

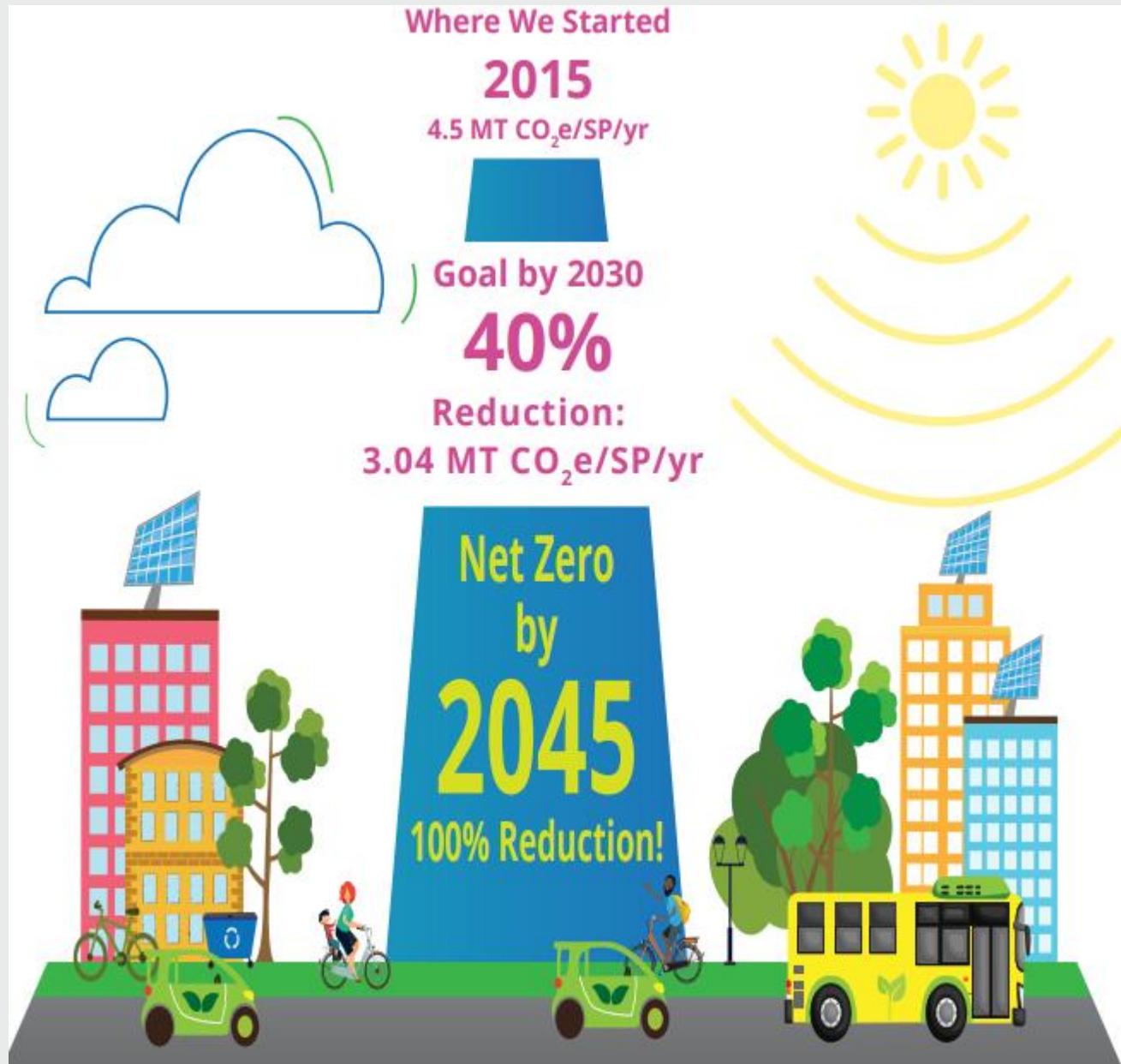


CAAP Implementation and Carbon Pricing

Climate Action and Environmental Committee Meeting -
March 15, 2022

CAAP—Carbon Reduction Goals

The CAAP proposes a range of actions to reduce greenhouse gas emissions and dependence on carbon in energy, buildings, transportation, and waste



CAAP—Carbon Reduction-Related Objectives

Transportation

- Decrease reliance on personal motor vehicles and increase transit, biking, and walking trips
- Shift to low- and zero-emissions vehicles to move people and freight

Building and Energy

- Transition to a carbon-free, more resilient electricity system
- Ensure new buildings are low-carbon or carbon-neutral
- Reduce emissions from local oil and gas extraction

Waste

- Reduce how much waste we generate
- Materials that can be recycled are recycled
- Collect all organic waste for composting or clean energy generation

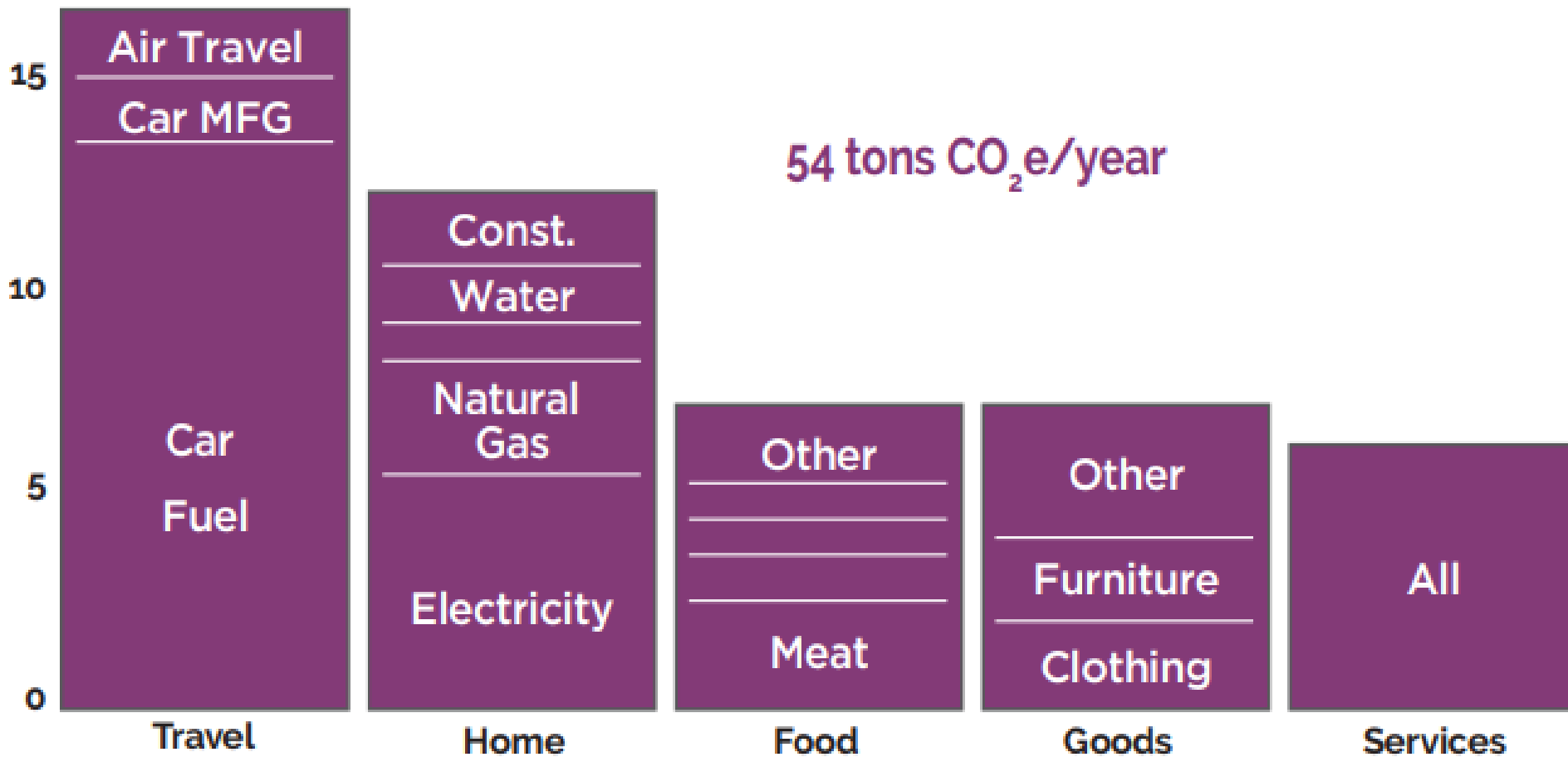
Air Quality

- Emissions are reduced by shifting to cleaner equipment and vehicles
- Air quality impacts from local oil and gas operations are minimized

CAAP—How we Measure our GHG Emissions

- CAAP analyzed emissions from a variety of perspectives:
 - Production based
 - Consumption based
 - Oil & lifecycle emissions
- However, per guidance from the State and to align with AB 32 and other legislation, CAAP reduction targets are based on “BASIC” production inventory, focusing on everything in the city boundaries that is in the city’s control (excludes, e.g., airplane and certain waterborne emissions)

Long Beach Average Household Carbon Footprint (Consumption-Based)



Source: CoolCalifornia.org, 2019

Life Cycle Emissions

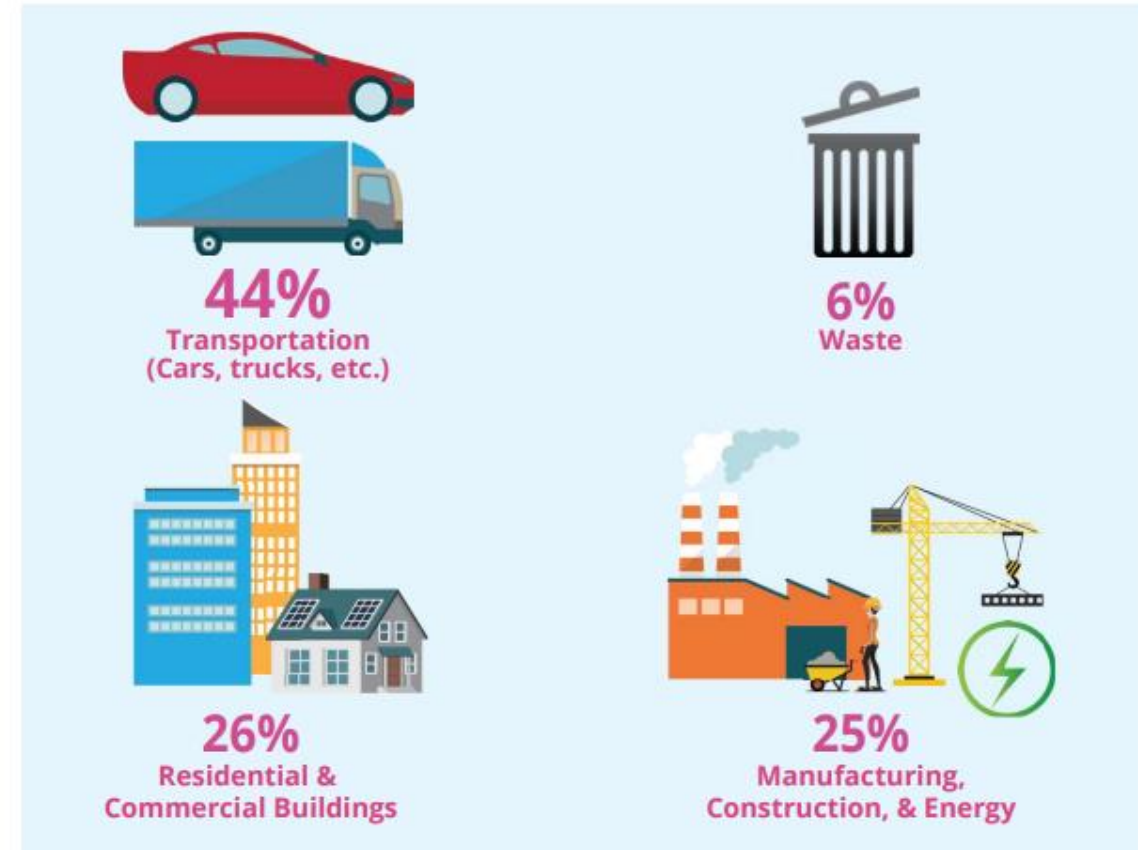
- 2015: 13 million barrels of crude oil and 5 billion cubic feet of natural gas produced in LB, resulting in 8.3 million MT CO₂e life cycle emissions
- Approximately 96 percent of the city's oil and gas life cycle emissions are attributed to crude oil, and the remaining 4 percent result from natural gas

Long-Term Strategy

- Local action to replace fossil fuel consumption in Long Beach with clean electricity and other renewable energy sources
- Support efforts to minimize global demand for oil and gas extracted in LB
- Investments in future carbon capture technology

CAAP—Production Inventory

Where do Our Emissions Come From?



Notes: Residential & commercial buildings and manufacturing, construction and energy are consolidated as "stationary energy" in the Production Inventory. The Total Production Inventory also includes port waterborne activity emissions. (chapter 5)

CITY OF LONG BEACH **PROPOSED CLIMATE ACTION AND ADAPTATION PLAN - NOV 2020**

California's Cap-and-Trade Program

- California is one of 13 states in the U.S. that has a carbon pricing or emissions trading program, but there is no nationwide carbon tax
- Launched in 2013, California's Cap-and-Trade system is one strategy among many aimed at reducing greenhouse gas emissions—by setting a statewide limit on emissions and selling emission allowances
- Revenues from the program are put into the Greenhouse Gas Reduction Fund, which invests in programming to further reduce emissions—\$12.5 billion in revenues since the start of the program

Benefits to Long Beach of California Cap & Trade

Projects



18 - Active Projects

20 - Complete Projects

EV Charger Usage (Public And City Fleet)



186,480 - Usage Hours (Since January 2018)

Solar Production



1,185,057 - kWh Produced

Financial



\$16 Million - Total Funds Spent to Date

AB 32 proceeds invested in city GHG reduction strategies in disadvantaged and low-income communities (\$5.9M in FY22)

Project examples:

- Direct Install for Multi-Family Efficiency (Water)
- Energy-efficient facility and appliance upgrades
- Streetlight LED conversion
- EV charging infrastructure
- Solar and battery storage
- Tree planting

Benefits to Long Beach of California Cap & Trade

State Greenhouse Gas Reduction Fund (GGRF) grants available to the City and partners:

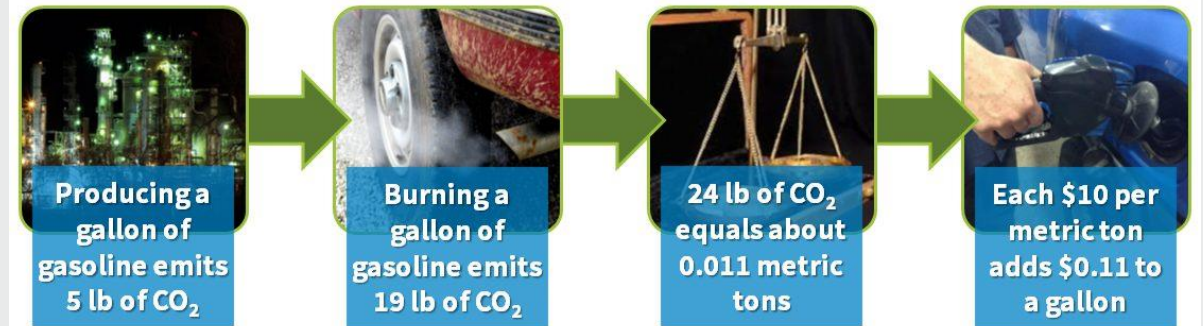
- Affordable Housing and Sustainable Communities Program (AHSC) awarded the City \$13,975,653 for Las Ventanas affordable housing project in 2018 and AHSC has also supported Century Villages at Cabrillo; 2 other AHSC applications pending
- Caltrans granted the City approximately \$1 million for UPLAN Phase II effort to reduce GHGs through coordinated land use and transportation strategies
- Conservation Corps of Long Beach-- tree planting and other services in disadvantaged communities throughout the City
- Los Cerritos Wetlands Authority (LCWA)- funding to protect and maintain wetlands in the City
- CA Air Resource Board- funding to implement the Clean Vehicle Rebate Project and Enhance Fleet Modernization Program

General Policy Approach

- Market-based strategy to increase the price of carbon extraction and production, thereby making fossil fuel sources less competitive
- Carbon fees would be collected on producers or importers of fossil fuels
- By increasing the cost of production and use, proposals aim to reduce emissions and drive clean energy innovation
- Legislative proposals for carbon pricing differ on:
 - Emissions and entities covered
 - Level of the tax/price
 - How the revenue is used

Example: Energy Innovation and Carbon Dividend Act

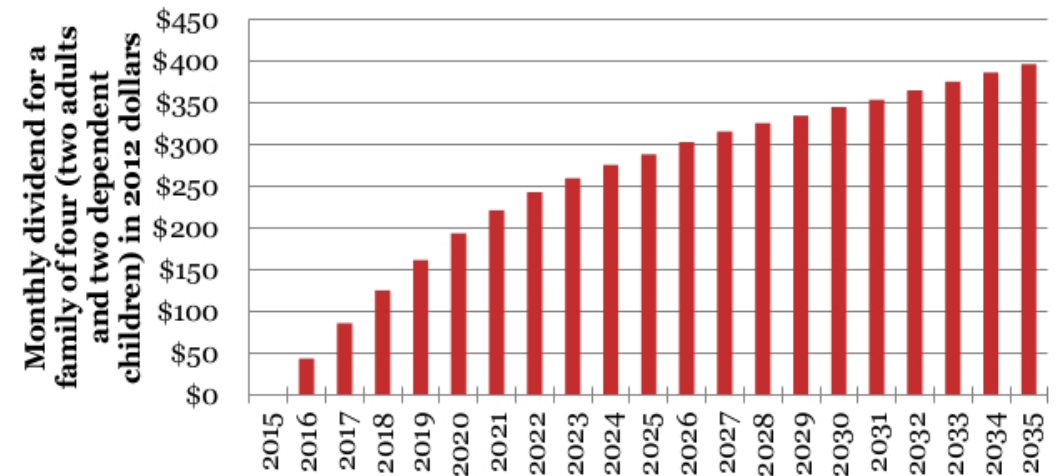
Place a fee on carbon, collected at the source based on dollar amount per metric ton



This process chart shows the basics of calculating a carbon fee that's passed down the energy supply chain from the point of extraction to the retail and end-use consumers. Chemistry determines the carbon dioxide or equivalent emissions of a fuel, which becomes part of its price within a transaction to discourage its use and garner revenues for a rebate (dividend).

Collected carbon fees are returned to households each month in the form of a monthly dividend

Monthly Dividend by Family



Staff Recommendations for Advocacy

- Continue to support legislative and funding proposals that help to advance the City's CAAP objectives to reduce carbon emissions, with an equity lens for how to best support communities most impacted by climate change
- Continue to support policies that distribute resources to the City to implement CAAP programs and projects
- Identify long-term, sustainable revenue sources to invest in carbon reduction efforts—as carbon use declines, so do carbon-based revenues
- Support policies that compliment or advance the State's Cap-and-Trade Program, which has benefited the City

A nighttime photograph of the Long Beach skyline. The city lights, including several tall buildings and palm trees, are reflected in the calm water in the foreground. A semi-transparent white rectangular box is overlaid on the left side of the image, containing the text "Thank you!".

Thank you!