Climate Action and Adaptation Plan

City Council

January 5, 2021

CITY OF LONG BEACH

What is the Climate Action and Adaptation Plan (CAAP)?

A plan to:

- Reduce communitywide greenhouse gas emissions (GHG), while preparing for the impacts of climate change
- Improve public health, foster economic opportunity, & advance social equity
- Meet policy commitments & state GHG reduction mandates

How?

- Establish a framework for creating or updating policies, programs, practices, and incentives to reduce the City's GHG footprint
- Ensure the community and physical assets are better protected from the impacts of climate change
- Informed by technical studies of climate stressors and communitywide vulnerabilities

Recent Council Actions

- City Council heard a study session update on March 19, 2019
  - Established carbon neutrality goal by 2045

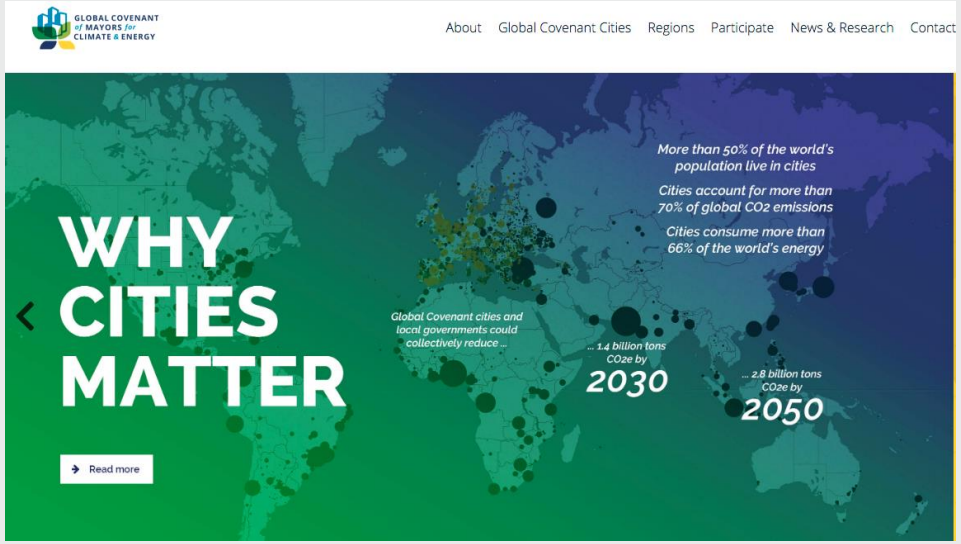
- City Council heard a study session update on October 20, 2020
  - Directed staff to coordinate with City departments to finalize the plan and the list of quantifiable 2030 GHG reduction measures that respective departments will commit to implementing as part of the CAAP
  - Key GHG reduction measures include:
    - Building Energy Sector: greater use of renewable residential and commercial electricity achieved through Southern California Edison initiatives (80% carbon free energy supply by 2030) and emissions reductions from oil production due depletion (20% from 2018 levels by 2030);
    - Transportation Sector: Port Clean Trucks Program and a 1 percent reduction in vehicle miles traveled; and,
    - Waste Sector: Increased commercial recycling and commercial organics diversion.

Why do we need a CAAP?

Target Year	State Target	Corresponding Legislation	City Status
2020	1990 GHG levels by 2020	AB 32, Global Warming Solutions Act (2006)	California met this target Statewide
2030	40% below 1990 levels by 2030	SB 32, Global Warming Solutions Act (2006)	The CAAP is a plan for Long Beach to meet this target by 2030
2045	Carbon neutrality by 2045	Executive Order B-55-18 of 2018	Aspirational for Long Beach
2050	80% below 1990 levels by 2050	Executive Order S-3-05 of 2005	CAAP's plan horizon is to 2030

Other Relevant Legislation

- SB 375 (Sustainable Communities)
- AB 691 (Sea Level Rise)
- SB 1000 (Environmental Justice in Local Land Use Planning)
- SB 379 (Climate Adaptation in Safety Elements)
- SB 100 (Carbon-free Electricity by 2045)



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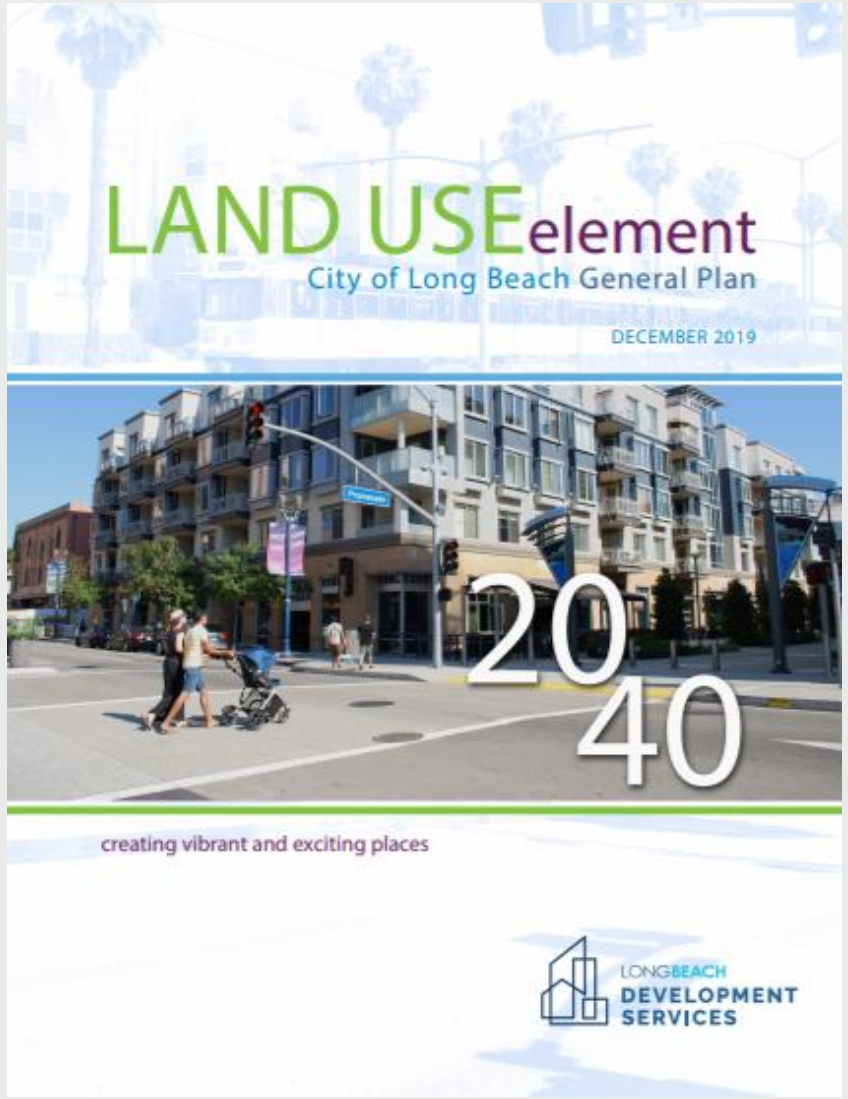
Why do we need a CAAP?

CAAP is a mitigation measure of the General Plan Land Use Element (LUE)

- The General Plan Land Use Element (LUE) was adopted in December 2019
- GHG emissions associated with implementation of the LUE (e.g., citywide vehicle trips, electricity usage)
- **City shall adopt a CAAP within approximately 36 months of adoption of the LUE and implement CAAP reduction measures (MM GHG-1)**



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Why do we need a CAAP?

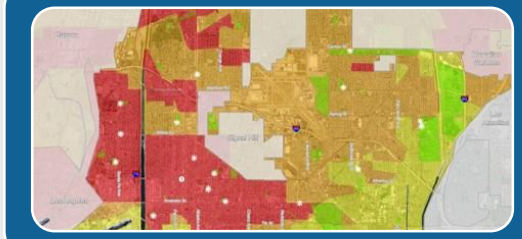
City leadership needed for city-scale mitigation, climate adaptation, and equity beyond what could be achieved by State emissions reduction efforts alone

Mitigation

- Implementation occurs at both city and state level (siting EV charging stations and updating building codes & zoning to incentivize electrified buildings, for example, require local leadership)
- CAAP identifies local GHG reduction measures for implementation

Adaptation

- State emissions reduction target does not prepare Long Beach for the impacts of climate change that are happening today
- CAAP helps increase resilience for current and future threats (extreme heat, poor air quality, sea level rise, etc.)

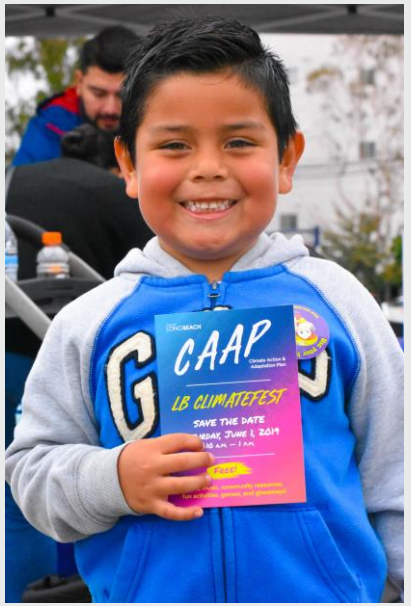


Equity

- State emissions reduction targets do not ensure that climate issues are equitably addressed
- CAAP helps address environmental justice & can help steer climate finance opportunities to communities most impacted by climate change

CAAP Community Outreach (June 2018 – present)

# of Estimated Attendees	**10,260**
# of Sign-ins	1,395
Events	67



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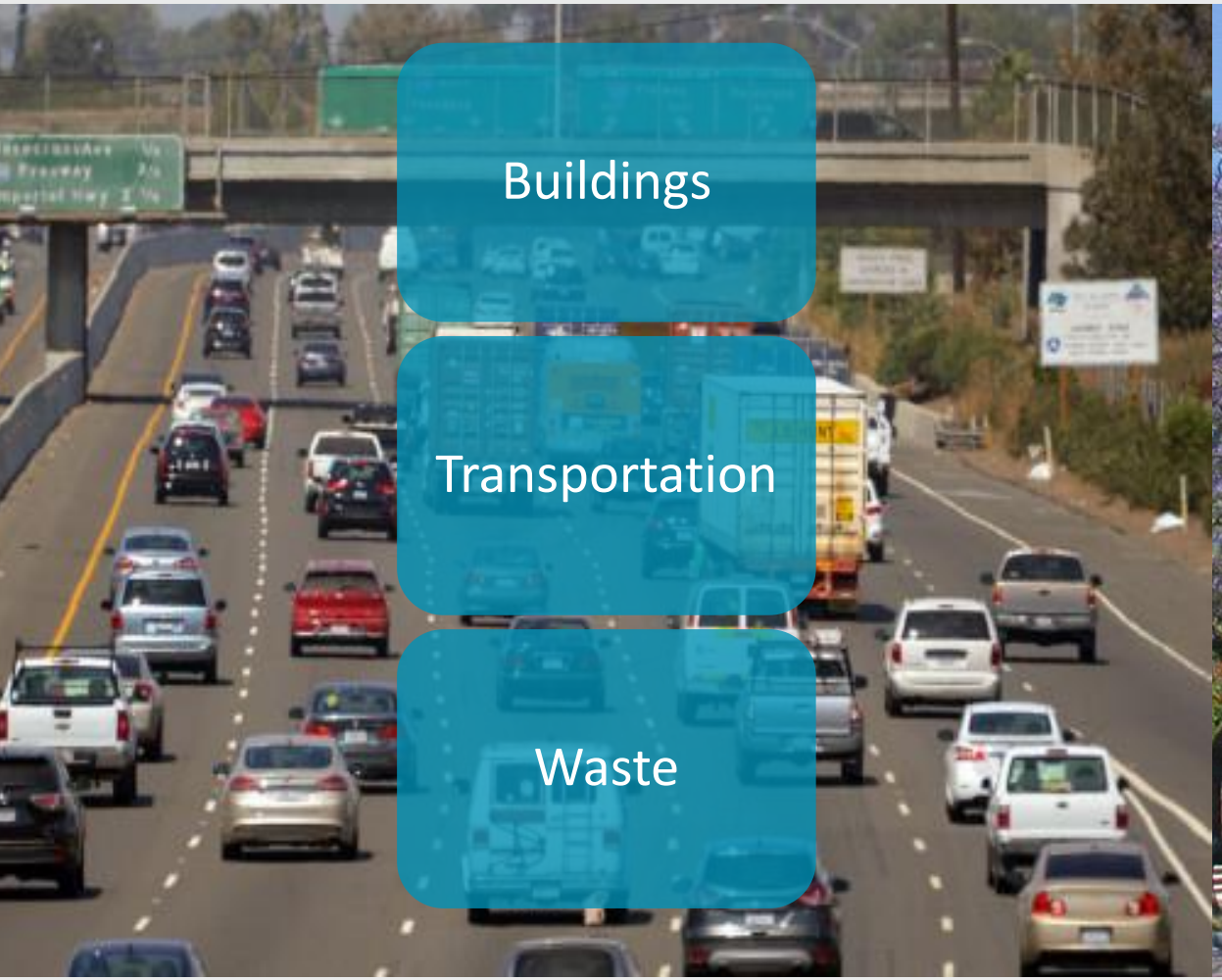
Mitigation

Adaptation



EQUITY STRATEGY: Prioritize the enhancement & expansion of urban forest cover in neighborhoods most vulnerable to extreme heat, poor air quality, and are lacking in green space.

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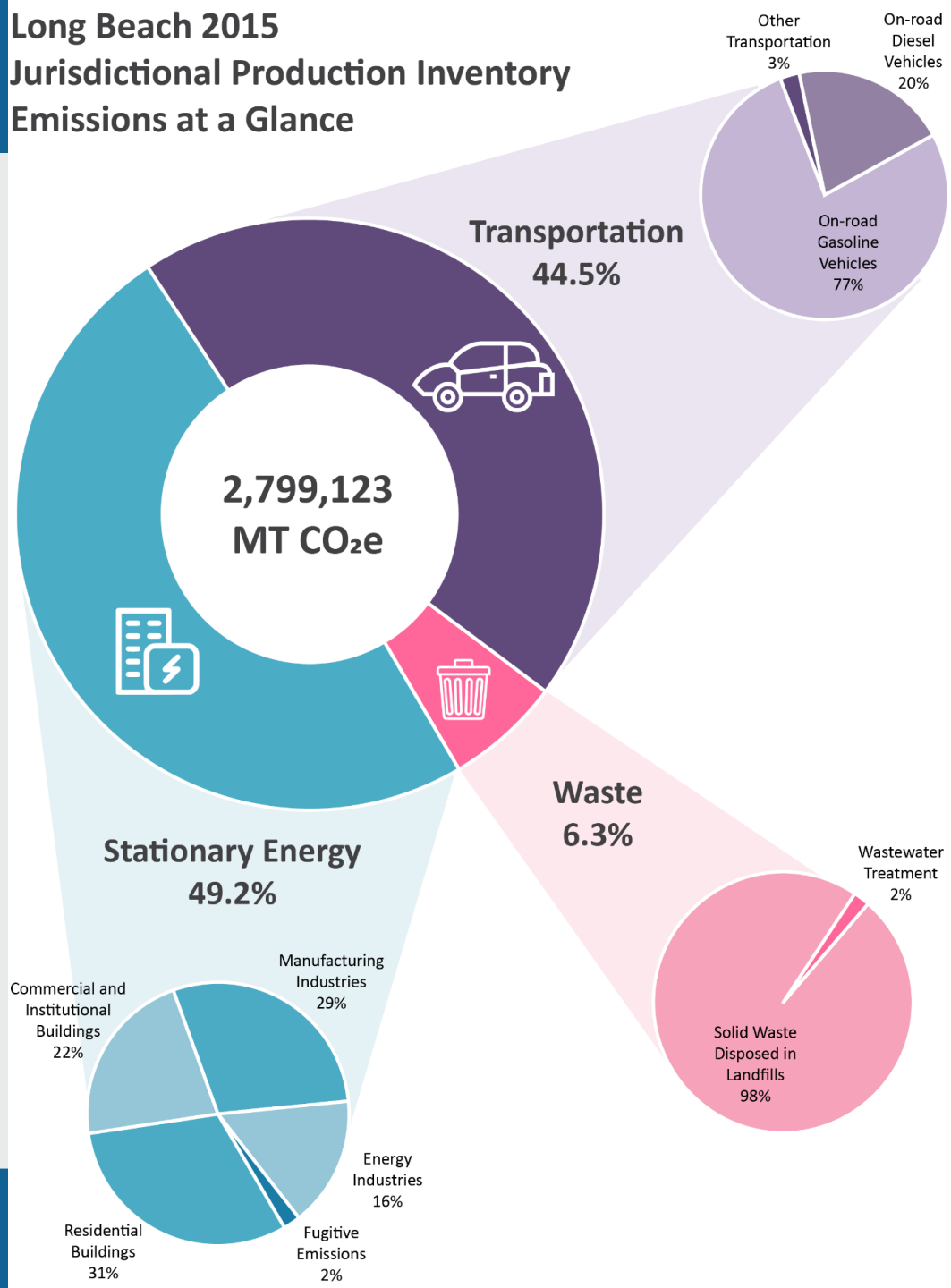
GHG Inventory

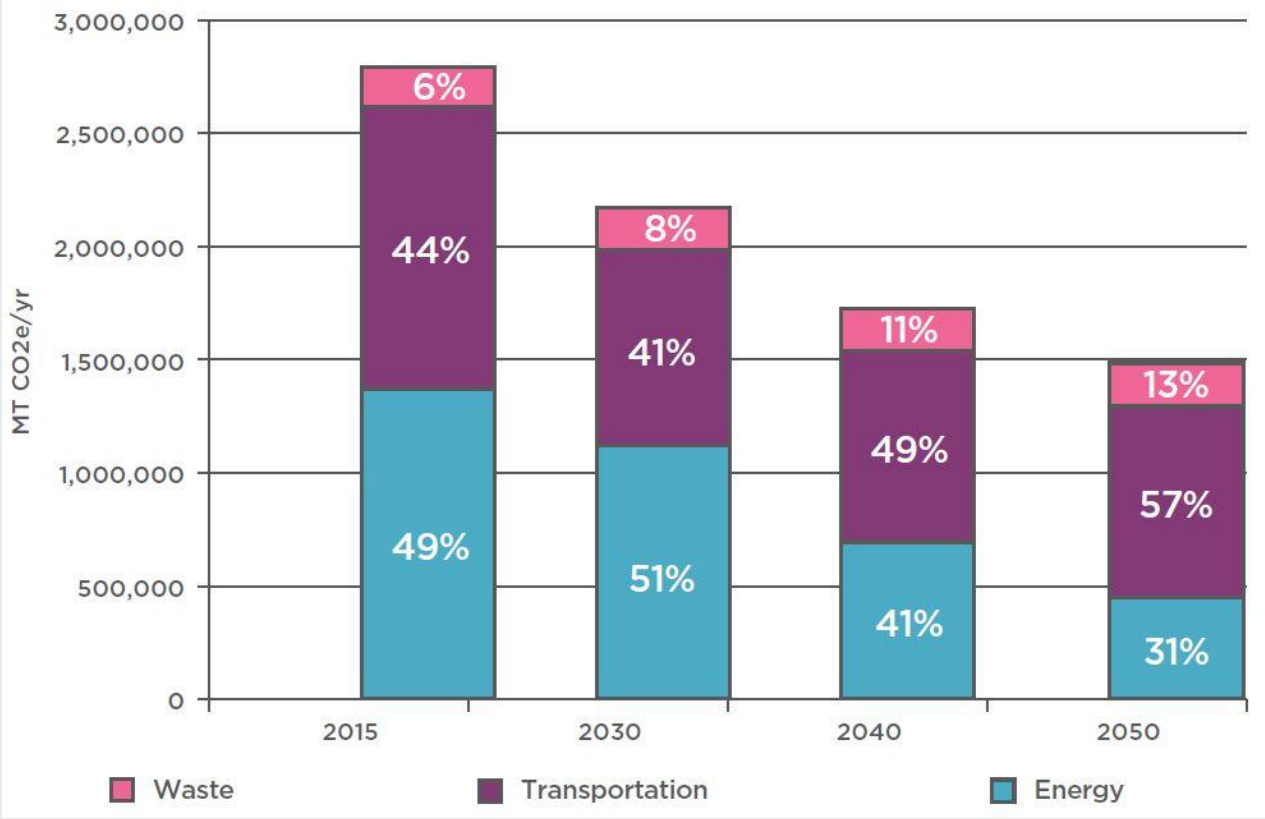
Sector	MT CO2e	% of Total
Stationary Energy	1,377,291	49.20%
Transportation	1,244,981	44.48%
Waste	176,850	6.32%
Total	2,799,123	100.00%
Per Capita	6.0	--



CAAP Implements State GHG Reduction Strategy and General Plan Land Use Element

- Forecast considers local population growth, employment and travel demand modeling
- Consistent with State GHG reduction strategy
  - 60% Renewable Portfolio Standard by 2030 (SB 100)
  - Vehicle efficiency standards
- Implements the General Plan Land Use Element (LUE)

City Business as Usual Emissions Forecasts 2015-2050



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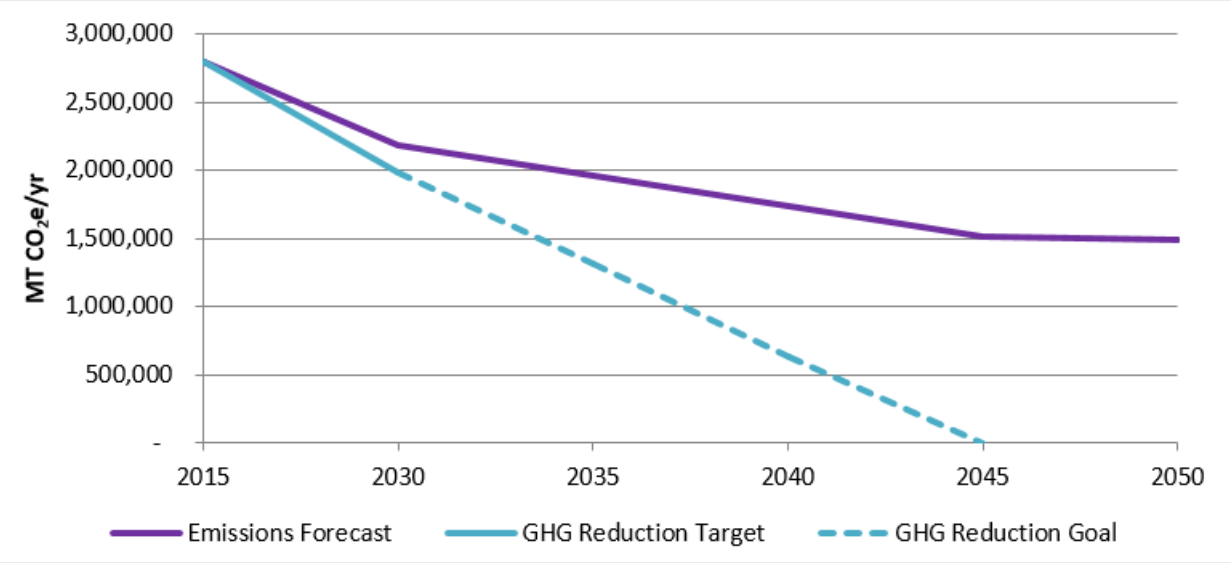
GHG Targets

City Emissions Targets vs. Forecasts 2015-2050



192,659
MT CO2e
equivalencies

41,623
Passenger vehicles driven for one year

32,618
homes' electricity use for one year

GHG Reduction Targets	
2030 GHG Target	**3.04 MT CO_2e/Service Population**
Business as Usual Forecast	2,176,931 MT CO_2e
Target Level	1,984,272 MT CO_2e
GHG Reductions Needed	**192,659 MT CO_2e**
2045 GHG Goal	**Net-carbon Neutrality**
Business as Usual Forecast	1,513,047 MT CO_2e
Target Level	0 MT CO_2e
GHG Reductions Needed	**1,513,047 MT CO_2e**

2030 GHG Reduction Target by Service Population	
Business as Usual Target	3.34 MT CO2e
Emissions Target Level	3.04 MT CO2e
Reduction Needed	**0.3 MT C02e**

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Anticipated Pathway to Achieve GHG Emissions Reduction Target

2030 GHG Reduction Needed: 192,659 MT CO_2e

Action	Assumptions	2030 MT C02e/year*
Building & Energy		**247,700**
SCE Carbon-Free Electricity	SCE 80% carbon free electricity supply by 2030, 10% voluntary participation in SCE 100% Green Rate program	188,960
Local Solar	5% of City's solar potential is developed	3,880
Municipal Renewable Electricity	City purchases 100% carbon-free electricity for all municipal accounts	13,120
Reduced Oil Production	Decrease oil production 20% below 2018 production volumes by 2030 due to depletion	41,740

*Estimates were developed based on standard GHG inventory protocols and methods.

Anticipated Pathway to Achieve GHG Emissions Reduction Target

2030 GHG Reduction Needed: 192,659 MT CO_2e (cont'd)

Action	Assumptions	2030 MT C02e/year*
Transportation		**30,480**
Port Clean Trucks Program	10% reduction in diesel heavy-duty truck emissions by 2030	25,250
Enhanced VMT Reduction	1% VMT reduction in 2030 for light-duty vehicles	5,230
Waste		**85,070**
Commercial Recycling	75% of paper/cardboard component of commercial 2030 forecast waste disposal served by private haulers is diverted from landfills	45,340
Commercial Organics Diversion	75% of food scraps & green waste of commercial 2030 forecast waste disposal served by private haulers is diverted from landfills	39,730
Total		**363,250**

*Estimates were developed based on standard GHG inventory protocols and methods.

Additional Actions not included in Quantified GHG Reduction

Port of Long Beach – 100% emissions free cargo handling equipment (CHE) & implementation of at-berth regulations

- 100% emissions free CHE to result in GHG reduction of ~127,000 MT CO_2e/year
- At-berth regulations to result in GHG reduction of ~100,500 MT CO_2e/year

Long Beach Airport – increased use of electric ground service equipment (GSE)

- Electrification of GSE to result in GHG reduction of ~2,559 MT CO_2e/year

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Recommendation

Receive report and supporting documentation;

Confirm the Climate Action and Adaptation Plan; and,

Direct staff to prepare the subsequent Environmental Impact Report (EIR)

Next Steps

- Prepare subsequent Environmental Impact Report

- Final Plan and Environmental Document Adoption by City Council (Fall 2021)

Thank you

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