

Modernizing Manufacturing for Environmental and Climate Justice

A Path Forward for Southern California's Industrial Sector

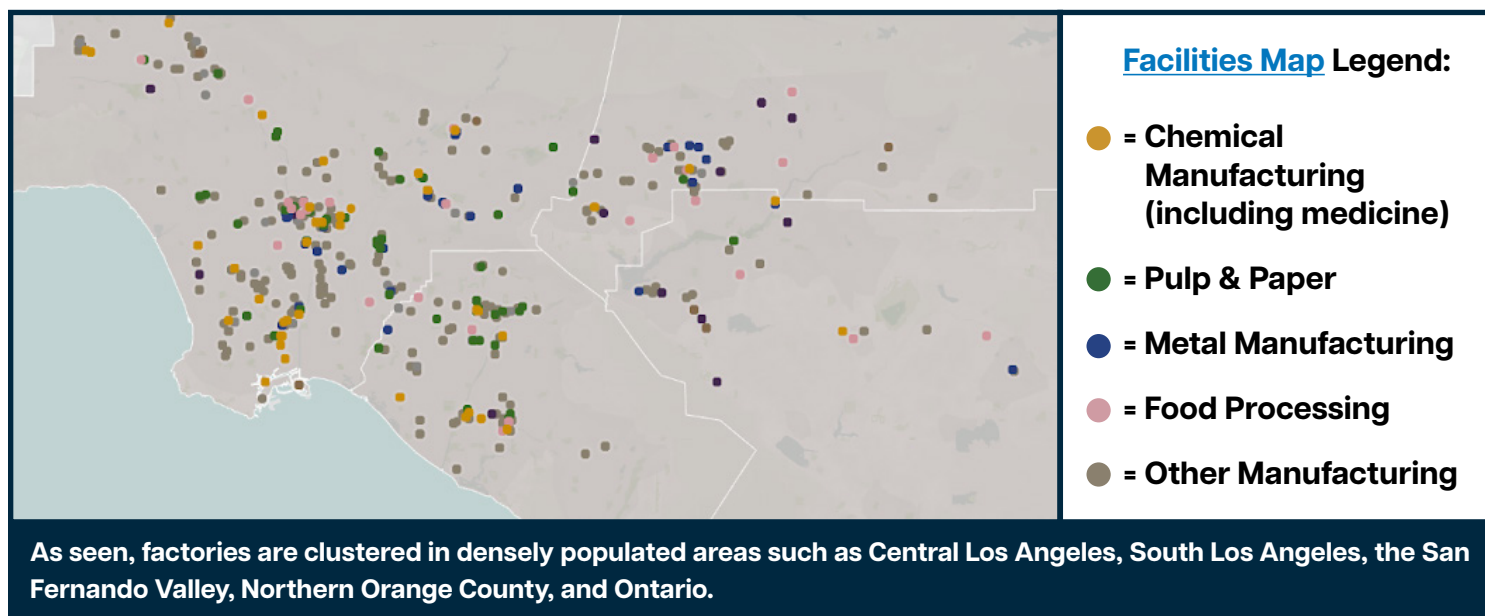
California has the largest manufacturing sector in the country, made up of thousands of producers of food, beverages, glass, paper, clothing, medicine, and other essential goods. These industrial facilities support a strong workforce and provide a critical underpinning to our state's economy. The scale of the sector also makes it a significant source of air and climate pollutants, impacting the health and well-being of the 17.5 million people living in the counties covered by the South Coast Air Quality Management District (SCAQMD).

In the U.S., much of our manufacturing processes rely on hundred year-old equipment that generate heat using harmful and volatile fossil fuels, such as methane gas, coal, and petroleum. We have the technological advancements and early policy precedent to cost-effectively transition to efficient and clean heating equipment, such as heat pumps and electric boilers.

As a hub of the nation's industrial sector, California can play a crucial role in leading the country to a modern and clean manufacturing industry. It is time for California to become home to an advanced manufacturing sector that protects our health and environment, mitigates the climate crisis, and creates new, family-sustaining jobs.

Manufacturing in the South Coast of California

The South Coast region (Los Angeles, Orange, San Bernardino and Riverside Counties) is home to 403 low-to-medium heat manufacturing facilities, operating more than 6,000 furnaces and boilers. Many of these facilities use outdated equipment generating heat from methane gas to manufacture everything from coffee and whiskey to cardboard and medicine. In California, low-temperature fossil fuel heating equipment accounts for [a third of carbon emissions generated](#) by the industrial sector.



The Harms of Outdated Heating Equipment

Burning methane gas for low-temperature manufacturing releases air pollution that exacerbates the climate crisis and puts the health of workers and local communities in Southern California at risk. Newer technologies not only consume less energy, resulting in potential cost savings for businesses, they also eliminate the toxic pollutants from fossil fuel systems, which is crucial for this region, home to the worst ozone pollution nationwide.

HEALTH



Methane gas heating equipment releases harmful air pollutants, such as particulate matter (PM^{2.5}) and nitrogen oxides (NOx), contributing to asthma and other chronic respiratory illnesses.



Industrial heat pumps can reduce smog-forming NOx pollution by **88%**.

CLIMATE



Low- and medium-temperature manufacturing in the South Coast is **responsible** for approximately 700,237 MMT of CO₂e, equal to the energy used by more than 94,000 homes in a year.



Installing electric heat pumps in facilities nationwide can reduce carbon emissions from low-temperature manufacturing by **70%**.

WORKER SAFETY



Burning fossil fuels for low-temperature manufacturing exposes workers to the threat of harmful indoor air pollution while raising the risk of gas leaks and explosions.



Clean heating technologies eliminate these health and safety risks while offering additional benefits to employers.

Worst Impacts on the Most Vulnerable Communities

California's manufacturing facilities are often found in communities of color already overburdened by pollution and contribute to the environmental injustices faced by these residents. In the South Coast, 42% of residents live in environmental justice communities, often located in urban areas with high concentrations of factories, vehicle traffic, and other sources of pollution. Pollution-burdened areas are nearly all home to [people of color](#), [low-income Californians](#), and other [disadvantaged communities](#).

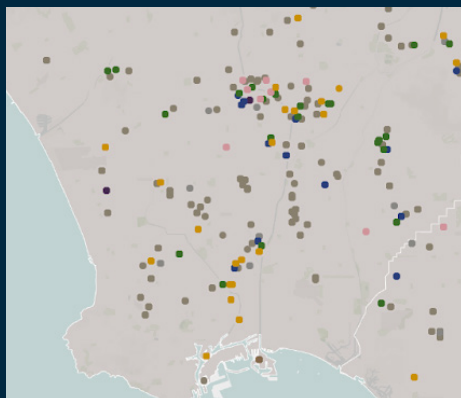


Case Study: Southeast Los Angeles

Gateway Cities Region, which includes Vernon, Maywood, Huntington Park, Bell, Bell Gardens, Cudahy, South Gate and Lynwood, is home to close to **2 million Latino, African-American, Asian-American, and Native American residents**, about 90% of the population. The area has some of the worst air quality in the region due to overlapping pollution sources such as massive transportation routes, including the 710, 110, 405, and 104 freeways. Nearby manufacturing facilities include food, textile and apparel, pulp and paper, chemical manufacturing, and more.

Neighborhoods with clusters of manufacturing facilities are also the areas with the highest emissions.

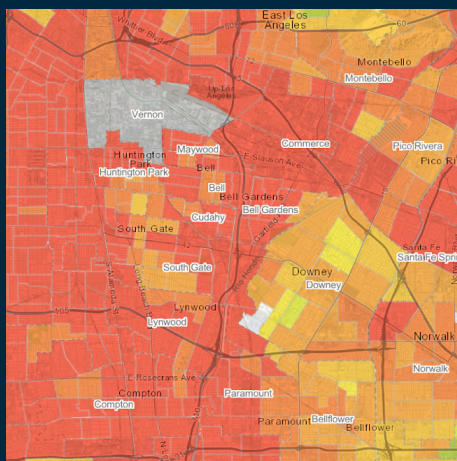
FACILITIES



[Facilities Map](#) Legend:

Orange = Chemical Manufacturing
Green = Pulp & Paper
Blue = Metal Manufacturing
Pink = Food Processing
Gray = Other Manufacturing

EMISSIONS



[CO₂ Emissions Map](#) Legend:

Red = High
Orange/Yellow = Medium
Green = Low

ASTHMA PREVALENCE



[Asthma Map](#) Legend:

Dark Green = Higher Asthma Rates
Light Green = Lower Asthma Rates

The Path to Clean, Modern Manufacturing in the South Coast

The South Coast Air Quality Management District (SCAQMD) Board can pursue a powerful path to cleaning up this air pollution by adopting strong air standards that replace fossil fuel heating equipment with state of the art, zero-emissions electric equipment.

Regulators in the region have begun the task of modernizing manufacturing by passing a zero-emission NOx standard ([Amended Rule 1146.2](#)) for small boilers and industrial-sized furnaces. The standard will reduce emissions from more than 1 million boilers and water heaters over the next decade, eliminating 5.6 tons of NOx per day by 2033. This early policy precedent has shown that we can modernize our manufacturing sector with cost-effective electric technology while protecting local communities and workers.

As SCAQMD begins to work on subsequent rules such as 1146 and 1146.1, strong support from local residents for zero-emissions standards like 1146.2 will be critical to further reducing this health-harming air pollution in Southern California. Join us.