

INTRODUCTION

Los Angeles is no stranger to dealing with environmental crises. In the 1970s, the LA skyline was shrouded by smog, and the city consistently exceeded federal air pollution standards. By 2005 LA was well on its way to reducing smog, but newly elected Mayor Antonio Villaraigosa pledged not only to reduce smog further, but also to reduce greenhouse gas emissions faster than any other city in the country. By the end of the Mayor's term in 2013, LA had reduced its power sector emissions

by 28% and is on track to rapidly expand public transportation to reduce the prevalence of passenger vehicles. A key driver of this success was political consensus between the Mayor and City Council on environmental imperatives, enabling clear directives to the publicly owned utility and port to reduce their emissions. Furthermore, LA leveraged disparate financing sources—local tax revenue, federal appropriations, and private capital—to fund its new infrastructure.

SUSTAINABLE ALTERNATIVES IN POWER AND TRANSPORTATION

Megacities like LA recognize that they can play an outsized role in leading the fight against **climate change, a global crisis with dramatic local impacts**. By mid-century, the LA region will be warmer by 4-5°F, impacting public health, water supplies, and disaster risk. But cities, which globally account for 70% of the greenhouse gases behind climate change, can control their own destiny by slashing collective emissions. To play its part, **LA targeted the power and transportation sectors** in pursuit of an ultimate goal of a 35% greenhouse gas reduction, below 1990 levels, by 2030.

LA attacked power sector emissions by deploying renewable energy and phasing out its consumption of dirty coal power. By 2010, LA had reduced its carbon dioxide emissions by 28% from the power sector and is on pace to reduce them by 40% in the next decade. Before enacting these policies, **the Mayor's Office, in partnership with the Los Angeles Department of Water and Power (LADWP) and several nonprofit organizations, educated Angelenos and their elected City Council**



Los Angeles Carbon Dioxide Emissions: 33% Electricity, 30% Transportation, 30% Heating/other combustion

representatives about the causes of climate change and the benefits of cleaner power. Political consensus was required, because cleaning up the power supply would increase electricity rates over the long run. To minimize the impact to the ratepayer, **LADWP auctioned large renewable projects to private developers** who provided the up-front capital to build massive solar and wind farms outside of LA, selling the power back to the City at predictable rates over twenty years. Finally, to incentivize distributed solar power within the City, **LA enacted the nation's largest urban Feed-in Tariff**, designed to pay businesses a premium price for selling solar power back to the grid. In the transportation sector, LA began by targeting emission sources it controlled, like in the power sector. The Port of Los Angeles is the nation's largest container port, composes almost 3% of LA's citywide emissions, much of which are caused by freight transport on short haul trucks. Therefore, the **Port of LA's Clean Trucks Program** aimed to modernize 17,000 inefficient diesel trucks, culminating in a clean fleet of 5,500 trucks powered by electricity or alternative fuels like natural gas. As a result, harmful emissions (diesel particulate matter, nitrogen and sulfur oxides) from trucks plummeted by 80%, and the port's greenhouse gas emissions declined by 18%. An important lesson is that **air pollution and greenhouse gases decreased simultaneously**, adding an immediate local benefit to the global battle against climate change.



18% of carbon dioxide emissions reduced



35% the greenhouse gas reduction's goal

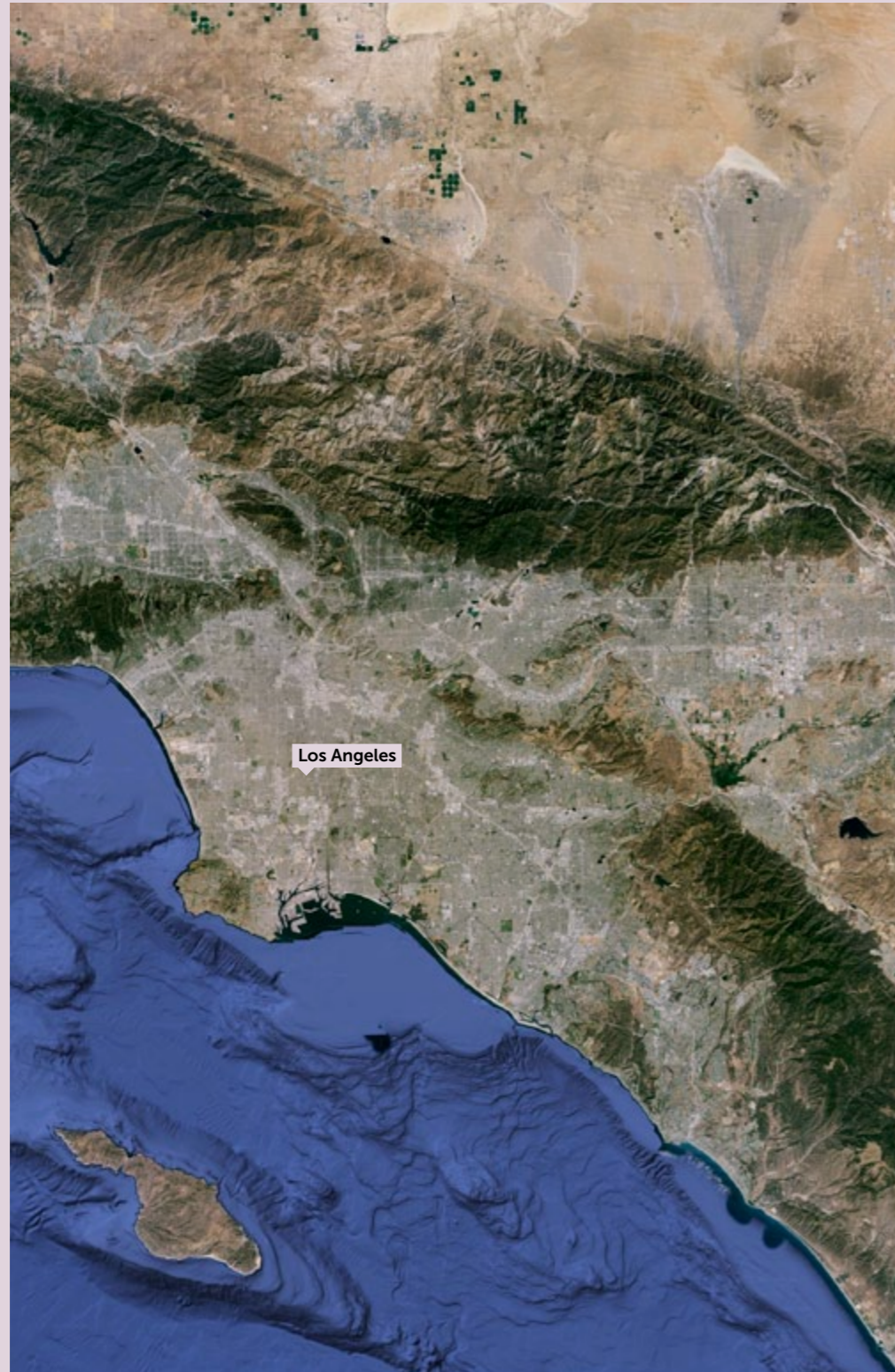
However, passenger vehicles comprise the vast majority of transportation sector emissions, which the City does not directly control. Therefore, LA needed to invest extensively in public infrastructure to offer residents a viable alternative to personal vehicles. Over the coming decades, **LA will extend its subway to the Pacific Ocean** and serve many other neighborhoods by rail. To fund the projects, the Mayor campaigned for and won a ballot measure which will raise \$4 billion over thirty years through a **local sales tax**. Furthermore, the Mayor lobbied Congress to pass America Fast Forward, a legislation which enables the City to **leverage federal funds for public transit infrastructure**. Through new rail lines, electric vehicle chargers, and transit-oriented development, LA will encourage a cultural shift from personal, gasoline-powered vehicles, to sustainable transportation options.

CONCLUSION

LA is proof that a car-choked, smoggy metropolis can shed its reliance on coal and gasoline to lead the US in renewable energy adoption and carbon emission reduction. Through strong leadership, public outreach, and diverse financing approaches, Los Angeles is leading megacities around the world to avert a climate crisis.

4. CiclaVia in Los Angeles

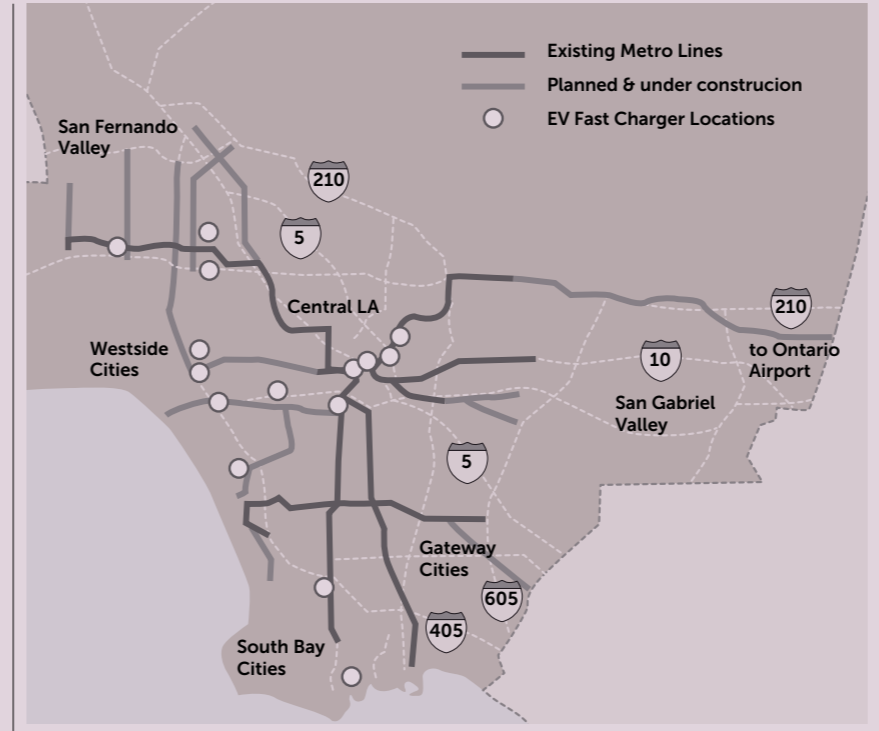




LOS ANGELES

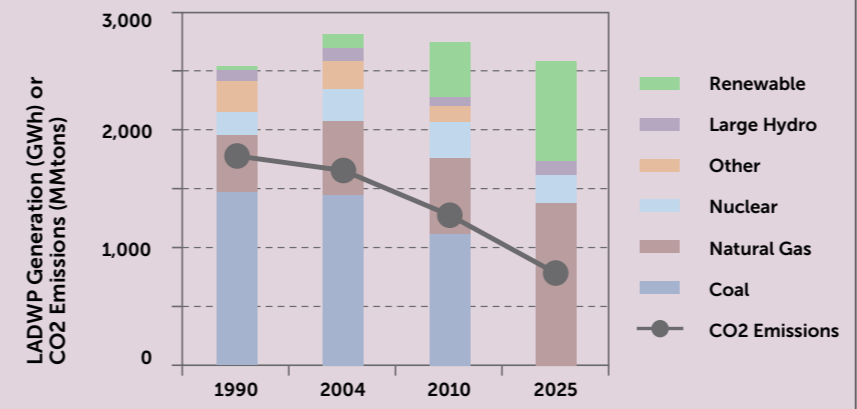


COORDINATES
34°3'N 118°15'E
 AREA
1,290,5 sq mi
 POPULATION
3,857,799
 DENSITY
2,989,38 sq mi
 GDP total
\$365.4 billion
 GDP per capita
\$6,220



Map. LA's Clean Transport Expansion: the map displays LA Metro's plans to extend its rail service using funds from Measure R and America Fast Forward federal legislation

Chart. Electricity Sources and Emissions: increasing share of renewable energy, on target to meet the state Renewable Portfolio Standard of 33 percent by 2020, has contributed to a 28 percent decline in carbon dioxide emissions



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LOS ANGELES, USA

THE CAPITAL OF CAR CULTURE GOES GREEN

In collaboration with MIT
 SA+P
 senseable city lab:::

