



## Greening Southern California cities

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As the reality of global warming intrudes every aspect of life, local governments are starting to act. Given the lack of direction by federal and state governments, efforts at the local level vary widely, as a team of [Fullerton College](#), California, student journalists found out in November 2020 when they reported on green efforts among cities in Southern California. Here is some of what they found:

### Irvine Pioneers for Sustainable Energy in Orange County – Rachel Lopez



A picture of climate-friendly garden encouraged by the city, which also requires debris generated by a demolition or construction project be recycled at levels prescribed by the California Green Building Standards Code.

*Photo credit - courtesy Irvine Ranch Water District*

Irvine is the greenest city in Orange County and ranks third in the nation. Irvine has moved towards becoming environmentally friendly since the 1980s. Their first major step accomplishing that was when the city banned all chemicals that harmed the ozone in 1989. Since then, their efforts have only grown towards a greener city.

Pioneering for sustainable energy usage, in 2005, Irvine began creating LEED (Leadership in Energy and Environmental Design) certified buildings which incorporated sustainable development in city facilities larger than 5,000 square feet. The nation had less than 300 LEED buildings at the time; now the total exceeds 67,000.

LEED certified buildings are an impactful move towards a greener city, designed to utilize renewable energy, water efficient equipment, and building materials made from recycled content.

To further lead in sustainable energy, Irvine launched the Green Business Program in November 2019. The program encourages businesses to adopt greener practices to reduce energy and water consumption and also prevent pollution. Additionally, the program offers help and incentives to achieve these greener standards as well as public recognition. Nineteen businesses have become certified since launching the program.

Public acknowledgement is critical; According to Forbes magazine, 88% of consumers want brands to help them be more environmentally friendly and ethical in their daily lives, and 43% think brands make it harder to do so.

Last fall, the city approved three plans to further its efforts to combat climate change; the Community Choice Energy initiative, and the next steps for the Climate Action and Adaptation Plan. City Council Member Melissa Fox announced on her blog: "[Community Choice Energy](#) (CCE) is a program that brings local control and freedom of choice and competition into the electricity marketplace. Community Choice allows cities and counties to purchase power on behalf of their residents and businesses to provide cleaner power options at a competitive price."

## **San Diego ranked sixth in national study of climate action – Myron Caringal**

In 2015, San Diego adopted its Climate Action Plan (CAP) with a goal of creating a more sustainable future for the city. It calls for eliminating half of all greenhouse gas (GHG) emissions in the city and aims for all electricity to be from renewable sources by 2035.

The CAP will:

- Create new jobs in the renewable energy industry
- Improve public health and air quality
- Conserve water
- More efficiently use existing resources
- Increase clean energy production
- Improve quality of life
- And save taxpayer money.

Within the first five years of their CAP, the City of San Diego was ranked sixth nationally by the Brookings Institution in efforts to reduce GHG emissions.

Evan Gillespie, director of the Sierra Club's clean energy campaign in California, estimated that San Diego's plan will reduce GHG emissions by 7 million metric tons annually. "We need others to see this and say, 'Game on,'" Gillespie told the New York Times. "We need places like Los Angeles, like San Francisco and New York, to step up."

San Diego already overtook their 2020 goal of reducing GHG emissions by 15%. According to their 2019 Climate Action Plan Annual Report, they have reduced GHG emissions by 24%.

San Diego's CAP focuses on five main strategies:

- 100% renewable electricity
- Water and energy efficiency
- Zero waste
- Cycling, walking, transit and land use
- And resiliency measures.

As of 2017, the final solar energy system was installed at the Northwestern Division of the San Diego Police Department. On average, a solar energy system of the same size will generate 25,500 to 34,000 kilowatt-hours of clean renewable solar power and avoid the creation of 42,160 pounds of harmful carbon dioxide released into the air each year. Implementing these systems also saves \$7,480 through solar power.

The city plans on implementing a zero-waste plan and transitioning a majority of government-owned vehicles to electric.

For more information on the City of San Diego's effort towards a more sustainable future, visit <https://www.sandiego.gov/sustainability>.

## **Placentia planning for green -- Kiara Espericueta and Daniella Alvarez**

The city of Placentia has been working on promoting environmental justice by reducing pollution exposure to improve air quality. On October 1, 2019, the Placentia City Council adopted a new General Plan that includes goals, policies and implementation actions. For, example, the plan calls for more windows in buildings to reduce electric lighting needs.

Joseph Lambert, the Director of Development Services for Placentia, cited Veteran's Village in Placentia, which serves military veterans who are homeless or disabled. The state-of-the-art development is LEED Gold certified, utilizing energy efficient design principles and building materials.

Luis Estevez, Acting Deputy Administrator of Placentia, says the city is looking into 'Teslas' for police cars. "Patrol cars run 24 hours a day and are constantly on the road, so if we can switch to another alternative, that would be a huge benefit to our environment," says Estevez.

Estevez adds that street sweepers and trash trucks have switched to cleaner-burning natural gas.

Placentia just finished paving three major arterial streets in the northern part of the city, using over 12,000 tons of brand new rubberized asphalt. Using this new rubberized asphalt was the equivalent of diverting 33,000 used tires from a dump site.

Tom Morris, a biology professor at Fullerton College, says there are about 10 million cars in Southern California. "People replace their car's tires every few years, and this technique can help reduce demand for landfill space," he said.

Morris noted that the complex operations of human civilization are dependent on a predictable environment. However, as global climate change progresses regional climates become less predictable. When that happens, Morris said, "it becomes more predictable to plan for the future."

### **Orange County turning green – Eileen Arriaga**

Orange County is proceeding on multiple fronts to be greener.

The Orange County Sanitation Department is working to turn landfill and wastewater treatment gas into energy. As listed on the OCgov website, the methane produced during this process powers roughly 60% of the energy required to run the plant. This program has contributed greatly to the OC Sanitation Department's plan to become 100% energy self-sufficient, though it is unclear when this goal will be reached.

The Orange County Transportation Authority's zero-emission bus pilot program is powering buses with hydrogen; only water is emitted. According to the OCTA website, the \$22.9 million used to fund the project is the "largest single grant to date from the California Air Resources Board to a transit agency."

In addition to this, OCTA also will be embarking on a wilderness preservation program created to offset the environmental impacts of freeway projects. Within this program, \$10 million has been allocated to restore 350 acres.

And the county's efforts reach to the individual household – The Orange County Waste & Recycling Department offers free composting workshops.

### **Sustainable Fullerton – Daniel-Gene Hicks**

The City of Fullerton is planning a range of sustainability initiatives to meet its Climate Action Plan goals by 2025 including energy use conservation, planning and construction improvement, water conservation, storm water pollution prevention, air quality improvement and waste reduction/recycling.

Partnering with companies such as Tanko Lighting and Philips, Fullerton has been able to convert streetlights to LED, saving 1 million kilowatts of electricity annually as well as \$5 million in net energy cost over the next 20 years.

HVAC (Heating, Ventilation and Air-Conditioning) system improvements have been implemented at all city buildings throughout Fullerton.

Fullerton has developed a Climate Action Plan, based on findings through a 2018 statistical analysis of energy use throughout the city that showed homeowners' energy use rising.

In repaving streets, the city has begun using rubberized asphalt created from recycled tires. The process uses 2,000 recycled tires per lane-mile.

The Fullerton Community Center has been awarded a LEED Platinum certified building award by implementing green components such as sustainable site development, water savings, energy efficiency, and material selection.

### **Chino Hills saving water and fuel – David Saldana**

Chino Hills is replacing grass with climate-friendly plants. So far, the city has converted 14.5 acres into water-saving landscape. This saves Chino Hills almost 27 million gallons of water a year.

Chino Hills also hopes to convert all city vehicles to electric power. And it also is encouraging electric cars for its residents by providing local reimbursement and easier public charging.