

Update on the Orange County's Climate Action Plan



PRELIMINARY CLIMATE ACTION PLAN

COUNTY OF ORANGE 2024

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Climate Action Plan Approach



Two-Phased Approach

1. Preliminary CAP
2. Comprehensive CAP with California Environmental Quality Act (CEQA) Analysis

Brought the Preliminary CAP to the Board of Supervisors in September 2024 as a Receive and File item and passed.

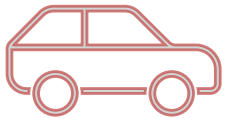




Sectors Selected Based on Public Input



Energy



Mobility



Resource Recovery and Waste



Environmental Justice



Natural Resources



Resilience

Climate Action Plan Changes



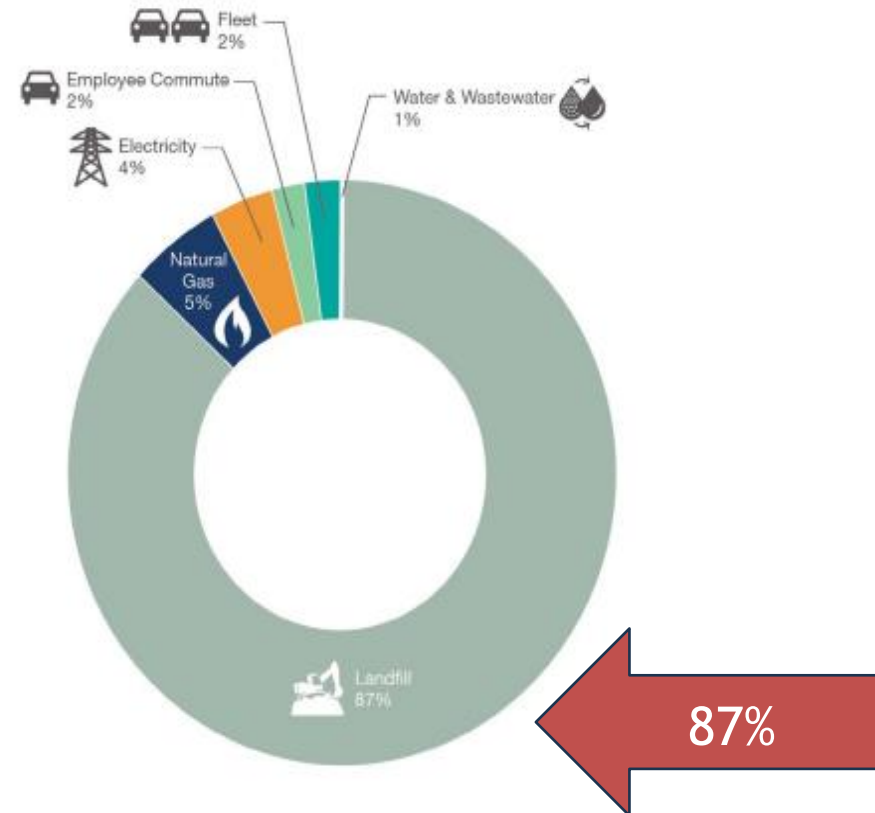
1. Emission Inventory has been refined so numbers may be slightly different. *Community inventory was off by -1% and Municipal inventory showed no discernable difference.
2. Structure of the measures are different. Measures will either be noted with a "Community" or "C" or "Municipal" or "M."
3. Included a Vulnerability Assessment Study.
4. Based on public input, target years have been set at 2030, 2035, 2040 and 2045.

Step 1 – Inventory Details



Municipal Inventory Included the following:

- 800+ structures (i.e., civic center plaza, social services, detention center, courthouses, county clerks, parks, animal shelters, etc.)
- John Wayne Airport
- Irvine Zoo
- 19,000 employees
- 4,500 on- and off-road vehicles
- Dana Point Harbor
- Three active landfills
- 20 Inactive landfills



Municipal/Community Measures — Energy



M-E1 – Pursue Building Decarbonization of County-Owned Facilities

M-E2 – Reduce Building Energy Use Throughout County-Owned Facilities

M-E3 – Install Solar at County-Owned Facilities

M-E4 – Reduce Carbon Intensity of County-Owned Facilities

C-E1 – Promote Building Decarbonization Throughout the Community

C-E2 – Reduce Building Energy Use Throughout the Community

C-E3 – Promote Solar Installation Throughout the Community

Municipal/Community Measures — Mobility



M-M1 – Expand County-Owned EV Charging Infrastructure

M-M2 – Reduce VMT for County Employees and County-Owned Fleet

M-M3 – Decarbonize the County-Owned Fleet

C-M1 – Expand publicly-accessible EV Charging Infrastructure

C-M2 – Reduce VMT in Unincorporated Areas

C-M3 – Decrease the Tourism-related GHG Emissions in Orange County

C-M4 – Optimize Traffic Flow in Unincorporated Areas

Municipal/Community Measures — Resource Recovery & Waste



M-RRW1 – Improve Diversion of Waste at County-Owned Landfills

M-RRW2 – Increase Waste-to-Energy Potential at County Landfills

M-M3 – Decarbonize the County-Owned Fleet

C-RRW1 – Increase Public Participation in County Waste Diversion Programs

Municipal/Community Measures — Environmental Justice



M-EJ1 – Increase Urban Greening on County Property

C-EJ1 – Expand Access to Green and Open Space for Communities Lacking Recreational Amenities

C-EJ2 – Promote and Expand Active Transportation Networks to Essential Destinations

C-EJ3 – Promote Building Retrofits Located in Underserved Communities

C-EJ4 – Incentivize Transit-Oriented Development in Underserved Communities

C-EJ5 – Expand and Promote Workforce Development in Green Industries

Community Measures – Natural Resources



C-NR1 - Improve Water Supply Reliability and Water Use Efficiency

C-NR2 – Protect and Enhance Surface and Beach Water Quality

C-NR3 – Improve Flood Management through Integration with Other Water Management Practices

C-NR4 – Restore and Protect Ecosystems, Native Habitat, and Natural Resources

Community Measures - Resilience



C-R1 – Encourage the Development of Sea Level Rise Vulnerability Analyses, Adaptation Strategies, or Other Coastal Resilience Plans Across the Entire Coastline

C-R2 – Improve Preparation for and Response to All Climate and Natural Hazard Events

CEQA Streamlining



- Under State CEQA Guidelines Section 15183.5, the County determined that conducting a full CEQA analysis is appropriate to ensure the document's validity and identify any secondary adverse impacts or further opportunities not previously considered.
- The CEQA analysis may also serve to streamline project-specific implementation of measures in the future. The County's CEQA analysis will determine whether the CAP may be used in this manner to streamline the GHG analysis of future development projects in the County, by enabling such projects to demonstrate their consistency with the CAP's policies, programs, and requirements.

Projects Being Considered for Streamlining:

Smart Landfill Project (5 Sites)

Covered Aerated Static Pile Project (3 Sites)

New Build Template

CEQA Analysis will be pushed back to accommodate these projects. This will expedite these projects in the future and save the County revenue.

Municipal Operations - Reductions



Measure & Performance Goal	Performance Goals		Reductions (MTCO2e)	
	2030	2045	2030	2045
M-E1: Pursue Building Electrification of County-Owned Facilities				
<i>Decarbonize X percent of ABAU building natural gas use</i>	5%	7%	386	3,675
M-E2: Reduce Building Energy Use Throughout County-Owned Facilities				
<i>Reduce energy use X percent below ABAU</i>	5%	5%	4,059	3,051
M-E3: Install Solar at County-Owned Facilities				
<i>Install X kW of solar PV</i>	5,000	7,500	1,313	0
M-E4: Reduce Carbon Intensity of County-Owned Cogeneration Facilities				
<i>Meet X percent of cogeneration natural gas power demand with LFG from County landfills</i>	100%	100%	49,223	53,362
M-M2: Reduce VMT for County Employees and County-Owned Fleet				
<i>Reduce employee commute VMT X percent from baseline</i>	40%	65%	5,784	1,906
M-M3: Decarbonize the County-Owned Fleet				
<i>Implement ACF; by 2027, 100% of end-of-life vehicles replaced with electric, 50% prior to 2027</i>			3,518	9,204
M-RRW1: Improve Diversion of Waste at County-Owned Landfills				
<i>Divert X% of BAU landfilled waste through organics programs</i>	5%	15%	81,006	127,166
M-RRW2: Increase Waste-to-Energy Potential at County Landfills				
<i>Achieve X percent collection efficiency</i>	85%	90%	360,004	764,030
M-EJ1: Increase Urban Greening on County Property				
<i>Plant X number of new shade trees</i>	10,000	20,000	262	524
Total			505,555	962,918

Reduction Summary – Community



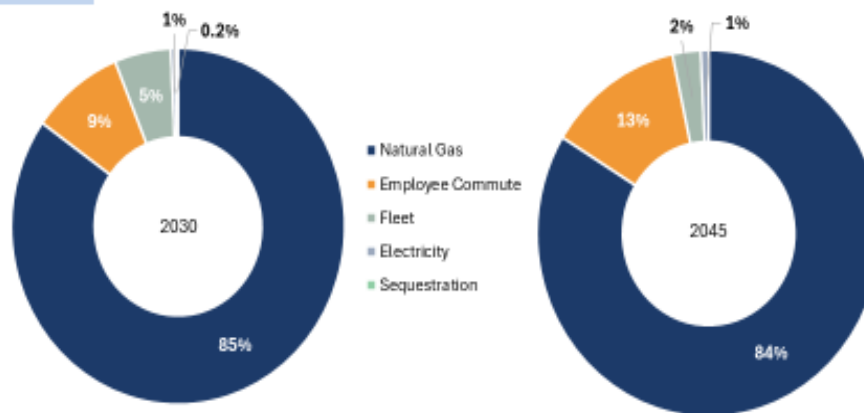
Measure & Performance Goal	Performance Goals		Reductions (MTCO2e)	
	2030	2045	2030	2045
C-E1: Promote Building Decarbonization Throughout the Community				
<i>Decarbonize X percent of existing building stock</i>	5%	20%	1,673	32,964
<i>Decarbonize X percent of new building stock</i>	15%	30%	303	11,063
C-E2: Reduce Building Energy Use Throughout the Community				
<i>Retrofit existing buildings to achieve X percent reductions in total energy use compared to 2025</i>	10%	25%	3,730	12,361
C-E3: Promote Solar Installation Throughout the Community				
<i>Install solar in X percent of existing residential buildings</i>	5%	20%	6,074	0
<i>Install X KW of solar in non-residential buildings (new and existing)</i>	6,000	25,000	1,473	0
C-M2: Reduce VMT in Unincorporated Areas				
<i>Reduce passenger vehicle VMT X percent from 2018 levels</i>	2%	5%	37,096	10,992
C-RRW1: Increase Public Participation in County Waste Diversion Programs				
<i>Achieve X tons of waste disposal per capita</i>	0.45	0.30	3,283	14,043
Total			53,632	81,423



Emission Reductions by Source

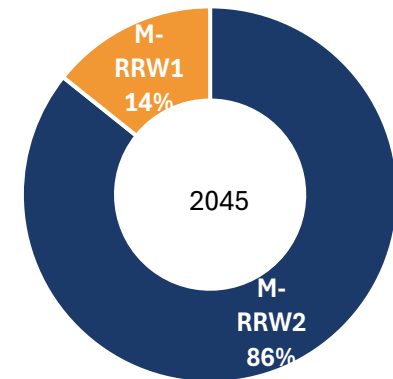
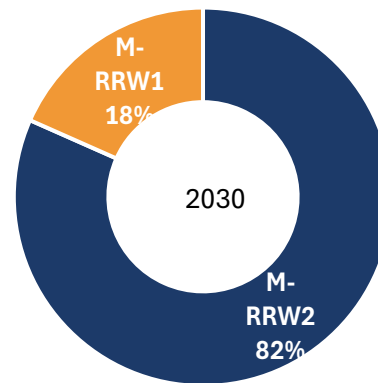
2030 & 2045 Reductions by Source – Municipal Operations, Non-Landfill Emissions

Source	Reductions (MTCO ₂ e)	
	2030	2045
Natural Gas	54,663	60,088
Electricity	319	0
Employee Commute	5,784	1,906
Fleet	3,518	9,204
Sequestration	131	524
Total	64,414	71,723



Emission Reductions by Source, Landfill Emissions

Measure	Reductions (MTCO ₂ e)	
	2030	2045
M-RRW1: Improve Diversion of Waste at County-Owned Landfills	81,006	127,166
M-RRW2: Increase Waste-to-Energy Potential at County Landfills	360,004	764,030
Total	441,010	891,196



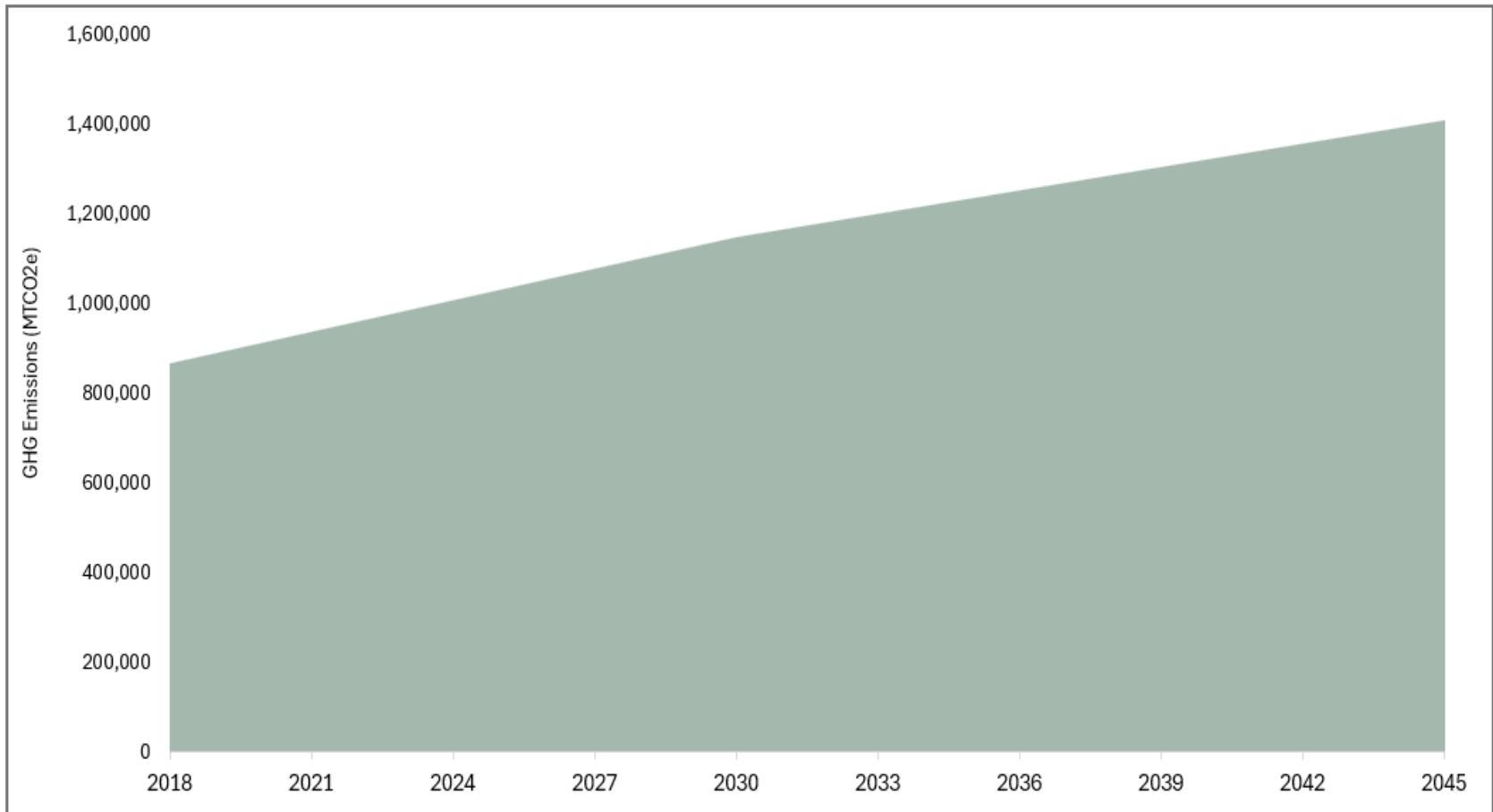
Two Sector-Specific Measures Identified for This Source Category

- M-RRW1: Improve Diversion of Waste at County-Owned Landfills
- ***M-RRW2: Increase Waste-to-Energy Potential at County-Owned Landfills***

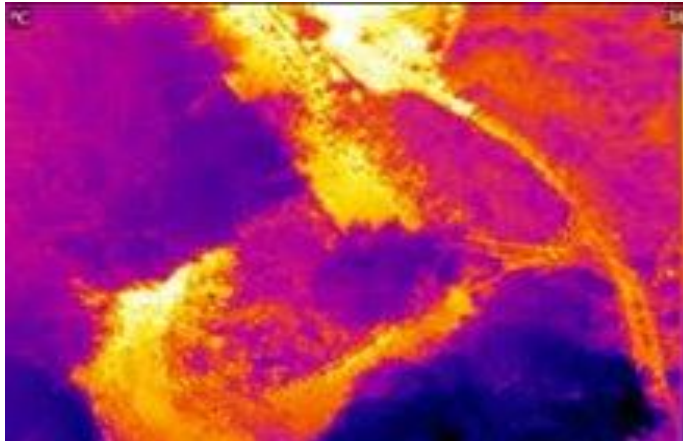
Reduction Measure	Reductions (MTCO ₂ e)	
	2030	2045
M-E1: Building Electrification of County-Owned Facilities	386	3,675
M-E2: Reduce Building Energy Use Throughout County-Owned Facilities	4,059	6,102
M-E3: Solar Installation at County-Owned Facilities	1,313	0
M-E4: Reduce Carbon Intensity of County-Owned Cogeneration Facilities	24,612	48,026
M-M2: Reduce VMT for County Employees and County-Owned Fleet	5,784	1,906
M-M3: Decarbonization of the County-Owned Fleet	1,503	780
M-RRW1: Improve Diversion of Waste at County-Owned Landfills	5,340	10,680
M-RRW2: Increase Waste-to-Energy Potential at County Landfills	322,859	519,110



Municipal Landfill Operations – BAU Model Baseline Year to 2045



Landfill Technology and Best Practices



Thermal Imagery



Methane Sensing Drones & Robot Dogs

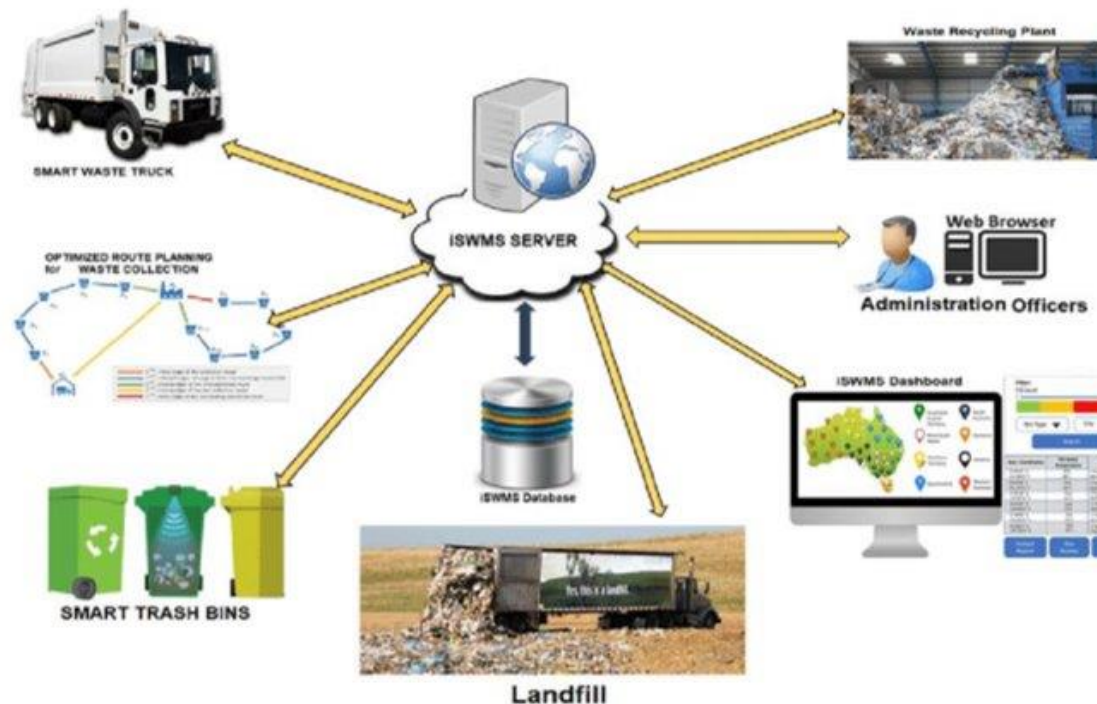


Covered Aerated Static Piles



Wellfield Monitoring

Smart Landfill Program



- Collection efficiency increase approximately 13%
- Funding request was > \$25 million.
- The increase in methane gas capture:
 - ✓ 4,218,379 MT CO₂e between 2030-2035.
 - ✓ 10,010,241 MT CO₂e total between 2030-2050.
- Cost of implementing the program is approximately \$11/MT CO₂e.

Other New Green Strategies



- OCPW and OCWR have joined forces to power our Central Utility Facility and Central Utility Plan (JWA) with landfill gas.
- OCPW will be releasing a request for proposals for a full Countywide photovoltaic study of all assets.
- OCPW will be working with SoCal Gas Ambassadors to audit the County's largest utility users for potential retrofits or replacements.
- The Sustainability Office is chairing a pro-bono project to bring no-cost solar to the County's lowest socioeconomic impact areas.
- The County filed its first tax return under the Inflation Reduction Act last week to get a refund on its 2023/2024 "Green Purchases."
- The Proposition 4 Climate Bond funds will be released next fiscal year and Vice-Chair Foley has been to Sacramento to advocate for our County.

Climate Action Plan Timeline



- These slides with targets and goals will be posted for 21-day public comment period.
- Public comments and responses received on the previous draft will also be posted for 21-day public comment period.
- You will be notified when the Vulnerability Assessment Study is completed as we would like your thoughts on that as well.
- Final document is scheduled for November 2025 BOS Hearing.
- CEQA document will follow in 2026.