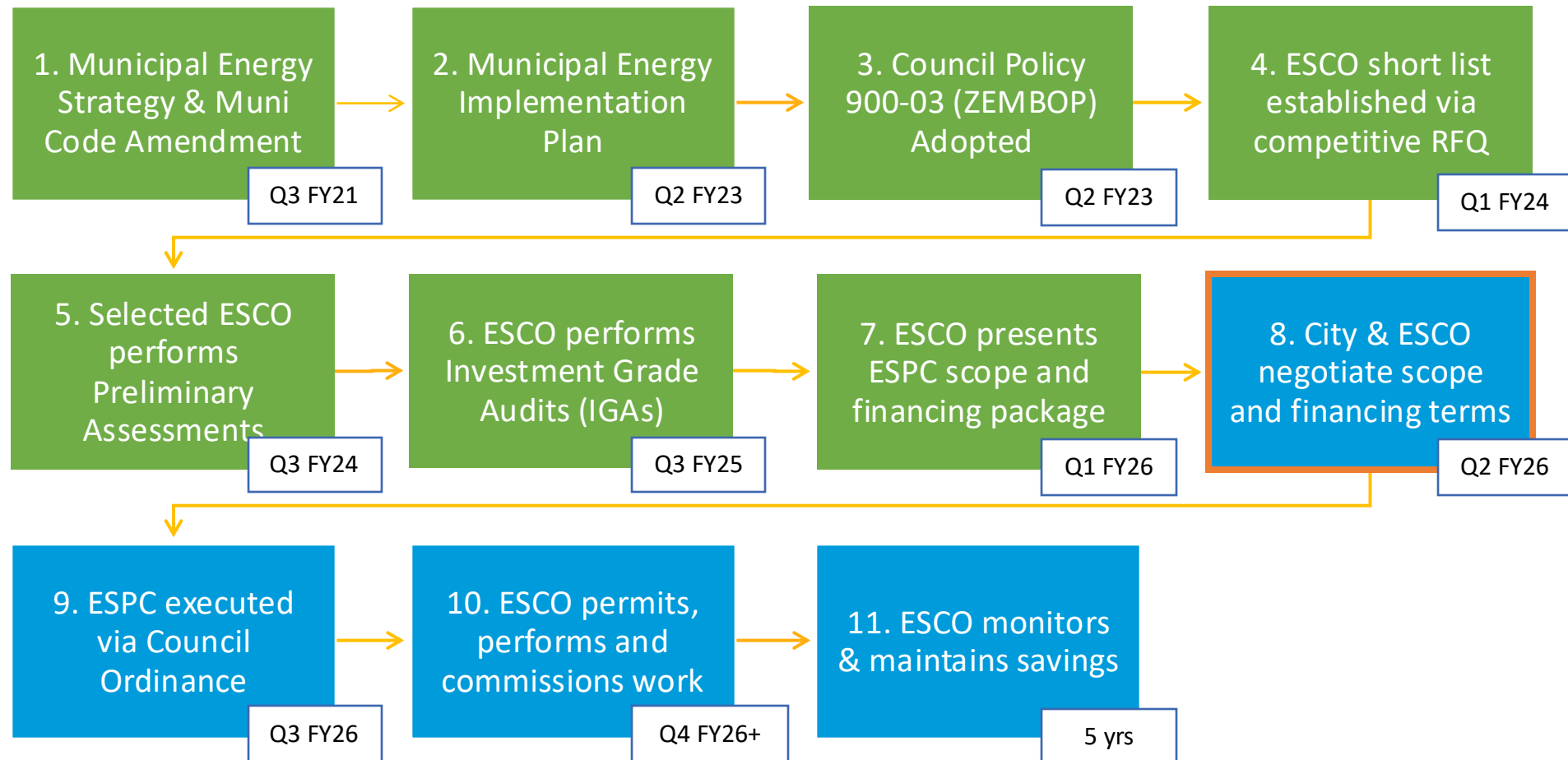
- New construction of muni facilities to be all electric
- Energy retrofits to 400+ existing City facilities to remove natural gas, increase energy efficiency, and deploy solar PV, battery energy storage, and fleet EV charging
- Asset Managing Departments develop Fossil Fuel Elimination Plan & Fleet Charging Plan
- Retrofits fall into 3 primary categories
 - CIPs (Asset Managing Departments + Engineering & Capital Projects Department)
 - Maintenance projects (DGS Facilities Services Division)
 - Energy Savings Performance Contracts (DGS Energy Division)

Energy Savings Performance Contracts (ESPCs)

- Well tested approach used by federal & state governments, many local governments
- Contract locks in guaranteed energy savings
- Savings are used to pay back the project costs over specified financing term
- ESCO performs ongoing monitoring and maintenance, and performs repairs at no cost

- Council adopted SD Muni Code amendment in Feb 2021 to leverage state code
- Enables flexible procurement of energy service contractors
 - Low bid / best value not required
 - The project is in the best interest of the public agency
 - Project costs are offset by energy cost savings

Process & Timeline



ESPC Opportunity

- 40,000 LED streetlight retrofits
- New efficient HVAC, lighting, water heaters, water fixtures, transformers, etc.
- Electrification of 23 buildings
- 1.7 MW of solar PV and 5 MW battery energy storage (17 systems)
- Facilities include
 - 16 libraries
 - 16 recreation centers
 - 5 sports fields
 - 2 police stations
 - Miramar Ops Yard & Ridgehaven

Hazard Mitigation Grant Program (HMGP)

- ~\$580k funded by FEMA, via CalOES
- Advance Assistance, Community Lifeline Energy Resilience
- Scope:
 - Establish framework for community energy resilience hubs at City facilities
 - Develop selection criteria, conduct planning studies, site assessments, and community engagement to identify a pilot site
 - Evaluate multiple sites for vulnerability and technical viability of a solar + battery microgrid
 - Produce 60% engineering design drawings, cost estimates, benefit-cost analysis, and proposal to next HMGP stage for construction funds
- Benefits:
 - Improved community access to electricity, heating, cooling in times of grid-sourced power loss, particularly for disadvantaged communities

THANK YOU
QUESTIONS?

Lindsey Hawes
Municipal Energy Program Manager
lhawes@san Diego.gov

