

2021

CLIMATE ACTION PLAN ANNUAL REPORT



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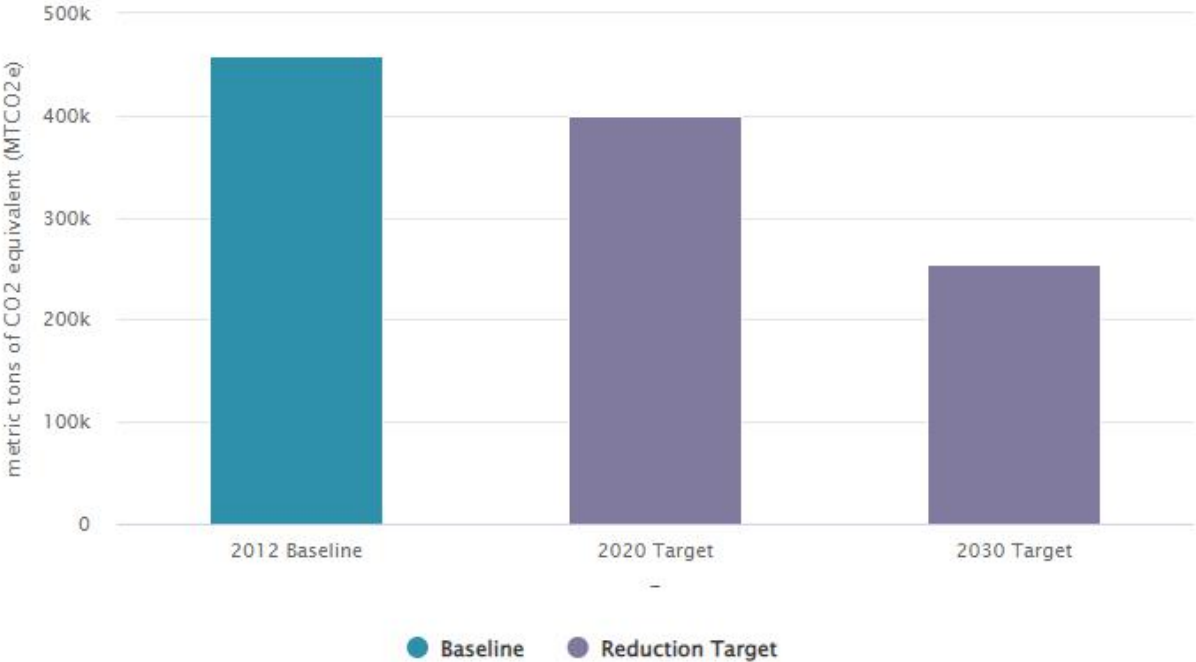
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Executive Summary

The City of Encinitas is actively engaged in addressing climate change and reducing greenhouse gas (GHG) emissions, evident through the adoption of a comprehensive Climate Action Plan (CAP) in 2018. Since then, the City has and will continue to commit to the implementation of the CAP's goals, strategies, and measures.

The City defines "sustainability" as the ability to meet our community's current needs without compromising the needs of future generations. We acknowledge the importance of continually adapting to our changing climate, which requires placing an emphasis on projects that will serve Encinitans now and in the future. Beyond the CAP, the City will continue to support practices that benefit environmental, social, and economic well-being with the goal of fostering equitable access to natural resources, in addition to enhancing public health and well-being.

Through the implementation of the CAP, the City aims to achieve citywide GHG emissions reductions of 13% below 2012 levels by 2020 and 44% below 2012 levels by 2030. This equates to reducing emissions by 59,664 metric tons of carbon dioxide equivalent (MTCO₂e) by 2020 and 201,941 MTCO₂e by 2030.



The City's original CAP, published in 2018, established 19 measures that each have numeric performance metrics and associated GHG emission reduction estimates that, when combined, will enable the City to achieve its overall 2020 and 2030 targets. The City's CAP was updated in 2020 and now includes a total of 20 measures.

Executive Summary

To track and share implementation progress with the public, the CAP calls for annual monitoring and reporting, which includes summarizing progress toward overall GHG reduction targets, and evaluating progress made on implementing each of the 20 measures. This is the City's fourth annual report; it includes data tracked through 2021 and features notable City accomplishments. In 2021, of the 20 CAP measures, 13 were completed, 5 were in progress, and 2 were awaiting resources.

It is notable that 18 out of the City's 20 measures have been initiated. Most of the City's CAP measures are long-term projects or programs, which require funding, planning, and coordinated implementation to be achieved. All measures outlined in the CAP are targeted to be completed by 2030 and initiating 90% of the measures in the first four years shows that the City is well on its way to reaching its goals. Notable measures in progress include activities like the design and construction of several roundabouts to improve traffic flow, the implementation of new local green building and energy efficiency requirements on future development projects, and the design and construction of new pedestrian and biking facilities. *Section 3: Implementation Progress by CAP Strategy* describes the progress on all measures in more detail.

The most recent GHG emissions inventory for the City, completed with support from the San Diego Association of Governments (SANDAG), is also included in the 2021 Annual Report. Using the best and most currently available data and modeling technology, this inventory estimated citywide GHG emissions in the City of Encinitas to be 390,600 MTCO₂e in 2016. This amount is 15% lower than emissions estimated in 2012, the baseline year. SANDAG is expected to complete an updated GHG inventory in 2022. More information regarding the City's latest GHG emissions inventory can be found in *Section 1: Greenhouse Gas Inventory*.

The 2021 Annual Report also evaluates whether the City is on track to meet the 2020 GHG emissions reduction target and provides an early look at the City's trend toward the 2030 emissions target. Since the latest GHG emissions inventory only includes data up to the year 2016, the 2021 Annual Report is not able to directly determine whether the City has met its 2020 target. However, it is anticipated that the City will achieve this target since the GHG emissions inventory with 2016 data exceeded the City's 2020 emissions reduction target of 13% below 2012 levels.

The progress made on individual CAP measures and, where possible, data and figures are presented to demonstrate progress. It is important to note that while the data presented may be used as an indicator of progress, multiple years of monitoring data is needed in order to develop long-term trends in GHG emissions that provide an accurate understanding of the overall impact of City efforts.

Section 1

Greenhouse Gas Inventory

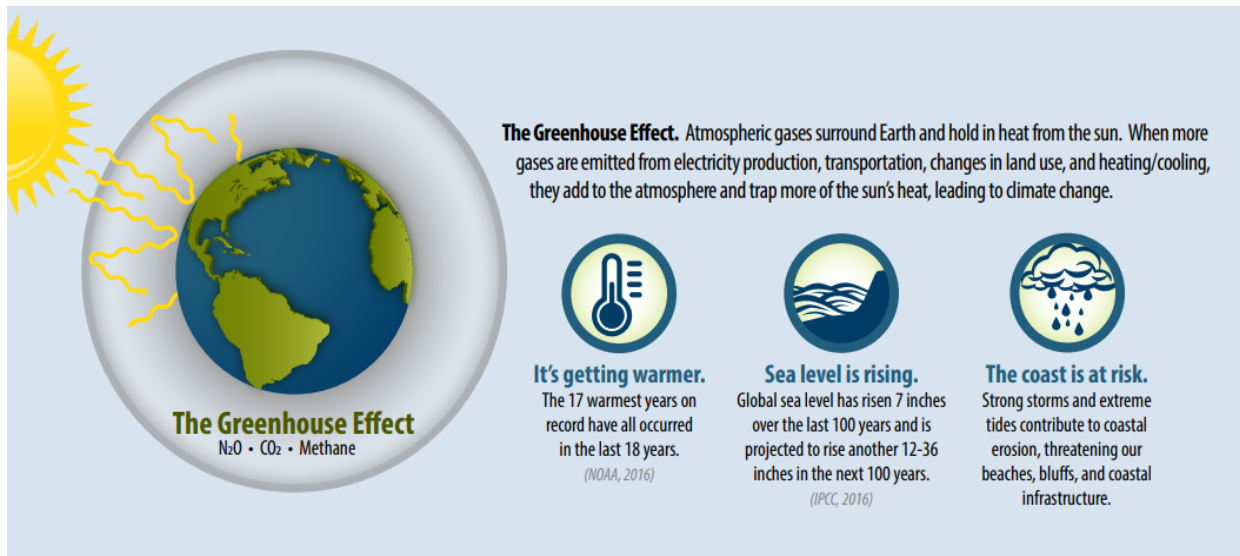


The City tracks the amount of greenhouse gases (GHGs) being emitted in Encinitas because it indicates how much our community is contributing to climate change. A GHG inventory is a monitoring tool used to report on the implementation of the City's Climate Action Plan (CAP). It helps to understand the source and amount of GHG emissions being generated, as well as track the progress towards CAP emission reduction targets. The following section demonstrates the City's efforts in lowering local GHG emissions.

GHG Inventory

GHG Inventory Greenhouse Gases

The primary greenhouse gases (GHGs) emitted in the City of Encinitas include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Each GHG has varying levels of potency in the atmosphere, therefore, to simplify the discussion and comparison of emissions, the Climate Action Plan (CAP) uses a measurement referred to as carbon dioxide equivalent (CO₂e), which is measured in metric tons (MT).



The infographic features a central illustration of Earth with a sun on the left emitting rays. A grey ring surrounds the Earth, representing the atmosphere. Below the Earth, the text reads "The Greenhouse Effect" followed by "N₂O • CO₂ • Methane". To the right, a paragraph explains the greenhouse effect. Below this are three circular icons: a thermometer, a rising sea level, and a storm cloud with rain. Each icon is accompanied by a heading and a short paragraph of text.

The Greenhouse Effect. Atmospheric gases surround Earth and hold in heat from the sun. When more gases are emitted from electricity production, transportation, changes in land use, and heating/cooling, they add to the atmosphere and trap more of the sun's heat, leading to climate change.

It's getting warmer.
The 17 warmest years on record have all occurred in the last 18 years.
(NOAA, 2016)

Sea level is rising.
Global sea level has risen 7 inches over the last 100 years and is projected to rise another 12-36 inches in the next 100 years.
(IPCC, 2016)

The coast is at risk.
Strong storms and extreme tides contribute to coastal erosion, threatening our beaches, bluffs, and coastal infrastructure.

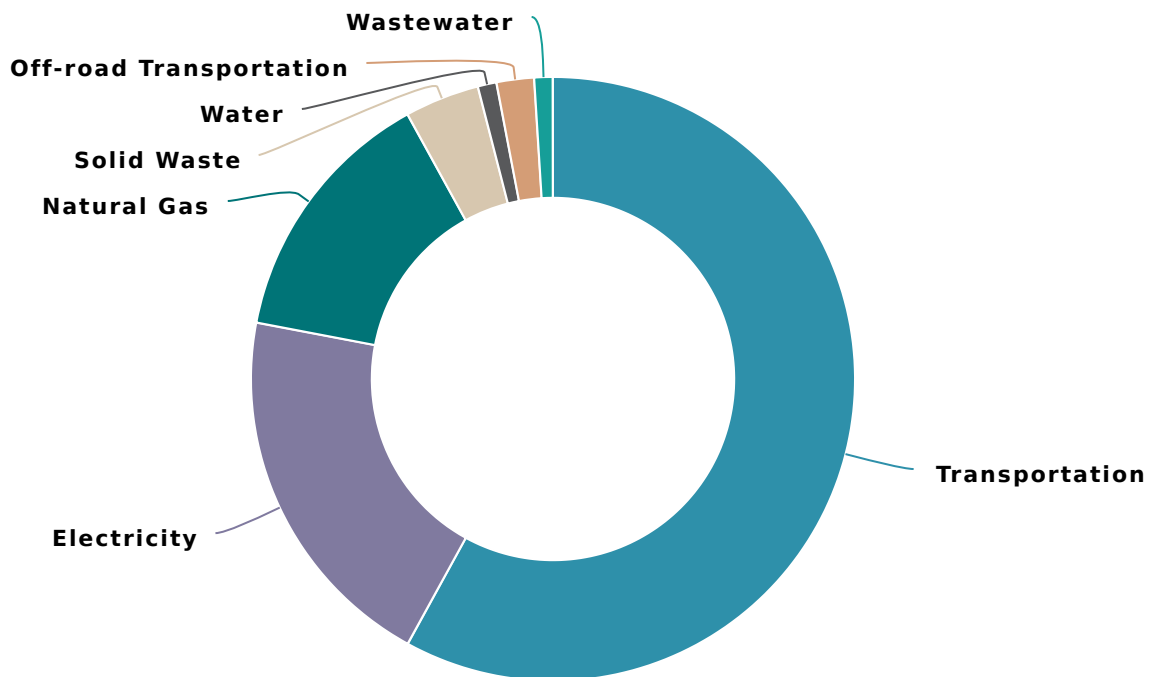
GHG Inventory

GHG Inventory

GHG Emissions Inventory

Completing GHG inventories is essential to achieving the main objective of the City's CAP, which is to meet targeted reductions in emissions by 2020 and 2030. GHG inventories are conducted periodically to provide a snapshot of emissions each year and help develop emissions trends over time. The City's baseline inventory completed for the 2018 CAP estimated GHG emissions from sources in Encinitas to be **459,000 metric tons of carbon dioxide equivalent (MTCO₂e) in 2012**.

The most recent GHG emissions inventory was completed in in 2018, by [San Diego Association of Governments \(SANDAG\)](#) as part of their [Regional Climate Action Planning Framework & Monitoring Program](#). This most recent inventory reflects GHG emissions from the year 2016. Using the best and most currently available data and modeling methods, citywide GHG emissions in the City of Encinitas were determined to be **390,600 MTCO₂e in 2016** which is **15% lower** than emissions calculated in 2012, the City's baseline year. The SANDAG GHG inventory for the City of Encinitas is the most current available data. SANDAG is anticipated to publish the next GHG inventory in 2022, which is expected to include data on 2020 emissions.



GHG Inventory

GHG Inventory

GHG Emissions Calculations and Trends

GHG emissions are calculated by multiplying activity data (e.g., kilowatt-hours of electricity, tons of solid waste) by an emission factor (e.g., pounds of CO2 per unit of electricity). Running these calculations involves, among other things, a sophisticated regional transportation model using citywide and regional data. Measuring emissions from transportation is one of the most challenging sectors to evaluate.

As climate science continues to advance and evolve, emissions calculation methodologies will vary from year to year, making direct comparisons difficult. Annual GHG inventories are best compared by evaluating the general trends in data over time.

GHG emissions in the City have **decreased** since 2012. Emissions went **down by 1% in 2013** and **15% in 2016** from the 2012 baseline level.



Section 2

Implementation Progress Summary



When the Climate Action Plan (CAP) was updated in 2018 the City also developed a comprehensive CAP Implementation Plan which outlines how the City will implement CAP actions and monitor progress.

Implementation of certain actions requires the City to develop and implement new ordinances, programs, and projects, or modify existing ones. This involved careful consideration of the operational and capital resources needed, as well as timing, phasing, and monitoring of implementation.

Section 2

Implementation Progress Summary

In this section, the City's progress on each Climate Action Plan (CAP) initiative is summarized with a brief description, the implementation timeline, the current status of implementation, and the co-benefits that will be realized when the action is implemented. The table at the end of this section offers a progress summary of each CAP measure, its timeline and status. The information found in the table and subsequent overview of each of the 2018 CAP strategy sections represents progress tracked through 2021. In 2021, the City made substantial progress on implementing multiple CAP measures via a variety of projects and programs.

Renewable Energy

Community Choice Energy Program Established

In 2019, the City of Encinitas formed a community choice energy (CCE) Joint Powers Authority along with four other cities in San Diego. Now operating as San Diego Community Power (SDCP), the agency began serving renewable power to Encinitas customers on March 1, 2021. City Council voted to establish "Power100" as the default rate for all Encinitas customers, which provides 100% renewable electricity at a cost that is only marginally more than San Diego Gas and Electric's (SDGE) current rates. This program supports CAP measure RE-1: Establish a Community Choice Energy Program.

Clean & Efficient Transportation

Community Alternative Transportation Infrastructure Expanded

In 2018, the City completed and adopted an Active Transportation Plan (ATP). Since then, the City has installed a variety of bike and pedestrian projects proposed in the ATP. In 2021, 5.6 miles of new bike facilities were in development and 1.27 miles of new pedestrian facilities were installed. Each additional mile of bike or pedestrian infrastructure supports CAP measure CET-1: Complete and Implement the Citywide Active Transportation Plan.

The City recognizes the importance of alternative transportation to the Encinitas community and worked to install 85 bike racks in order to support safe and accessible bike storage throughout the City in 2021. The racks were primarily installed at coastal access points spanning from Cardiff State Beach to Grandview Beach, plus Olympic Park. This project also supported CAP measure CET-1.

Implementation Progress Summary

Clean & Efficient Transportation Community Bikeshare Launched

In 2021, the City secured a partnership with BCycle, one of the largest and longest standing bike share companies in the United States, to begin the City's first bikeshare program. In coordination with the City, BCycle launched their pilot bikeshare program in early 2022. BCycle plans to install up to 500 docking stations for 250 electric bikes (e-bikes) throughout the City. Increased access to an affordable and clean transportation alternative such as BCycle's shared e-bikes encourages locals and tourists alike to avoid driving vehicles and opt for zero emission shared bicycle transportation instead. BCycle's bikeshare program will further aid the City in achieving its GHG reduction goals outlined in the CAP, including measure CET-1.



Section 2

Implementation Progress Summary

Building Efficiency, Renewable Energy, and Clean & Efficient Transportation Green Building Ordinance Adopted

City Council adopted a new green building ordinance, Ordinance No. 2021-13, on October 27, 2021. Ordinance No. 2021-13 sets higher energy efficiency standards for residential and nonresidential (commercial) buildings and advances decarbonization—the reduction of greenhouse gas (GHG) emissions generated by the burning of fossil fuels—of all new buildings in Encinitas.

Ordinance No. 2021-13 requires residential remodels to install certain energy efficiency upgrades if the building is of a certain age or if permit value is \$50,000 or greater. Various requirements include air duct sealing, cool roof, energy efficient lighting, energy efficient water heating, or minimum R-38 attic insulation. For all new residential construction, the ordinance requires all-electric construction, with limited exceptions.

Ordinance No. 2021-13 also requires nonresidential buildings to meet certain energy efficiency criteria, such as efficient outdoor lighting, sealed docks doors, daylight power devices, and service water heating for restaurants. Existing nonresidential projects will trigger these requirements if they are adding at least 1,000 square feet of building space or undergoing a building alteration with a permit value of at least \$200,000. For all new nonresidential construction, the ordinance requires all-electric construction, with limited exceptions.

The ordinance became effective on August 2, 2022. With adoption of Ordinance No. 2021-13, Encinitas became the first local jurisdiction in the San Diego region to require all new buildings to include electric appliances, but the fiftieth jurisdiction in the state to do so.

The green building ordinance supports the following eight CAP measures:

- BE-1: Adopt a Residential Energy Efficiency Ordinance
- BE-2: Require Decarbonization of New Residential Buildings
- BE-3: Adopt Higher Energy Efficiency Standards for Commercial Buildings
- BE-4: Require Decarbonization of New Commercial Buildings
- RE-2: Require New Homes to Install Solar Systems
- RE-3: Require Commercial Buildings to Install Solar Systems
- CET-4: Require Residential Electric Vehicle Charging Stations (EVCS)
- CET-5: Require Commercial Electric Vehicle Charging Stations (EVCS)

Status of CAP Implementation



CAP Measure	Description	Timeline	Status
Building Efficiency			
Goal 1.1 : Reduce Building Energy Consumption			
BE-1	Adopt a Residential Energy Efficiency Ordinance Adopt an ordinance requiring all existing residential property owners conducting major renovations to implement energy efficiency retrofits.	Within 2 Years	
BE-2	Require Decarbonization of New Residential Buildings Adopt an ordinance requiring electrification of new residential buildings, including single family homes and low-rise multi-family homes.	Within 2 Years	
BE-3	Adopt Higher Energy Efficiency Standards for Commercial Buildings Adopt an ordinance requiring 1) all new commercial buildings, including the commercial portion of mixed-use projects, and 2) commercial building additions of 1,000 square feet or greater or alterations with a permit value of at least \$200,000 to meet the 2019 California Green Building Standards Code Nonresidential Tier 1 Voluntary Measures.	Within 2 Years	
BE-4	Require Decarbonization of New Commercial Buildings Adopt an ordinance requiring the electrification of all new commercial buildings, including the commercial portion of mixed-use projects.	Within 2 Years	
Goal 1.2 : Reduce Municipal Operation Energy Consumption			
MBE-1	Continue Implementation of Energy Efficient Projects in Municipal Facilities Reduce municipal energy use below 2012 baseline energy use.	Ongoing	
Renewable Energy			
Goal 2.1 : Achieve 100% Renewable Electricity Supply in Homes and Businesses			
RE-1	Establish a Community Choice Energy Program Present to City Council for the consideration of a Community Choice Energy program that increases renewable electricity supply.	Within 2 Years	

Status of CAP Implementation



CAP Measure	Description	Timeline	Status
RE-2	Require New Homes to Install Solar Systems Require: 1) New single-family homes to install at least 1.5 W solar per square feet or minimum 2 kW per home, and 2) New multi-family homes to install at least 1 W solar per square feet or minimum 1 kW per unit.	Ongoing	
RE-3	Require Commercial Buildings to Install Solar Systems Adopt an ordinance requiring installation of solar PV systems on 1) All new commercial buildings, including the commercial portion of mixed-use projects, and 2) Commercial building additions that increase total roof area by at least 2,000 square feet or alterations with a permit value of at least \$1,000,000 that affect at least 75% of gross floor area, unless the installation is impracticable due to poor solar resources or other physical constraints, as approved by the Director of Development Services.	Within 2 Years	
Goal 2.2 : Increase Renewable Electricity Supply in Municipal Operations			
MRE-1	Supply Municipal Facilities with Renewable Energy Supply municipal facilities with onsite renewable energy to achieve "Net Zero Electricity" municipal operations.	Within 5 Years	
Water Efficiency			
Goal 3.1 : Reduce Citywide Potable Water Consumption			
WE-1	Conduct Water Rate Studies and Implement Approved Water Rates Implement approved water rates based on studies for San Dieguito Water District and Olivenhain Municipal Water District to promote water conservation.	Ongoing	
Clean and Efficient Transportation			
Goal 4.1 : Reduce Vehicle Miles Traveled			
CET-1	Complete and Implement the Citywide Active Transportation Plan Implement the bicycle and pedestrian projects in the Active Transportation Plan (ATP). In concert with the Housing Element housing site build-out, ATP projects are estimated to lead to a 9% shift in bicycle mode share and 8% shift in walk mode share within the vicinity of ATP projects.	Within 10 years	

Status of CAP Implementation






CAP Measure	Description	Timeline	Status
CET-2	Implement a Local Shuttle System Implement service routes recommended in the Encinitas Transit Feasibility Study and use compressed natural gas (CNG) buses for these routes, or implement an alternate shuttle system approved by City Council.	Within 5 Years	
Goal 4.2 : Reduce On-Road Fuel Use			
CET-3	Improve Traffic Flow Improve traffic flow by retiming traffic signals and installing roundabouts at intersections in the City.	Within 10 Years	
Goal 4.3 : Increase Use of Alternative Fuels			
CET-4	Require Residential Electric Vehicle Charging Stations (EVCS) Require new residential units to install EVCS equipment. Single family units are to install complete 40-Amp electrical circuit (EV Ready). Multi-Family units are to install EVCS equipment at 15% of the total number of parking spaces.	Ongoing	
CET-5	Require Commercial Electric Vehicle Charging Stations (EVCS) Require installation of EVCS at 8% of the total number of parking spaces at all new commercial buildings, including the commercial portion of mixed-use projects, and commercial building modifications, alterations, and additions with square footage larger than 10,000 square feet.	Ongoing	
MCET-1	Transition to Zero Emission Vehicle (ZEV) Municipal Fleet Develop a municipal fleet replacement plan to 1) Convert gasoline-fueled cars and light-duty trucks to Zero Emission Vehicles, including all-electric vehicles or other ZEV technology by 2030, and 2) Convert to renewable diesel for all diesel-fueled heavy-duty trucks by 2020.	Ongoing	
MCET-2	Adopt a Municipal Employee Telecommute Policy Develop a policy for City Council consideration to facilitate telecommuting by City employees, based on job function, with approval from supervisors and human resources.	Within 2 Years	
Off-Road Equipment			
Goal 5.1 : Reduce Off-Road Fuel Use			

Status of CAP Implementation

 COMPLETE

 IN PROGRESS

 AWAITING RESOURCES

CAP Measure	Description	Timeline	Status
OR-1	Adopt a Leaf Blower Ordinance to Limit Use of 2-Stroke Leaf Blowers Starting in 2018, prohibit 2-stroke leaf blowers and implement the phase-out of leaf blower emissions.	Ongoing	
Zero Waste			
Goal 6.1 : Divert Solid Waste			
ZW-1	Implement a Zero Waste Program Implement a Zero Waste Program to reduce waste disposal from residents and businesses in the community.	Ongoing	
Carbon Sequestration			
Goal 7.1 : Increase Urban Tree Cover			
CS-1	Develop and Implement an Urban Tree Planting Program Develop and implement an Urban Tree Planting Program, including standards to right-size trees and minimize pruning and irrigation needs, and to promote increased carbon sequestration by trees within the community.	Ongoing	

Section 3

Implementation Progress by CAP Strategy



The Climate Action Plan (CAP) includes the following categories that each of the City's 20 individual CAP measures fall under:

Building Efficiency, Renewable Energy, Water Efficiency, Clean and Efficient Transportation, Off-Road Equipment, Zero Waste, and Carbon Sequestration.

Section 3: Implementation Progress by CAP Strategy

Strategy 1: Building Efficiency



The Building Efficiency strategy of the City's Climate Action Plan (CAP) aims to cut back on emissions by increasing the energy efficiency of residential and commercial buildings and reducing energy use in municipal facilities. Much of the energy that powers, heats, and cools buildings in our community is generated through the burning of fossil fuels like natural gas, which releases greenhouse gases (GHG) and other harmful emissions into the atmosphere. To reduce GHG emissions, the CAP aims to set higher energy efficiency standards for residential and commercial buildings, in addition to installing energy efficiency measures at municipal facilities.

Implementation of the Building Efficiency strategy is estimated to reduce the City's GHG emissions by **941 metric tons of carbon dioxide equivalent (MTCO_{2e}) by 2020** and **675 MTCO_{2e} by 2030**.

Residential and Commercial Buildings

BE 1-4: Energy Efficiency and Decarbonization Green Building Ordinance

In 2021, the City developed a comprehensive green building ordinance ([Ordinance 2021-13](#)) to effectively implement the following Building Efficiency CAP measures at once:

- BE-1: Adopt a Residential Energy Efficiency Ordinance
- BE-2: Require Decarbonization of New Residential Buildings
- BE-3: Adopt Higher Energy Efficiency Standards for Commercial Buildings
- BE-4: Require Decarbonization of New Commercial Buildings

Note: Ordinance 2021-13 also implements Renewable Energy CAP measure RE-3: Require Commercial Buildings to Install Solar Photovoltaic Systems.

Ordinance 2021-13 development included public outreach and receipt of input, consultation with stakeholders, cost effectiveness analysis, drafting of the building code amendments, and recommendation with subsequent approval by the City's Environmental Commission.

The green building ordinance (Ordinance 2021-13) was adopted by City Council on October 27, 2021, and became effective on August 2, 2022, after gaining approval from the California Energy Commission (CEC) and the California Building Standards Commission (CBSC). It includes requirements that address the following:

- Higher energy efficiency standards for residential and commercial buildings
- Installation of solar photovoltaic (PV) systems on commercial buildings
- Decarbonization of all new buildings

The following sections describe the new requirements in more detail as they relate to each CAP measure. Additional ordinance information can also be found on the [City's website](#).

Residential and Commercial Buildings

Building Energy Reduction

Homes

In accordance with the City's Climate Action Plan (CAP), a new green building ordinance ([Ordinance 2021-13](#)) was adopted by City Council on October 27, 2021 and became effective on August 2, 2022 after gaining approval from the California Energy Commission (CEC) and the California Building Standards Commission (CBSC).

Ordinance 2021-13 addresses four building-related CAP measures. The ordinance requires residential remodels to install certain energy efficiency upgrades as part of their projects. It also requires electrification of all new single-family homes and multi-family homes. The requirement for energy efficiency upgrades will apply to residential additions and alterations with a permit value of \$50,000 or greater. These requirements are intended to lower carbon emissions, reduce resident's energy bills, and improve indoor air quality.

The 2030 CAP goals for residential buildings will be achieved if approximately **250 homes undergo energy efficiency retrofits** and **1,200 low-rise residential units are electrified**.



COMPLETE

BE-1: Adopt a Residential Energy Efficiency Ordinance **Building Energy Reduction - Homes**

[Ordinance 2021-13](#) requires residential remodels to install certain energy efficiency upgrades if the building is of a certain age or if the permit value is \$50,000 or greater. Various requirements include air duct sealing, cool roof, energy efficient lighting, energy efficient water heating, or minimum R-38 attic insulation. The greenhouse gas (GHG) reduction target for this measure will be achieved if **approximately 250 homes undergo energy efficiency retrofits by 2030**. Tracking progress toward this target began in August of 2022.

Strategy 1: Building Efficiency

Residential and Commercial Buildings



COMPLETE

BE-2: Require Decarbonization of New Residential Buildings Building Energy Reduction - Homes

[Ordinance 2021-13](#) requires all new residential buildings in Encinitas to be all-electric unless an exception applies. An all-electric building is defined as having no natural gas or propane plumbing, no gas meter connection, and only using electricity as the source of energy for space and water heating, cooking appliances, and clothes drying appliances. If applicable, an all-electric building may include solar-thermal pool heating. These requirements are intended to lower GHG emissions, reduce resident's energy bills, and improve indoor and outdoor air quality. The GHG reduction target for this measure will be achieved if **1,200 low-rise residential units are electrified by 2030**. Tracking progress toward this target began in August of 2022.

RESIDENTIAL ENERGY REDUCTION GOALS BY 2030

250 HOMES UNDERGO
ENERGY EFFICIENCY
RETROFITS



1,200 LOW-RISE
RESIDENTIAL
ELECTRIFICATION
PROJECTS ARE
COMPLETED



Residential and Commercial Buildings

Building Energy Reduction

Businesses

In addition to the residential requirements, the green building ordinance ([Ordinance 2021-13](#)) also requires higher energy efficiency standards for commercial (nonresidential) buildings.

Existing nonresidential projects will trigger these energy efficiency requirements if they are adding at least 1,000 square feet of building space or undergoing a building alteration with a permit value of at least \$200,000. For all new nonresidential construction, the ordinance requires all-electric construction, with limited exceptions.

The 2030 goals for existing nonresidential buildings will be achieved if energy consumption of commercial projects is reduced by **1.4 million kWh electricity use** and **5,000 therms natural gas use**. The 2030 CAP goals for new commercial buildings will be achieved if energy use is reduced in commercial spaces by **54,000 kWh and 500,000 therms**.



COMPLETE

BE-3: Adopt Higher Energy Efficiency Standards for Commercial Buildings

Building Energy Reduction - Businesses

[Ordinance 2021-13](#) requires commercial buildings to meet certain energy efficiency criteria, such as efficient outdoor lighting, sealed docks doors, daylight power devices, and service water heating for restaurants. To maintain consistency with the California Energy Code, the ordinance defines commercial buildings as non-residential buildings. In addition to commercial buildings like retail, office, and warehousing, the ordinance also applies to hotels, motels, and multi-family housing complexes more than three stories tall.

Existing commercial projects will trigger these requirements if they are adding at least 1,000 square feet of building space or undergoing a building alteration with a permit value of at least \$200,000. The GHG reduction target for this measure will be achieved if a total reduction of **1.4 million kilowatt hours (kWh) of electricity use** and **5,000 therms of natural gas use** is achieved by 2030. Tracking progress toward this target began in August of 2022.

Strategy 1: Building Efficiency



Residential and Commercial Buildings



COMPLETE

BE-4: Require Decarbonization of New Commercial Buildings Building Energy Reduction - Businesses

[Ordinance 2021-13](#) requires all new non-residential buildings in Encinitas to be all-electric, with limited exceptions. An all-electric building is defined as having no natural gas or propane plumbing, no gas meter connection, and only uses electricity as the source of energy for space and water heating, cooking appliances, and clothes drying appliances. If applicable, an all-electric building may include solar-thermal pool heating. The GHG reduction target for this measure will be achieved if a total reduction of **54,000 kilowatt hours (kWh) of electricity** use and **500,000 therms of natural gas** use is achieved by 2030. Tracking progress toward this target began in August of 2022.

COMMERCIAL ENERGY REDUCTION GOALS BY 2030		
	EXISTING BUILDINGS	NEW BUILDINGS
	1.4 MILLION kWh ELECTRICITY	54,000 kWh ELECTRICITY
	5,000 THERMS NATURAL GAS	500,000 THERMS NATURAL GAS

Strategy 1: Building Efficiency

Municipal Facilities



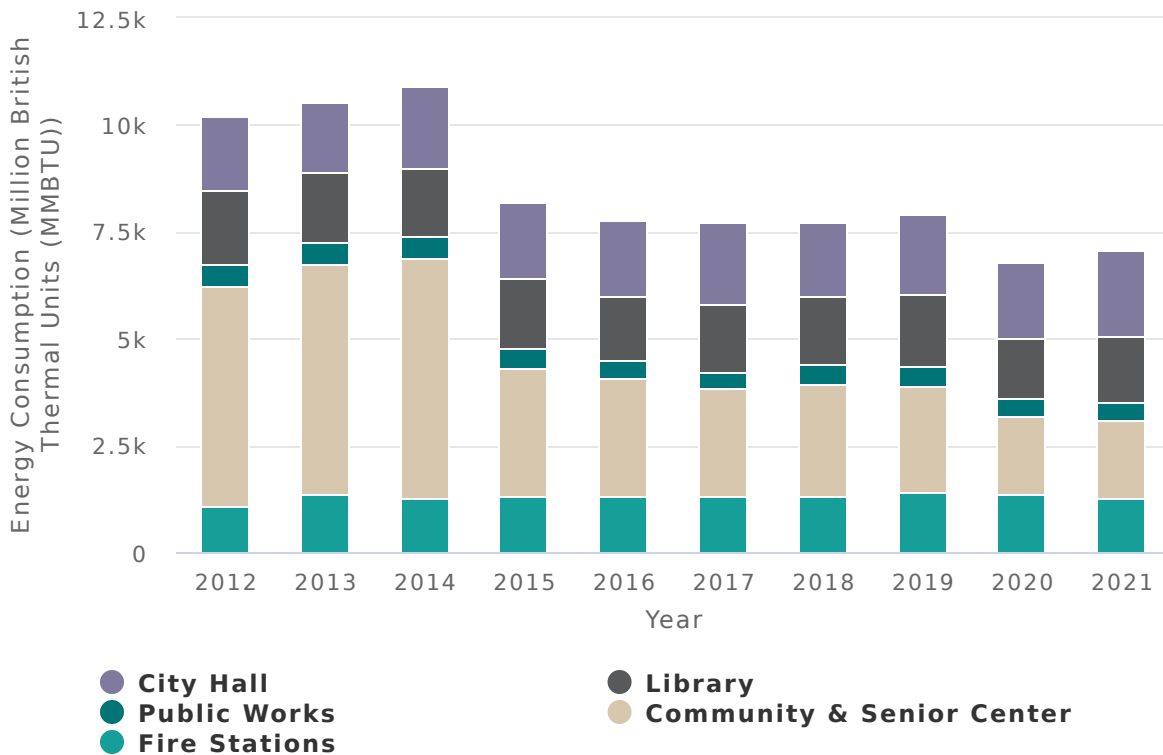
MBE-1: Continue Implementation of Energy Efficient Projects in Municipal Facilities

Municipal Facilities Energy Consumption

The City's CAP established a goal of reducing municipal energy consumption below 2012 baseline energy use by **7.5% by 2020** and **15% by 2030**. Municipal facilities include City Hall, a Public Works facility, two libraries, the Community and Senior Center, five fire stations, and numerous parks.

Since 2012, the City has seen a **31% reduction** in overall building energy use as a result of various energy efficiency upgrades, including more efficient lighting, upgrades to heating and air conditioning systems, and other projects. This reduction exceeds both the 2020 and 2030 CAP goals.

Major energy efficiency projects include the replacement of the Community and Senior Center building cooling system in 2015, which **reduced energy consumption at that facility by 43%**, and the Public Works facility LED lighting retrofit in 2016. The City continues to identify and implement energy efficiency upgrades as opportunities arise.



Section 3: Implementation Progress by CAP Strategy

Strategy 2: Renewable Energy



The Renewable Energy Strategy in the City's Climate Action Plan (CAP) aims to increase supply and access to renewable energy for existing and new residences, commercial properties, and municipal facilities. Transitioning from fossil fuels to renewable energy sources like solar and wind will reduce pollution, including greenhouse gas (GHG) emissions.

To accomplish this, the City's CAP calls for the launch of a Community Choice Energy Program (CCE), the installation of solar panels on homes and businesses, and the addition of solar panels on municipal facilities, among other initiatives.

Implementation of these measures is estimated to reduce the City's GHG emissions by **434 metric tons of carbon dioxide equivalent (MTCO_{2e}) by 2020** and **20,935 MTCO_{2e} by 2030**.

Strategy 2: Renewable Energy

Community Choice Energy



COMPLETE

RE-1: Establish a Community Choice Energy Program 100% Renewable Electricity by 2030

One of the key goals of the City's Climate Action Plan (CAP) was to launch a Community Choice Energy (CCE) program that serves 100% renewable electricity to customers by 2030. CCE programs are not-for-profit, locally controlled energy agencies that purchase clean electrical power on behalf of residents and businesses.

In 2019, after the completion of a Technical Feasibility Study, the City formed a CCE Joint Powers Authority along with the cities of San Diego, Chula Vista, La Mesa, and Imperial Beach. Now operating as [San Diego Community Power](#) (SDCP), the new agency began serving power to customers on March 1, 2021. Service was rolled out in the following phases:

- Phase 1: March 1, 2021 - Municipal Customers
- Phase 2: June 1, 2021 - Commercial Customers
- Phase 3: April 1, 2022 - Residential and Solar Customers (Net Energy Metering)

As part of this roll-out, Encinitas City Council voted to establish SDCP's premium product, Power100, as the default electricity choice for all customers within the City of Encinitas. Power100 provides 100% renewable electricity to customers at a cost that is only marginally greater than San Diego Gas and Electric's (SDGE) current rates, 1 to 3% greater depending on the rate class. ***This action enables the City to achieve its 100% renewable electricity goal well in advance of the 2030 target date.***

Community Choice Energy



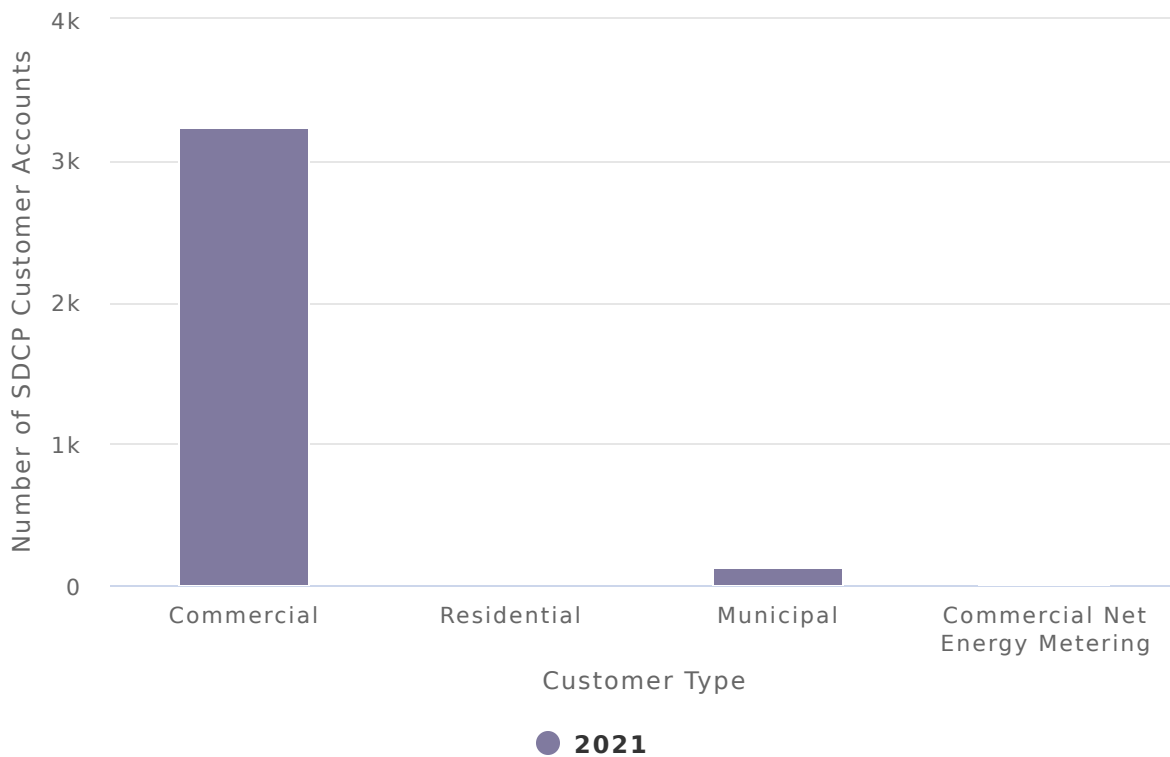
COMPLETE

RE-1: Establish a Community Choice Energy Program

Number of Active SDCP Accounts by Customer Type

In 2021, SDCP recorded **3,375 active accounts in Encinitas**, which included municipal and commercial accounts. Residential and solar accounts were not enrolled as of 2021.

Note: Data on residential and solar customer accounts will be reported in 2022.



Strategy 2: Renewable Energy

Community Choice Energy



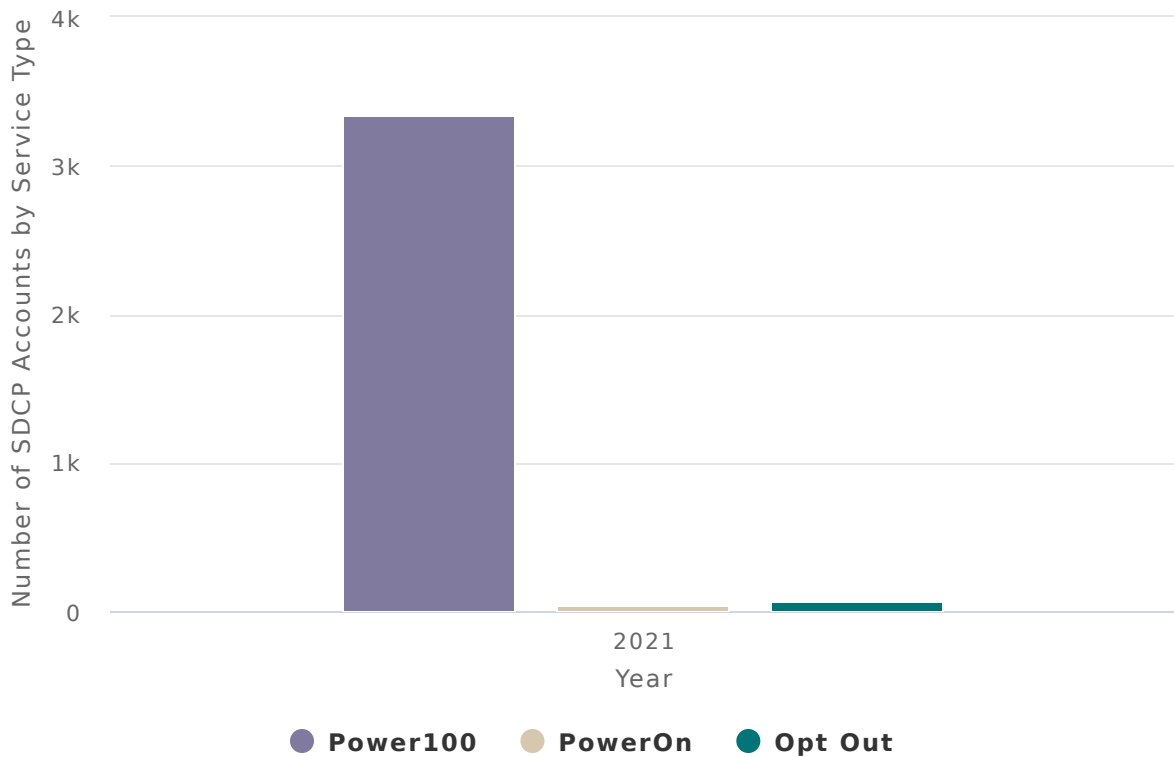
COMPLETE

RE-1: Establish a Community Choice Energy Program

Number of SDCP Accounts by Service Type

In 2021, **99%** of accounts were subscribed to **Power100 (100% renewable)** and **1%** were subscribed to **PowerOn (50% renewable)**. A total of 65 customers opted out of SDCP altogether.

To learn more about SDCP, visit their [website](#).



Strategy 2: Renewable Energy

Homes and Businesses

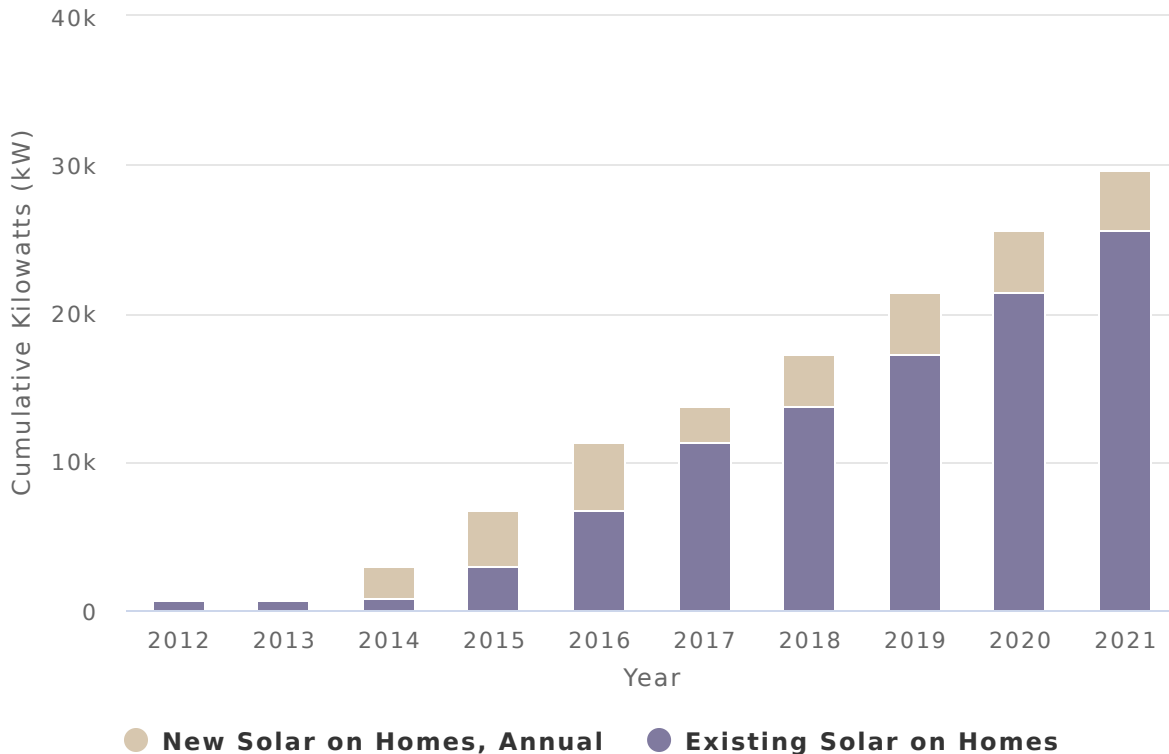


COMPLETE

RE-2: Require New Homes to Install Solar Systems Solar Photovoltaic (PV) Systems - Homes

In 2015, the City adopted Ordinance 2015-13 which incorporated new statewide residential solar requirements into its local building code. As of January 1, 2020, all new single-family and multi-family homes up to three stories in California are required to install a solar photovoltaic (PV) system large enough to meet the average annual electricity usage of the building. This supports the City's Climate Action Plan (CAP) goal to install **400 kilowatts (kW)** and **1,000 kW of additional residential solar by 2020 and 2030** on newly constructed buildings, respectively.

Over the past several years, many residents have also voluntarily installed solar panels on their homes. Residential solar PV systems typically range in size from 5 to 20 kW per home. Together with the statewide residential solar mandate, between 2012 and 2021, a cumulative total of **29,644 kW of solar** was installed on **4,503 homes** in Encinitas. In 2021 alone, **4,048 kW of solar** was installed on residential properties, which far exceeds the 2020 CAP target.



Strategy 2: Renewable Energy

Homes and Businesses



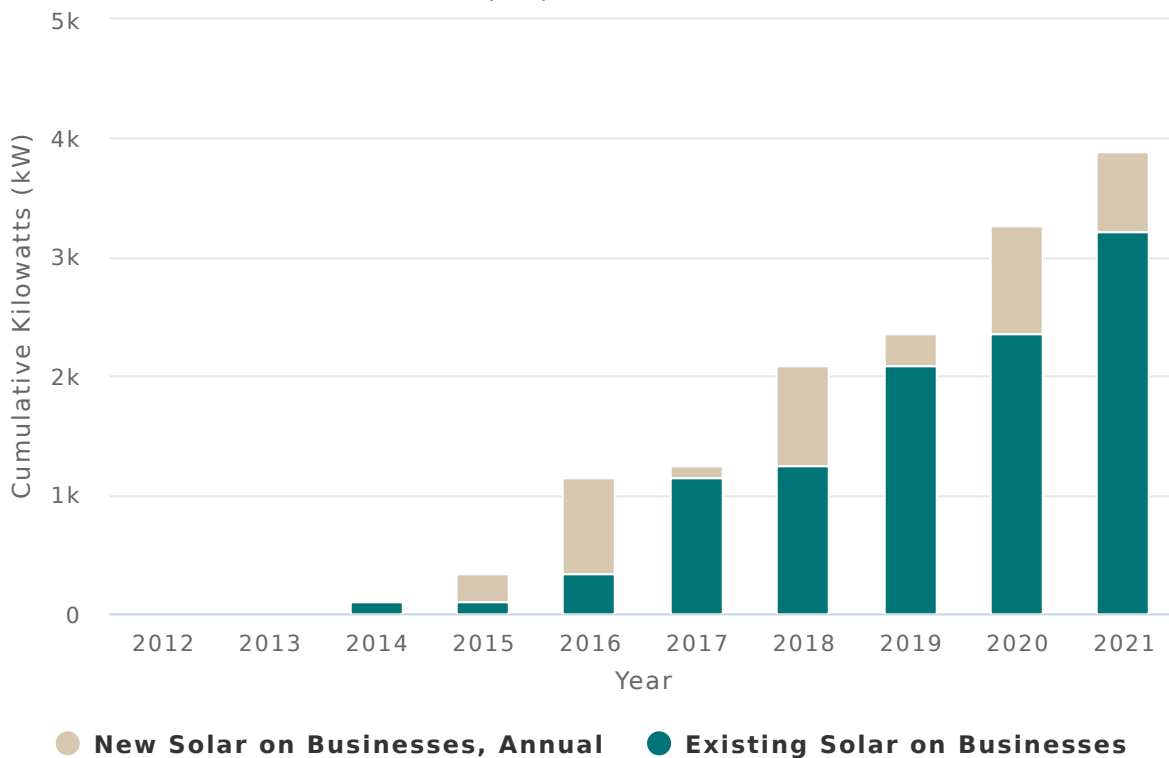
COMPLETE

RE-3: Require Commercial Buildings to Install Solar Systems Solar Photovoltaic (PV) Systems - Businesses

The CAP calls for increasing solar PV on commercial buildings to reduce greenhouse gas emissions (GHG) from commercial electricity use. To achieve this goal, the City adopted a new green building ordinance ([Ordinance 2021-13](#)) on October 27, 2021, which requires solar photovoltaic (PV) systems to be installed as part of all new commercial buildings and remodeled commercial buildings of a significant size. To maintain consistency with the California Energy Code, the ordinance defines commercial buildings as “non-residential” buildings. In addition to commercial buildings like retail, office, and warehousing, the ordinance also applies to hotels, motels, and multi-family housing complexes more than three stories tall.

These requirements support the City’s CAP goal to install **2.7 megawatts (MW) of solar by 2030** on new and retrofit non-residential projects. Staff will begin tracking progress toward this target once the ordinance becomes effective in 2022.

Some non-residential properties have already voluntarily installed solar panels. Between 2012 and 2021, a cumulative total of **3,947 kilowatt (kW) of solar** was installed at 99 commercial properties in Encinitas. In 2021 alone, **676 kW of solar** was installed on non-residential properties.



Strategy 2: Renewable Energy

Municipal Operations



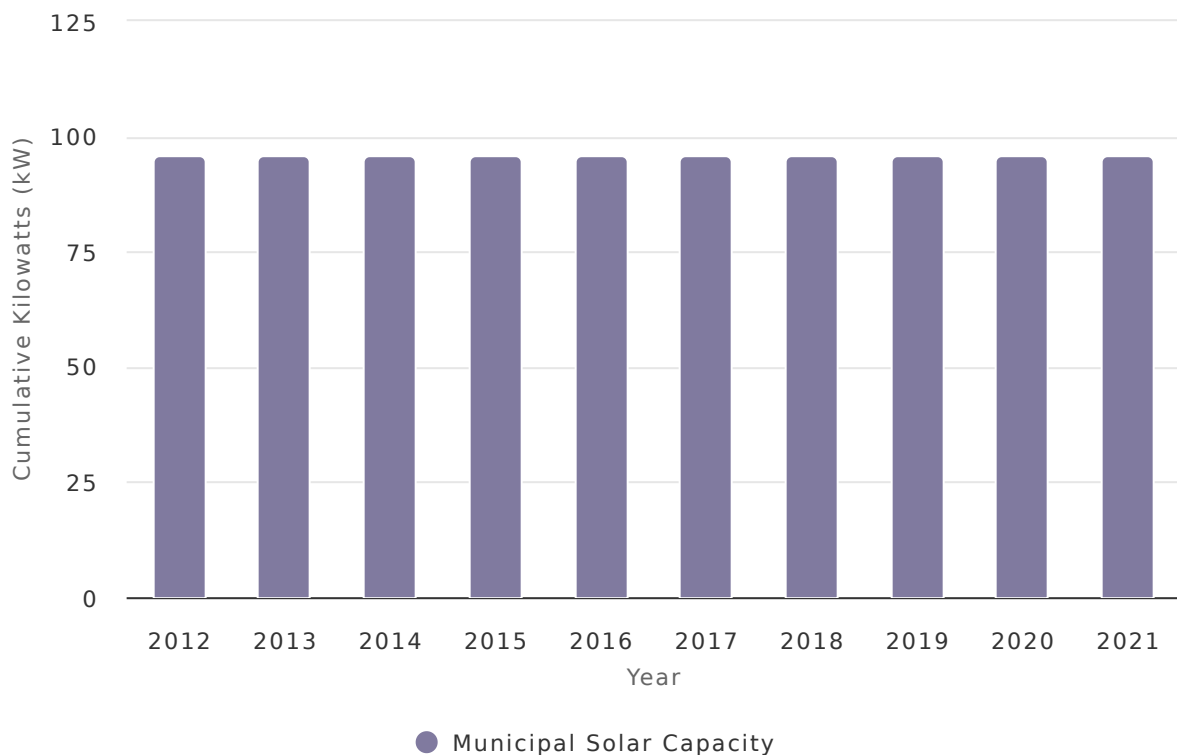
IN
PROGRESS

MRE-1: Supply Municipal Facilities with Renewable Energy Municipal Facilities with On-Site Renewable Energy

The City's CAP set an ambitious goal of supplying all municipal facilities with enough onsite renewable energy to achieve "Net Zero Electricity." This means that municipal buildings would generate as much electricity as they consume. The City aims to supply **50% of its municipal energy needs from renewable sources by 2020** and **100% by 2030**.

In 2008, the City installed a 96 kilowatt (kW) solar PV system at City Hall. The system generates approximately 150 megawatt hours (MWh) of electricity each year which is equivalent to about **7%** of the City's total municipal building electricity use, annually.

In 2019, the City hired an energy consultant to design and install solar PV systems for the Community and Senior Center, the Public Works building on Calle Magdalena, the Encinitas Public Library, and to add more solar panels at City Hall as part of a "paid-through-savings" program. In total, the project was anticipated to **increase the City's solar capacity to approximately 600 kW**, which would be able to supply **48%** of the City's total municipal electricity use. In 2020, this project was put on hold due to COVID-19 and other competing project financing needs, but is expected to be revisited as part of a future City budget cycle.



Section 3: Implementation Progress by CAP Strategy

Strategy 3: Water Efficiency



The Water Efficiency strategy of the City's Climate Action Plan (CAP) aims to reduce greenhouse gas (GHG) emissions by encouraging the community to conserve water in their homes and businesses. Clean water is an essential but limited resource that is expected to be strained even further through projected drought conditions in a changing climate. We can reduce GHGs and enhance our resilience by ensuring we all use water in the most efficient ways possible.

Implementation of water conservation measures is estimated to reduce GHG emissions by **712 metric tons of carbon dioxide equivalent (MTCO_{2e}) by 2020** and **795 MTCO_{2e} by 2030**.

Strategy 3: Water Efficiency

Conserve Water



COMPLETE

WE-1: Conduct Water Rate Studies and Implement Approved Water Rates

Reduce Water Use

The City's Climate Action Plan (CAP) set a goal of reducing water consumption in Encinitas by approximately **five gallons per capita per day (GPCD) by 2020** and another **2,400 acre-feet by 2030**. This equates to a reduction of **258 million gallons by 2020** and **672 million gallons by 2030** from the CAP's 2012 baseline. The energy used to treat and deliver water creates greenhouse gas (GHG) emissions. Reducing water use thereby reduces energy use.

Encinitans will need to cut water use by an average of *five gallons per day* to meet the CAP's water reduction goals. For context, standard shower heads use 2.5 gallons of water per minute and older toilets use as much as 6 gallons per flush. To reduce water use, Encinitans should consider decreasing outdoor irrigation, taking shorter showers, or investing in [WaterSense](#) products, like low-flow shower heads and toilets.

The City's two water districts—[San Dieguito Water District](#) (SDWD) and [Olivenhain Municipal Water District](#) (OMWD)—regularly conduct water rate studies and adjust rates based on the cost to supply water and the cost of operations. Both water districts also offer various public education programs to encourage water conservation efforts. For example, in 2021, SDWD partnered with other local water agencies, including OMWD, to provide community events such as residential and commercial landscape workshops. SDWD also facilitated youth educational outreach in collaboration with the San Diego County Office of Education.

Conserve Water



COMPLETE

WE-1: Conduct Water Rate Studies and Implement Approved Water Rates

Encinitas Water Use

In 2021, average water use by San Dieguito Water District (SDWD) customers was **129 gallons per capita per day (GPCD)**, which is a GPCD **reduction of 16%** from 2012. For Olivenhain Municipal Water District (OMWD) customers, the **average use was 128 GPCD**, which is a GPCD **reduction of 17% from 2012**. Note that OMWD's service district also encompasses areas outside of the City of Encinitas. Both districts have consistently met the 2020 goal established in the Climate Action Plan (CAP).

Our water use has varied over the years, but overall, Encinitas residents tend to use more than the average American. According to the United States Geological Survey (USGS), the national average water use was 82 GPCD in 2015. Encinitas' higher water use could be a result of Southern California's dry climate and the increased need for landscape irrigation. Outdoor irrigation accounts for over 50% of total residential water use in San Diego County. In 2021, SDWD offered two community WaterSmart Landscape workshops to educate customers about best landscape practices and changes.

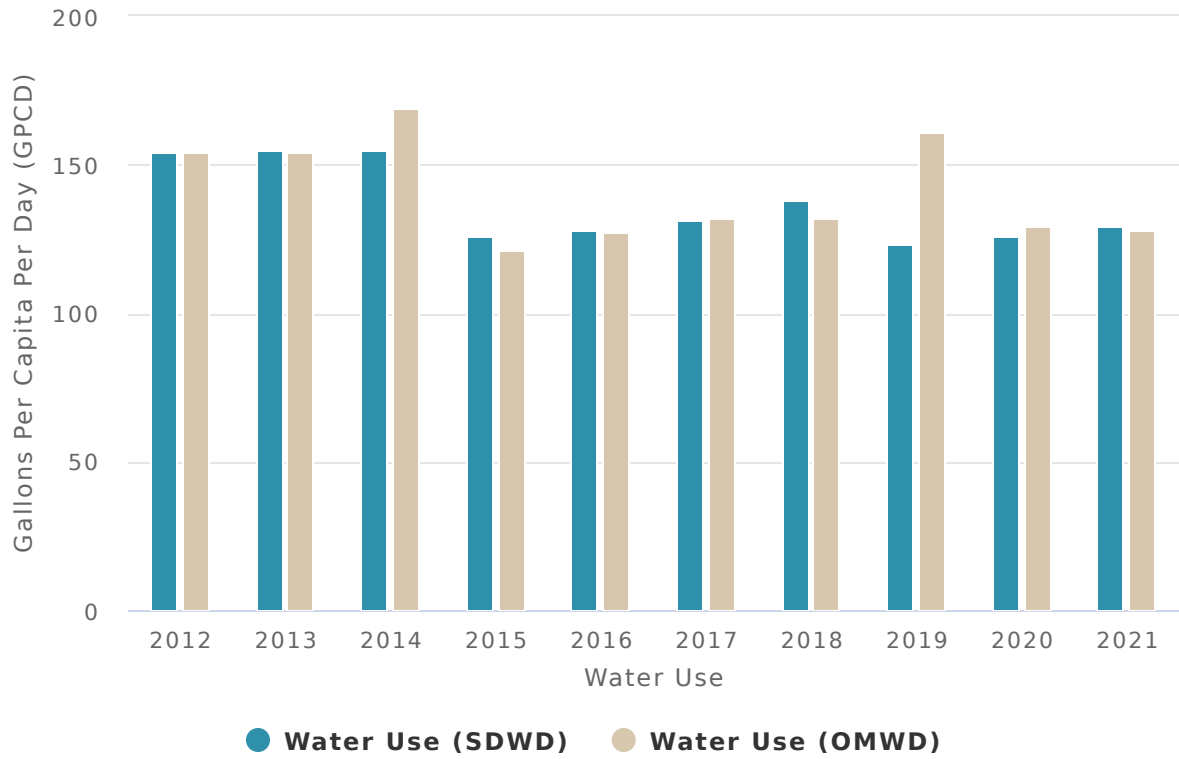
On October 20, 2021, SDWD declared a Level 1 Water Shortage. The shortage was declared in response to California Governor Gavin Newsom's October 19, 2021, [Proclamation of a State Emergency](#). The governor's proclamation included San Diego County and urged Californians to step up their water conservation efforts by voluntarily reducing water use by 15%. SDWD encouraged customers to take conservation actions such as minimizing inefficient landscape irrigation, halting washing paved surfaces, and only serving and refilling water to restaurant patrons upon request. As of June 2022, the Level 1 shortage is still in effect.

Note: GPCD values include all water rate classes (environment, agriculture, and urban) for SDWD and OMWD.

See next page for graph

Strategy 3: Water Efficiency

Conserve Water



Section 3: Implementation Progress by CAP Strategy

Strategy 4: Clean & Efficient Transportation



The Clean and Efficient Transportation strategy of the Climate Action Plan (CAP) leverages smart land use planning and other initiatives to encourage people to take transit, carpool, walk, or bike rather than drive alone.

This strategy also includes initiatives meant to boost the use of electric and alternative fueled vehicles when driving is necessary. Achieving greenhouse gas (GHG) emissions reductions from this strategy involves coordination with local and regional transportation and planning agencies, as well as residents and businesses. Implementation of the Clean and Efficient Transportation strategy is estimated to reduce the City's greenhouse gas (GHG) emissions **4,481 metric tons of carbon dioxide equivalent (MTCO_{2e}) by 2020** and **5,900 MTCO_{2e} by 2030**.

Reduce Vehicle Miles Traveled

Reduce VMT

Reduce Vehicle Miles Traveled

Vehicle miles traveled (VMT) data shows how much people are driving in a given timeframe. We can reduce our community's VMT by choosing transportation options like walking, biking, taking the bus, and carpooling to reduce the number of miles we drive alone. In 2012, the total VMT in Encinitas was approximately **1.4 million miles per day**, which equates to **538 million miles traveled** in that year. The City's Climate Action Plan (CAP) identified two actions to reduce VMT:

1. Complete and implement a citywide Active Transportation Plan (ATP)
2. Organize a local shuttle system



CET-1: Complete and Implement the Citywide Active Transportation Plan

Citywide Active Transportation Plan

The City's Climate Action Plan (CAP) established a goal of completing and implementing a citywide Active Transportation Plan (ATP). An ATP addresses local and regional bike and pedestrian travel by establishing proposed biking and walking facilities and improvements to multimodal connections to public transit. The City completed and adopted its ATP on August 22, 2018, meeting the 2020 goal. Implementation of cost-effective projects has and will continue to be initiated and major projects will be incorporated into the City's Capital Improvement Plan based on project priority.

After the ATP was completed, the CAP was updated in 2020 to include targets to reduce vehicle miles traveled (VMT), encourage mode shift, and cut greenhouse gas (GHG) emissions. Completion of the proposed bicycle and pedestrian projects established in the ATP would reduce emissions by an estimated **254 metric tons of carbon dioxide equivalent (MTCO_{2e})**.

In 2020, the City received funding through the [Caltrans Sustainable Communities Grant](#) to begin work on the development of the Modal Alternatives Plan (MAP), which directly implements the ATP. The City hosted two public workshops and coordinated a community survey to gain constituent feedback in 2021 and into 2022. The purpose of the MAP is to provide City staff with a comprehensive list of prioritized ATP bike and pedestrian projects that community members wish to see built. The final implementation plan is anticipated to be complete in early 2023.

Strategy 4: Clean & Efficient Transportation

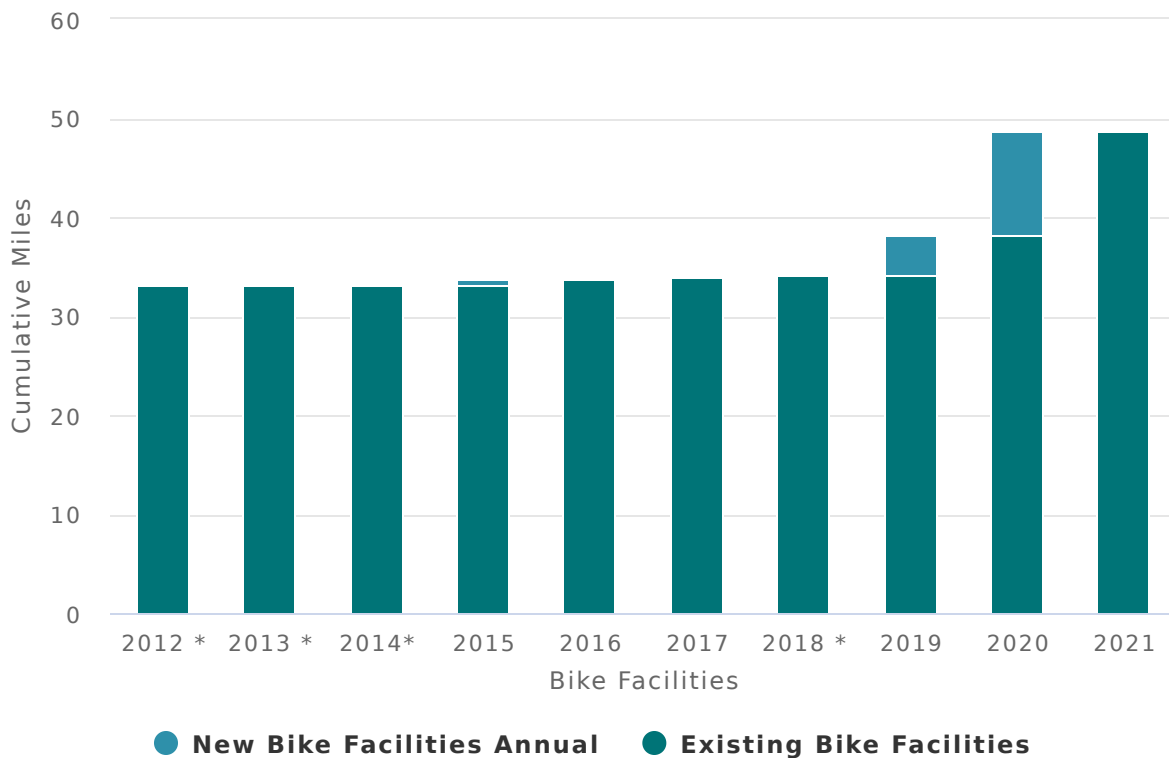
Reduce Vehicle Miles Traveled



CET-1: Complete and Implement the Citywide Active Transportation Plan Bike Facilities

Since 2012, the City has installed a total of **15.5 miles of bike lanes**. In 2021, the City installed **0 miles** of new bike lanes. However, in 2021, **5.6 miles of new bike** facilities were in design.

**Note: In 2012, 2013, 2014, and 2018, the City did not track data on bike facility improvements. Although not represented in this chart, bike facility improvement projects were still completed during these years. In 2019, it was reported that the City installed 4 miles of new bike facilities. However, that data has been reevaluated and adjusted to reflect the correct mileage of 4.1 miles.*



Strategy 4: Clean & Efficient Transportation

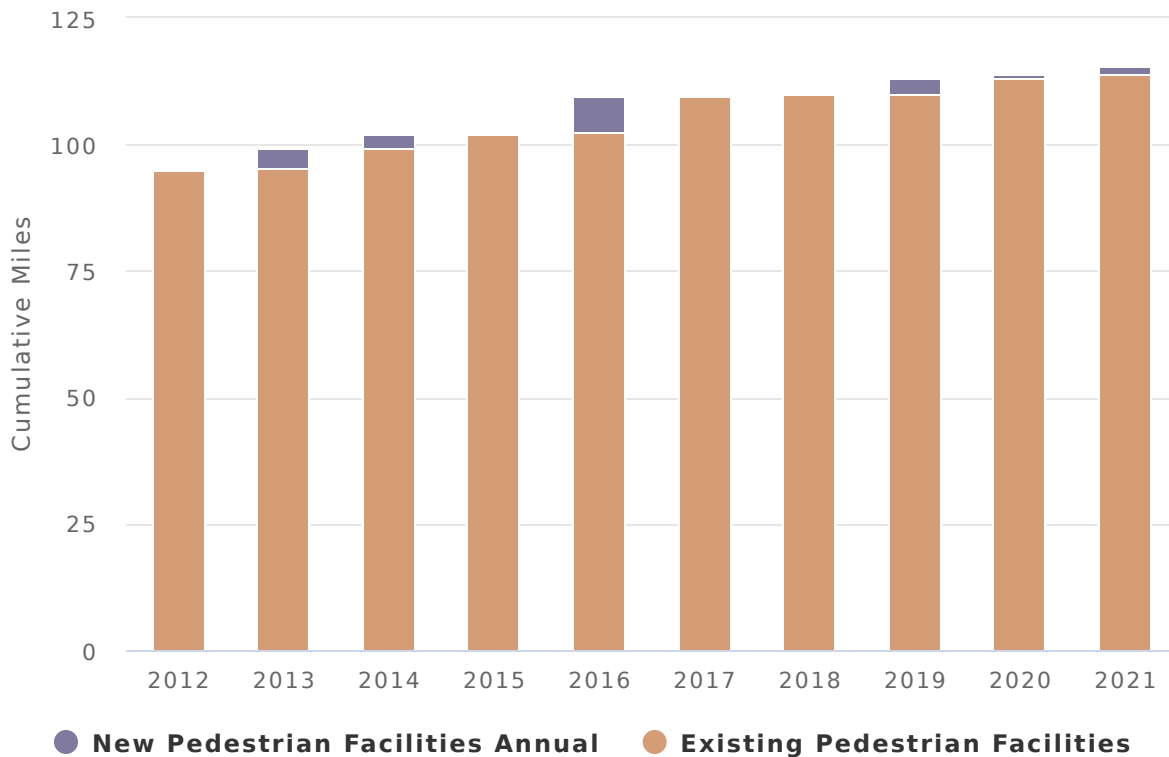
Reduce Vehicle Miles Traveled



CET-1: Complete and Implement the Citywide Active Transportation Plan Pedestrian Facilities

Since 2012, the City has installed a total of **20.37 miles of pedestrian facilities**. The City installed **1.27 miles of pedestrian facilities** including sidewalks, walkways, and crosswalks in 2021. One notable pedestrian project completed in 2021 included the replacement of the existing concrete sidewalk with ADA-compliant sidewalk at MacKinnon Avenue from Birmingham Drive to Interstate 5.

Note: In 2019 it was reported that the City installed 2.75 miles of new pedestrian facilities. However, that data has been reevaluated and adjusted to reflect the correct mileage of 3.2 miles.



Strategy 4: Clean & Efficient Transportation

Reduce Vehicle Miles Traveled



CET-2: Implement a Local Shuttle System

AWAITING
RESOURCES

Local Shuttle System

The City's Climate Action Plan (CAP) estimated that adding new local transit options could save 365,000 vehicle miles traveled (VMT) in 2020 and 875,000 VMT in 2030. This would result in an estimated greenhouse gas (GHG) emissions reduction of approximately **130 metric tons of carbon dioxide equivalent (MTCO_{2e}) and 178 MTCO_{2e}**, respectively. In 2014, the City completed a Transit Feasibility Study that recommended implementing new local transit routes to serve the Highway 101 corridor, education facilities in the city, and the Encinitas COASTER station. Since the adoption of the CAP, the City has been exploring potentially viable public transit options, including rideshare programs that may be served by microtransit electric vehicles. Microtransit is an on-demand transportation system that provides an alternative to traditional route-based transit like buses and trains. Microtransit includes more flexible transportation modes like mini-shuttles, neighborhood electric vehicles, and shared ride hailing technology like Uber and Lyft.

In 2020, the City actively collaborated with regional partners such as the San Diego Association of Governments (SANDAG), the North County Transit District (NCTD), and neighboring jurisdictions—including the cities of Solana Beach, Carlsbad, Del Mar, and Oceanside—to develop a sub-regional or local public transportation system related to this CAP measure. The partners assessed options including shared neighborhood electric vehicle (NEV) rideshare programs, such as the City of San Diego's Free Ride Everywhere Downtown program, and more traditional programs such as shuttle buses providing service to and from transit centers to employment centers. In 2020, the City also actively searched for grants and other outside funding to support this measures. The City will continue these collaboration and investigative efforts as CAP implementation continues.

Strategy 4: Clean & Efficient Transportation

Reduce Vehicle Miles Traveled

Supporting Measure: Implement Bikeshare Program BCycle Bikeshare

Related to CET-2: Implement a Local Shuttle System, from 2018 through 2022, the City worked to launch a local bikeshare program. In 2018, the City entered a Memorandum of Understanding with several North County coastal cities to develop a bikeshare program. In 2019, the City adopted [Ordinance 2019-02](#), which allowed for the formation and operation of a pilot bikeshare program by a City-selected vendor. Soon after, the City entered into a license agreement with a vendor to operate a pilot bikeshare program. Ultimately, due to COVID-19 and other circumstances, the vendor was unable to meet contract obligations and the agreement was terminated on September 21, 2020. However, in 2021, the City secured a partnership with an alternate vendor, [BCycle](#), one of the largest and longest standing bike share companies in the United States.

In coordination with the City, BCycle launched their pilot bikeshare program in early 2022. BCycle plans to install up to 500 docking stations for 250 electric bikes (e-bikes) throughout the City. An increase in access to an affordable and clean transportation alternative such as BCycle's e-bikes will encourage locals and tourists alike to avoid driving vehicles and opt for zero emission shared bicycle transportation instead. BCycle's bikeshare program will further aid the City in achieving its GHG reduction goals outlined in the CAP.



Reduce Fuel Use



CET-3: Improve Traffic Flow Reduce On-Road Fuel Use

Vehicle fuel usage is another way to measure how transportation impacts the climate. Reducing road congestion and improving traffic flow can lead to reductions in vehicle fuel use and greenhouse gas (GHG) emissions. The City's Climate Action Plan (CAP) identified two ways to reduce fuel use:

- Retiming traffic signals
- Installing roundabouts

Efficient signal timing and roundabouts reduce vehicle stops and starts, improve vehicle stacking time, and reduce idle time, which collectively contributes to reduced fuel use and reduced GHG emissions.

By 2020, the CAP aimed to retime 60 traffic signals and install three roundabouts. By 2030, the CAP proposes the installation of an additional four roundabouts to improve traffic flow. These actions would reduce GHG emissions by approximately **3,671 metric tons of carbon dioxide equivalent (MTCO_{2e}) in 2020** and **1,241 MTCO_{2e} in 2030**.

The construction of **one roundabout** at Eolus Avenue and Andrews Avenue was completed in October of 2021. Additionally, a roundabout on North Coast Highway 101 and El Portal Street was under construction as part of the first phase of the Leucadia Streetscape project in 2021. The City also retimed **six traffic signals** to improve traffic flow and pedestrian crossings in 2021.

The City broke ground on the [Leucadia Streetscape Project](#)—a multi-year and multi-stage project aimed to preserve and enhance the North Coast Highway 101 corridor in Leucadia—in early 2021. Construction for Segment 'A' North of Leucadia Streetscape, which occurred from Marcheta Steet to Basil Street, was completed in the summer of 2022. Improvements included the El Portal roundabout, new sidewalks, new crosswalks, pedestrian trails, and green bike lanes down to Encinitas Boulevard. This projected supports CAP measure CET-3 and measure CET-1.

Since the goals for on-road fuel use were established in the CAP in 2018, the City has shifted its focus to installing mobility infrastructure to promote the use of active transportation and reduce on-road fuel use, rather than adjusting traffic signal timing. Although the 2020 goals for traffic signal retiming have not been met and installation of roundabouts are still in process, the continued effort and commitment to these areas represents the City's interest in prioritizing mobility improvements throughout the City to reduce GHG emissions.

Increase Use of Alternative Fuels

Increase Use of Alternative Fuels

Use Electric Vehicles

Vehicles that run on electricity produce fewer emissions than vehicles that run on gasoline or diesel. By supporting a network of electric vehicle charging stations (EVCS), the City can help facilitate the switch to vehicles that run on electricity. As our electricity supply becomes cleaner, so will electric vehicles. The City's Climate Action Plan (CAP) identified two actions to promote the adoption of electric vehicles:

1. Require new single-family homes to be "EV Ready" and new multi-family developments to include EV charging stations
2. Require new and remodeled commercial developments to install EV charging stations



Increase Use of Alternative Fuels



COMPLETE

CET-4: Require Residential Electric Vehicle (EV) Charging Stations

Residential EV Charging Stations

To increase electric vehicle (EV) adoption by residents, the City's Climate Action Plan (CAP) proposed enacting local building codes that would require new single-family homes to install electrical equipment capable of handling an EV charger, making the home "EV Ready." New multifamily homes are also required to install EV charging stations (EVCS) at 15% of the parking spaces in the complex. In November 2019, City Council adopted an ordinance enacting these new regulations, effective January 1, 2020. As a result of these new codes, the CAP estimated that **65 EVCS will be installed by 2020** and **370 EVCS will be installed by 2030** at new residential developments. Meeting these goals will decrease greenhouse gas (GHG) emissions by approximately **185 metric tons of carbon dioxide equivalent (MTCO_{2e}) by 2020** and **260 MTCO_{2e} by 2030**.

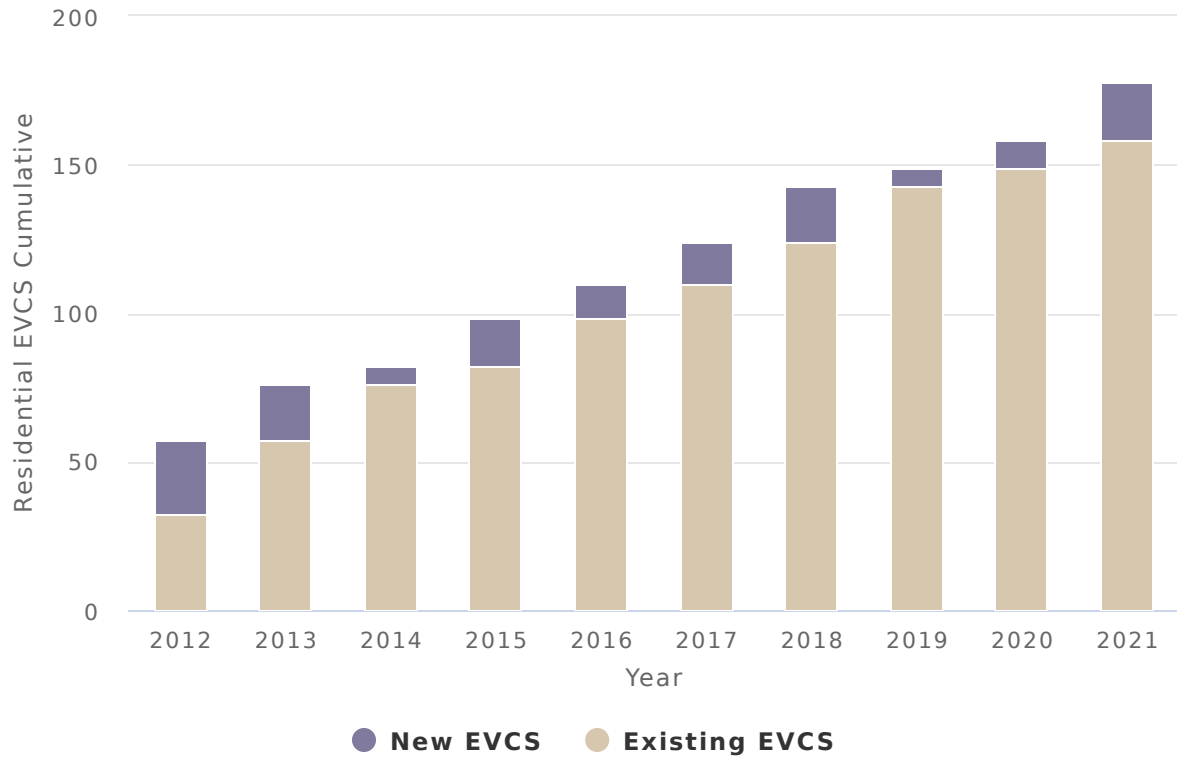
According to the City's building permit data, **three single-family residential buildings** were issued new construction permits in 2020. Thus, the electric vehicle ordinance triggered three charging station and related electrical installations. Irrespective of the new EVCS ordinance, in 2021, **17 EVCS** were installed at single family residences voluntarily, according to building permit records.

In total, **158 EVCS were permitted and installed** at residential properties between 2012 to 2021. The City also assumes that many more EVCS have been installed than what has been reported according to the City's permit records, as anecdotally, it is known that many EV owners install home charging stations without seeking permits from the City or directly plug into existing 110-volt wall sockets if their EV charging needs are not significant.

See next page for graph

Strategy 4: Clean & Efficient Transportation

Increase Use of Alternative Fuels



Increase Use of Alternative Fuels



COMPLETE

CET-5: Require Commercial Electric Vehicle (EV) Charging Stations

Commercial EV Charging Stations

To increase electric vehicle (EV) adoption by residents, the City's Climate Action Plan (CAP) proposed enacting local building codes requiring the installation of EV charging stations at **8% of the total number of parking spaces** at commercial developments. This new requirement would apply to all new commercial developments (including the commercial portion of mixed-use projects) and commercial building modifications, alterations, and additions that are 10,000 square feet or greater. In November 2019, City Council adopted an ordinance enacting these new regulations, effective January 1, 2020. As a result of these new codes, the CAP estimated that **150 electric vehicle charging stations (EVCS) will be installed by 2020** and **490 EVCS will be installed by 2030** at new commercial developments. Meeting these goals will decrease greenhouse gas (GHG) emissions by approximately **440 metric tons of carbon dioxide equivalent (MTCO_{2e}) by 2020** and **3,582 MTCO_{2e} by 2030**.

In 2021, no commercial building projects triggered the new local EVCS code requirements. However, as of September of 2022, the **total number of publicly available charging stations in Encinitas was 14**. This number was determined based on information available from [Plugshare](#), [ChargeHub](#), and [energy.gov](#), in addition to local knowledge of City staff. It is important to note that not all commercial charging stations may be available 24/7 and that some require users to be customers for that particular charging network or for the vehicle being charged to have the appropriate charging plug. For example, the EV chargers located at BMW Encinitas may only be used by BMW vehicle owners. Drivers can visit [PlugShare](#) to see a station location map and to get more information about each publicly available charging station located in Encinitas.

While the ordinance is in place and being enforced, it is evident that this new requirement may not result in the number of EVCS anticipated by the CAP. To supplement this ordinance, the City is in the process of developing an Electric Vehicle Charging Station Master Plan that will identify ideal locations for charging stations and outline additional measures the City can do to implement to promote EVCS installation at commercial locations. The City is also seeking grants, funding, and other opportunities to support EVCS installation. For example, the City coordinated the installation of six public DC Fast charging stations in the lower lot of the Civic Center at Vulcan Avenue and E Street. This project was formerly managed by a private entity, but was taken over by the City in 2021. These charging stations were installed and became available for public use in the spring of 2022.

Transition to Zero Emission Municipal Fleet



IN
PROGRESS

MCET-1: Transition to Zero Emission Municipal Fleet

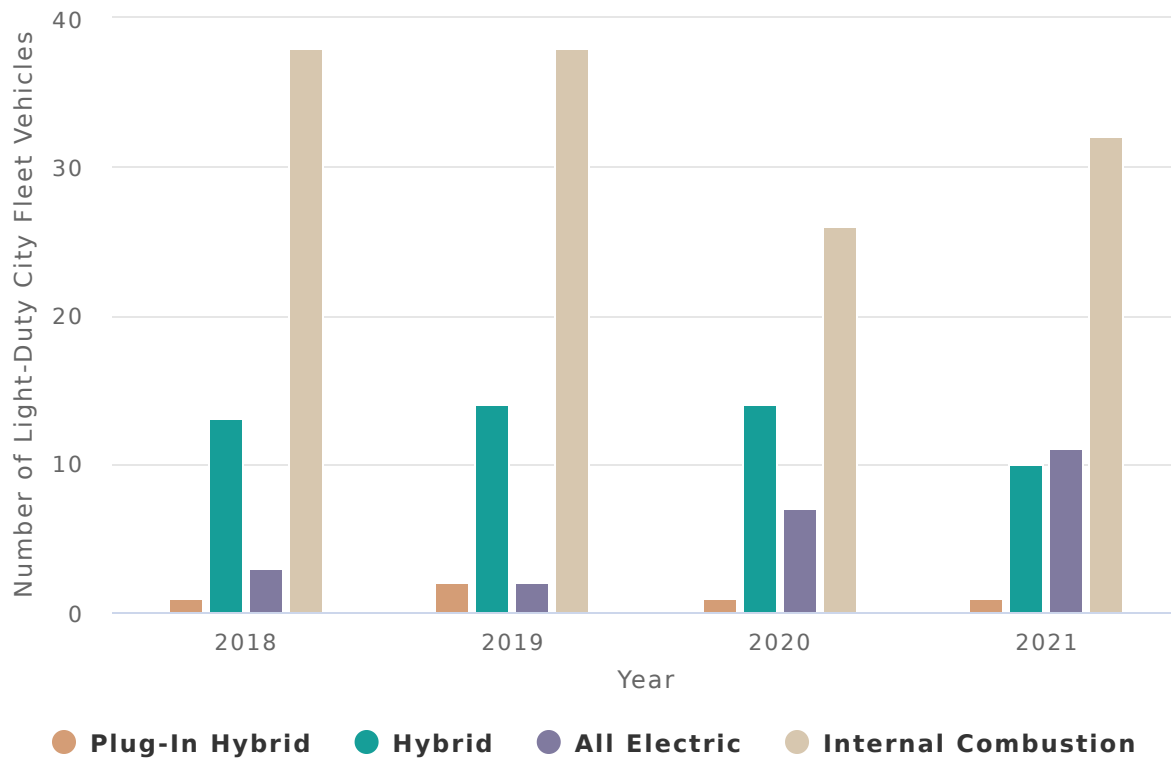
Transition to Zero Emission Municipal Fleet

The City's Climate Action Plan (CAP) set a goal of transitioning the City's municipal fleet to "zero emission" or alternative fuels by 2030. Examples of zero emission vehicles (ZEVs) include battery electric vehicles and fuel cell vehicles. Other low-emission vehicles like hybrids, plug-in hybrids, and compressed natural gas vehicles also contribute to reduced greenhouse gas (GHG) emissions. In February 2018, the City drafted a ZEV Fleet Conversion Plan to achieve the CAP goal. According to the plan, the City will convert all light-duty vehicles to electric vehicles and all heavy-duty vehicles to renewable diesel. The City's CAP estimated that this action would reduce fleet fuel use by **10% by 2020** and **30% by 2030**, which reduces GHG emissions by **55 metric tons of carbon dioxide equivalent (MTCO_{2e})** and **384 MTCO_{2e}**, respectively.

In 2021, the City's municipal fleet included **11 battery-electric vehicles, 1 plug-in hybrids, and 10 hybrid vehicles**, with **22 clean fleet vehicles** in total. EVs make up **41% of the light duty fleet**—the portion of the fleet that commonly have EV alternatives available in the market. In accordance with the ZEV Fleet Conversion Plan, City vehicles are evaluated annually and vehicle replacements are budgeted and scheduled as needed. Whenever possible, EVs are selected as replacement vehicles in the light-duty class. In 2018, to support the transition to electric vehicles, the City installed **10 EV charging stations** at the Public Works Yard through San Diego Gas and Electric's (SDGE) ["Power Your Drive" program](#). More charging stations are planned for installation at City Hall, the Community and Senior Center, and the library. In 2022, Five Level 2 charging stations were in the process of being installed as part of the City Hall renovation project. This project is anticipated to be completed in late 2022 at which time the charging stations will be available for use by the public, City employees and the City's fleet vehicles.

See next page for graph

Transition to Zero Emission Municipal Fleet

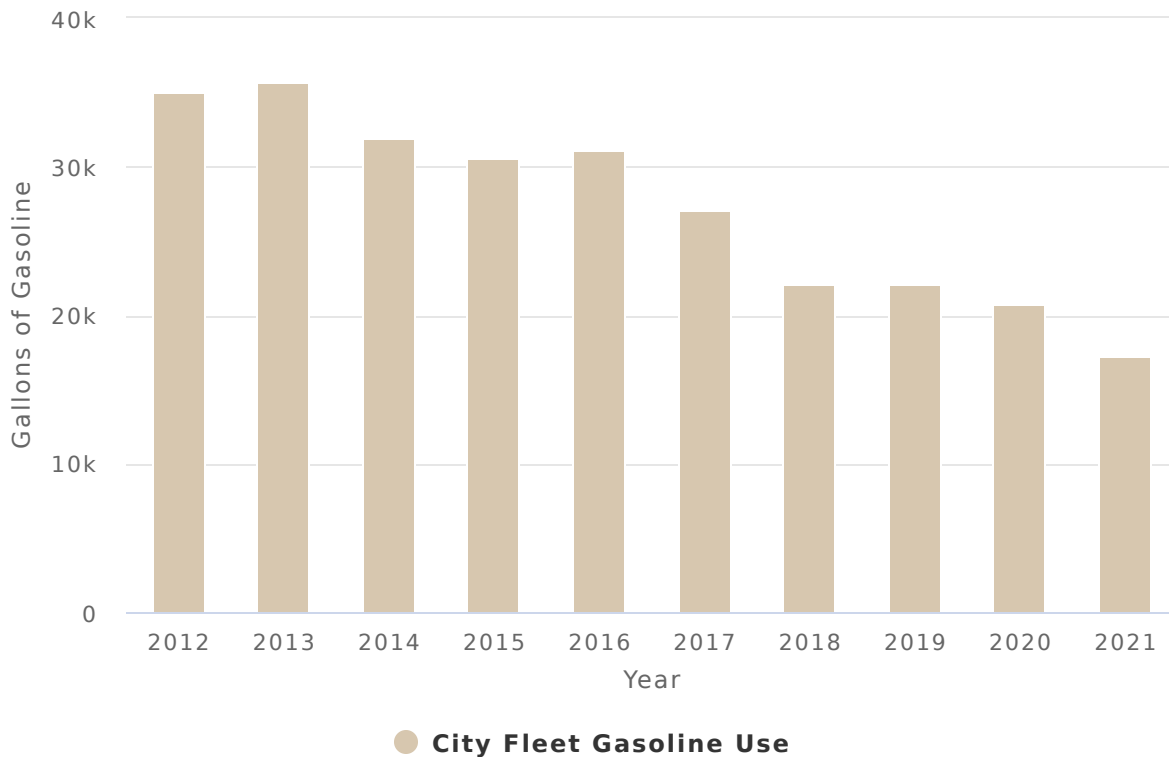


Transition to Zero Emission Municipal Fleet



MCET-1: Transition to Zero Emission Municipal Fleet Purchasing EVs and Reducing Gasoline Use

Since 2012, due to the transition to EVs and right-sizing the fleet, total gasoline use by City vehicles has **decreased by 51%**, far exceeding the 2020 goal and making great strides towards a zero-emission light duty fleet by 2030. In 2021, the City continued receiving deliveries of renewable diesel fuel for municipal fleet use. Renewable diesel is made from products that would otherwise be wasted, such as natural fats, vegetable oils, and greases, as opposed to conventional diesel which is derived from extracted petroleum. Renewable diesel is chemically like conventional diesel but generates fewer emissions and other harmful substances when burned.



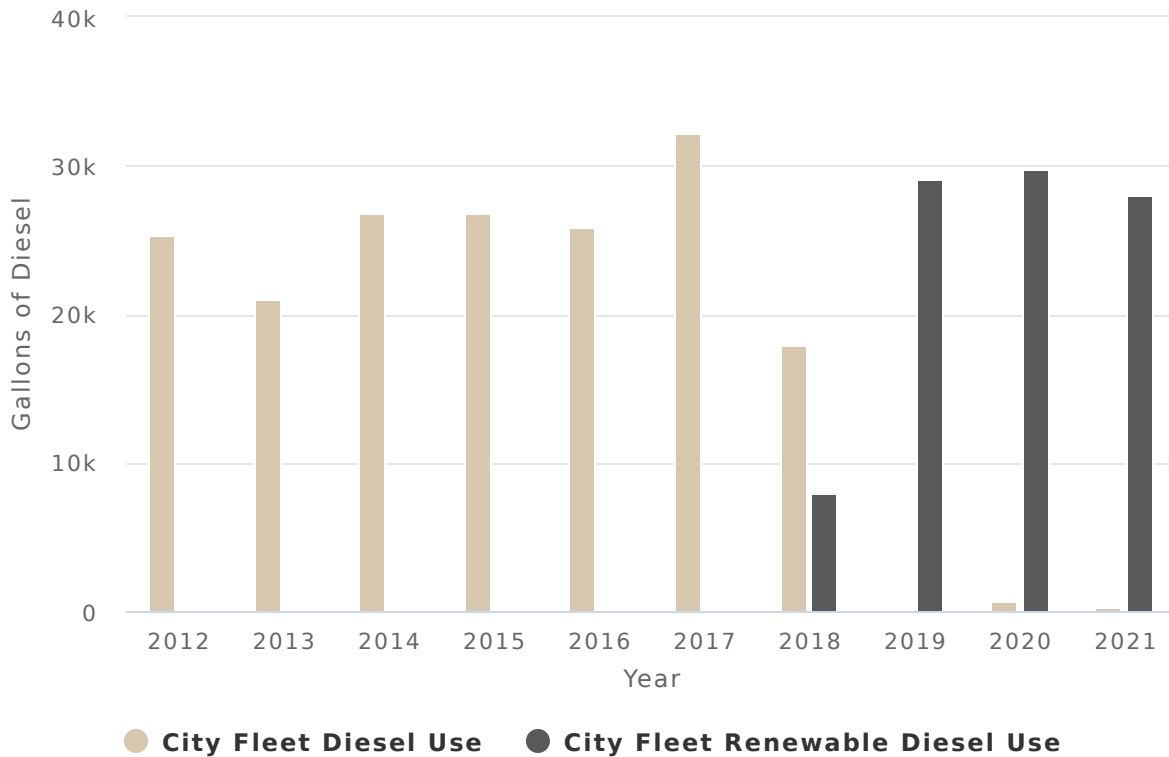
Transition to Zero Emission Municipal Fleet



IN
PROGRESS

MCET-1: Transition to Zero Emission Municipal Fleet The Switch to Renewable Diesel

All City fleet diesel-fueled vehicles—including pickups, dump trucks, fire trucks, and stationary generators—are now fueled by renewable diesel. The City tracks diesel use and, since 2012, there has been a **99% decrease in use of conventional diesel fuel**, mainly due to an increase in use of renewable diesel. The City’s overall **renewable diesel consumption has increased by 255%** since 2012. The switch to renewable diesel in 2018 enabled the City to far exceed both the 2020 and 2030 CAP goals for renewable diesel several years early.



AWAITING
RESOURCES

MCET-2: Adopt a Municipal Employee Telecommute Policy Municipal Telecommute Policy

When the City’s CAP was updated in 2020, this measure was added, making it the CAP’s 20th measure. The future policy will facilitate telecommuting by City employees based on job function and management approval. The implementation of this measure will assist in decreasing the City’s overall greenhouse gas (GHG) emissions by reducing the number of vehicle miles traveled by City employees. Tracking progress toward this target will begin when the policy becomes effective.

Section 3: Implementation Progress by CAP Strategy

Strategy 5: Off-Road Equipment



The Off-Road Equipment strategy of the City's Climate Action Plan (CAP) aims to cut back on emissions by prohibiting the use of gas-powered two-stroke leaf blowers. Transitioning away from fossil fuel powered landscape equipment will decrease greenhouse gas (GHG) emissions, reduce noise from yard care activities, reduce air particulates and debris, and prevent many other harmful emissions from polluting the air.

Implementation of this strategy is estimated to reduce the City's GHG emissions by **128 metric tons of carbon dioxide equivalent (MTCO₂e) by 2020** and **142 MTCO₂e by 2030**.

Strategy 5: Off-Road Equipment

Leaf Blower Use



COMPLETE

OR-1: Adopt a Leaf Blower Ordinance to Limit Use of 2-Stroke Leaf Blowers

Leaf Blower Emissions

The Off-Road Equipment strategy of the City's Climate Action Plan (CAP) aims to cut back on emissions by prohibiting the use of gas-powered two-stroke leaf blowers. Transitioning away from fossil fuel powered landscape equipment will decrease greenhouse gas (GHG) emissions, reduce noise from yard care activities, reduce air particulates and debris, and prevent many other harmful emissions from polluting the air.

Implementation of this strategy is estimated to reduce the City's greenhouse gas emissions by **128 metric tons of carbon dioxide equivalent (MTCO_{2e}) by 2020** and **142 MTCO_{2e} by 2030**.



**GAS-POWERED LEAF BLOWERS
are PROHIBITED in Encinitas.**

Per Encinitas Municipal Code Chapter 11.28

Clearing the air...

This restriction applies to *any person, including business owners, commercial operators, and residents!*

**Electric or battery-powered leaf blowers
ARE allowed and may only be operated:**

Monday - Saturday: 8 AM - 6 PM
Sunday: 12- 5 PM



Strategy 5: Off-Road Equipment

Leaf Blower Use



COMPLETE

OR-1: Adopt a Leaf Blower Ordinance to Limit Use of 2-Stroke Leaf Blowers

Clean Up Alternatives

The City's Climate Action Plan (CAP) set a goal to reduce greenhouse gas (GHG) emissions by phasing out the use of gas-powered two-stroke engine leaf blowers throughout the City of Encinitas. According to the California Air Resources Board, two-stroke leaf blowers are among the top four most used types of off-road equipment.

The CAP estimated that **20%** of the emissions from lawn and garden equipment could be attributed to two-stroke leaf blowers. In addition to GHG emissions, two-stroke engine leaf blowers also emit several other harmful air pollutants. The CAP estimated that phasing out the use of gas-powered two-stroke leaf blowers would reduce emissions by approximately **128 carbon dioxide equivalent (MTCO_{2e}) by 2020** and **142 MTCO_{2e} by 2030**.

Alternatives to gas-powered leaf blowers include electric and battery powered leaf blowers, human-powered equipment, and preventing the need for equipment through smart landscaping and planning. These alternative options not only generate less noise, but also produce little to no harmful air pollutants.

In August 2019, City Council adopted [Ordinance 2019-06](#), which prohibits the use or operation of any leaf blower powered by a gasoline combustion engine (two-stroke or four-stroke) within City limits. Additionally, the ordinance regulates the allowed hours of operation of all leaf blowers and prohibits leaf blowers from depositing waste (leaves, debris, etc.) onto a neighboring property, street, sidewalk, gutter, or storm drain. The ordinance went into full effect on January 20, 2020. Any violations of this ordinance may be reported by submitting a Code Enforcement Complaint using this online [form](#) or the MyEncinitas app which can be downloaded to your phone [here](#).

Strategy 6: Zero Waste



The Zero Waste strategy in the City's Climate Action Plan (CAP) aims to reduce the amount of waste sent to local landfills. Methane—a greenhouse gas (GHG) that is about 25 times more potent than carbon dioxide (CO₂)—is emitted when waste (primarily organic material) decomposes in landfills. Successful implementation of this strategy depends on the expansion of recycling and composting programs, in addition to participation from City residents and businesses to reduce waste and increase diversion.

Implementation of the Zero Waste strategy is estimated to reduce the City's GHG emissions by **2,830 metric tons of carbon dioxide equivalent (MTCO₂e) by 2020** and **9,216 MTCO₂e by 2030**. Explore the sections below to learn about the City's planned and ongoing actions to achieve these goals.

Strategy 6: Zero Waste

Divert Solid Waste



COMPLETE

ZW-1: Implement a Zero Waste Program

Divert Solid Waste

The City's Climate Action Plan (CAP) plans to reduce greenhouse gas (GHG) emissions from landfills by implementing a Zero Waste Program that promotes waste prevention, recycling, and diversion of organic waste. This Program aims to **divert 65% of Encinitas' solid waste from the landfill by 2020** and **80% of total solid waste by 2030**. This is equivalent to reducing our waste generation rates to **5.3 pounds per person per day (lbs/person/day) by 2020** and **3 lbs/person/day by 2030**. If these goals are achieved, the CAP estimated this would result in a greenhouse gas (GHG) reduction of approximately **2,830 metric tons of carbon dioxide equivalent (MTCO_{2e})** and **9,216 MTCO_{2e}**, respectively.

The City works closely with [EDCO](#), our contracted waste hauler, to execute the CAP's goals. EDCO leverages green technologies, such as a state-of-the-art Resource Recovery Facility, that properly sorts the City's co-mingled recycling waste. In 2021, EDCO began collecting and processing food waste for recycling. This was an important step towards diverting waste away from landfills.

To learn more about the City's Zero Waste programs, [visit this website](#).



COMPLETE

ZW-1: Implement a Zero Waste Program

Balloon Ordinance

On May 13, 2021, the City's Environmental Commission passed a recommendation to City Council to adopt an ordinance that would ban the sale, use, and distribution of lighter-than-air or helium balloons within City limits. City Council unanimously approved the ordinance ([Ordinance 2022-01](#)) in January 2022. The ordinance not only protects wildlife, but also reduces the amount of litter and waste generated within the City.

Strategy 6: Zero Waste

Divert Solid Waste

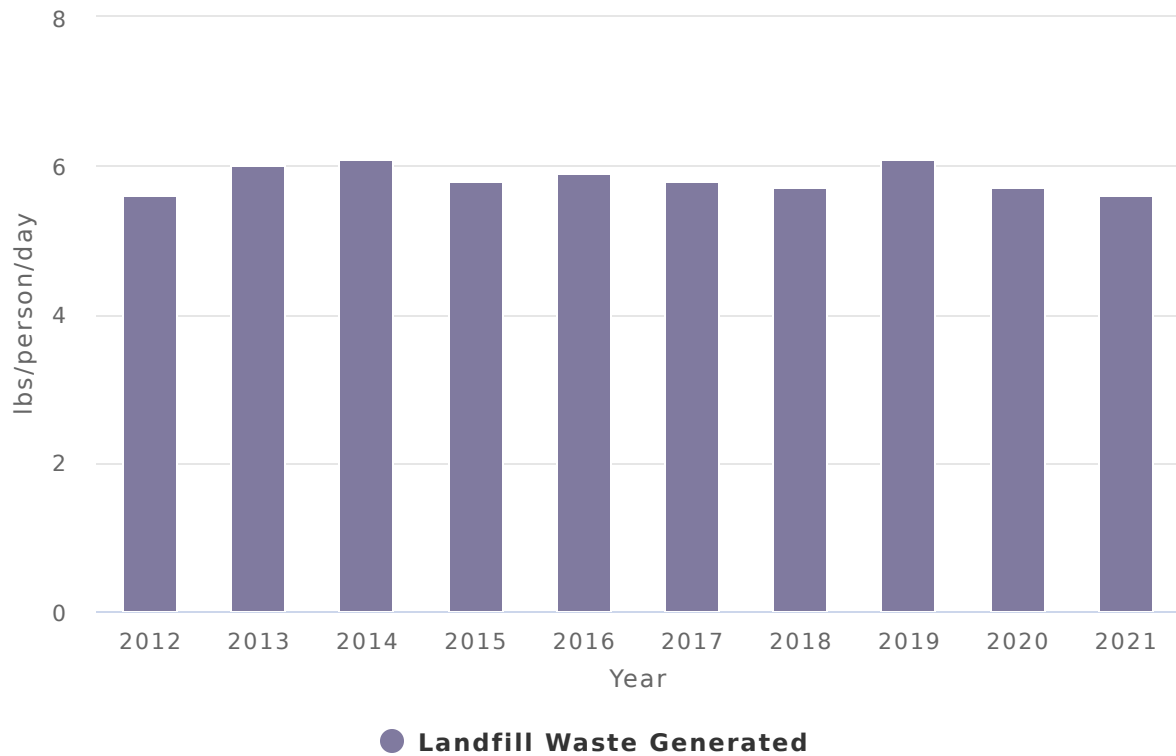


COMPLETE

ZW-1: Implement a Zero Waste Program

Waste Reduction

According to CalRecycle, the amount of waste generated by the City of Encinitas has fluctuated between 5.6 and 6.1 lbs/person/day since 2012. In 2021, the average Encinitan generated **5.6 lbs/person/day**.



Divert Solid Waste



COMPLETE

ZW-1: Implement a Zero Waste Program

Organic (Green Waste and Food Waste) Recycling

In early 2021, EDCO completed construction of an anaerobic digestion (AD) facility to serve the San Diego region, including Encinitas residents. The AD facility uses microorganisms to break down material into digestate and renewable natural gas (RNG) in an air-tight environment that eliminates the release of methane. Digestate is rich in nutrients and can be further processed into fertilizer for crops. RNG can also be used to fuel trucks or for energy, which displaces the need for fossil fuels.

Curbside organics recycling became available to Encinitas residents in single-family homes in accordance with Senate Bill (SB) 1383 in June of 2021. [SB 1383](#) requires all California residents and businesses to recycle organics beginning January 1, 2022. Food scraps and green waste generated in Encinitas are now collected and processed at EDCO's AD facility. Commercial enrollment—including multifamily properties and businesses—for organics collection began in the fall of 2021 and 100% participation was expected by July 2022.

To comply with SB 1383, the City also updated its “Solid Waste and Construction and Demolition Debris Recycling” ordinances in 2021 ([Ordinance 2022-16](#) and [2022-17](#)), which includes a 5% increase in the percentage of construction debris that must be recycled. The ordinances became effective on January 1, 2022. Additionally, the City introduced a new ordinance in 2021, “Mandatory Organics Recycling and Edible Food Recovery” ([Ordinance 2022-15](#)), which also became effective January 1, 2022. Ordinance 2022-15 not only requires all generators to recycle organics, but also mandates that some edible food generators donate any leftover food products to local organizations.

Divert Solid Waste



COMPLETE

ZW-1: Implement a Zero Waste Program

Construction Waste Recycling and Edible Food Recovery

To comply with [SB 1383](#), the City also updated its “Solid Waste and Construction and Demolition Debris Recycling” ordinances in 2021 ([Ordinance 2022-16](#) and [2022-17](#)). These include a 5% increase in the percentage of construction debris that must be recycled. The ordinances became effective on January 1, 2022.

Additionally, the City introduced a new ordinance in 2021, “Mandatory Organics Recycling and Edible Food Recovery” ([Ordinance 2022-15](#)). Effective January 1, 2022, Ordinance 2022-15 not only requires all generators to recycle organics, but also mandates that some edible food generators donate any leftover food products to local organizations.



COMPLETE

ZW-1: Implement a Zero Waste Program

Education and Outreach

The City supports at-home management of organic waste through educational workshops—such as an annual Zero Waste Fair—and offers subsidies to purchase compost and worm bins. The City frequently partners with local organizations such as the [Solana Center for Environmental Innovation](#), [I Love a Clean San Diego](#), [BCK Programs](#), and several Encinitas schools for various outreach events and programming.

Over the years, through periodic audits and observation, city staff has found that recyclable material can sometimes be misplaced in the trash and vice-versa. In 2021, to help improve and promote the City’s blue bin recycling program, the City contracted the Solana Center to create a [how-to video](#) and [resource packet](#) for multi-family home property managers to share with their residents. The goal of this initiative was to improve residents’ recycling habits and achieve a better understanding of how different types of materials should be disposed of.

Section 3: Implementation Progress by CAP Strategy

Strategy 7: Carbon Sequestration



The Carbon Sequestration strategy in the City's Climate Action Plan (CAP) aims to facilitate the process of removing carbon dioxide (CO₂), a greenhouse gas (GHG), from the atmosphere through natural or artificial means. This is referred to as carbon sequestration. Trees, algae, and other vegetation are referred to as "carbon sinks" because they naturally take in atmospheric CO₂ through their respiration processes. An important way our community can improve its carbon sequestration potential is by increasing the number of trees planted and by maintaining a healthy urban tree canopy.

Implementation of the Carbon Sequestration strategy is estimated to reduce the City's GHG emissions by **5 metric tons of carbon dioxide equivalent (MTCO₂e) by 2020** and **66 MTCO₂e by 2030**.

Strategy 7: Carbon Sequestration

Urban Forestry



COMPLETE

CS-1: Develop and Implement an Urban Tree Planting Program Urban Forest Management Program

The City of Encinitas actively maintains a thriving urban forest of City-owned and maintained trees. City trees include trees in the public right of way, typically along streets and sidewalks, and trees within City parks. New trees are continually added to the City's urban forest and established City trees are maintained regularly. In addition to carbon sequestration, trees provide many benefits to our community such as improving water quality, reducing stormwater runoff, regulating temperature, reducing energy use in buildings, cleaning the air, enhancing property values, supporting human health, and providing wildlife habitat.

Measure CS-1 directs the City to develop an Urban Tree Planting Program, which includes standards to right-size trees and minimize pruning and irrigation needs, in addition to promoting increased carbon sequestration by trees within the community. Through the Urban Tree Planting Program, the City's Climate Action Plan (CAP) set a goal of planting **150 net new City trees by 2020** and **100 net new City trees** annually after that, for a total of **1,150 net new trees planted by 2030**. The City achieved its 2020 goal five years ahead of schedule in 2015.

We recognize the City's urban forest as one of our greatest natural resources. City leaders and staff have made our trees a priority and they are dedicated to the continued planting, protection, and maintenance of Encinitas' urban forest. The departments of Public Works and Parks and Recreation have an established [Urban Forest Management Program](#) (UFMP) which closely follows the City's UFMP Administrative Manual and incorporates the City's Urban Tree Planting Program. In 2018, the City hired a City Arborist to support the implementation of the UFMP and oversee the care of the City's trees.

Strategy 7: Carbon Sequestration

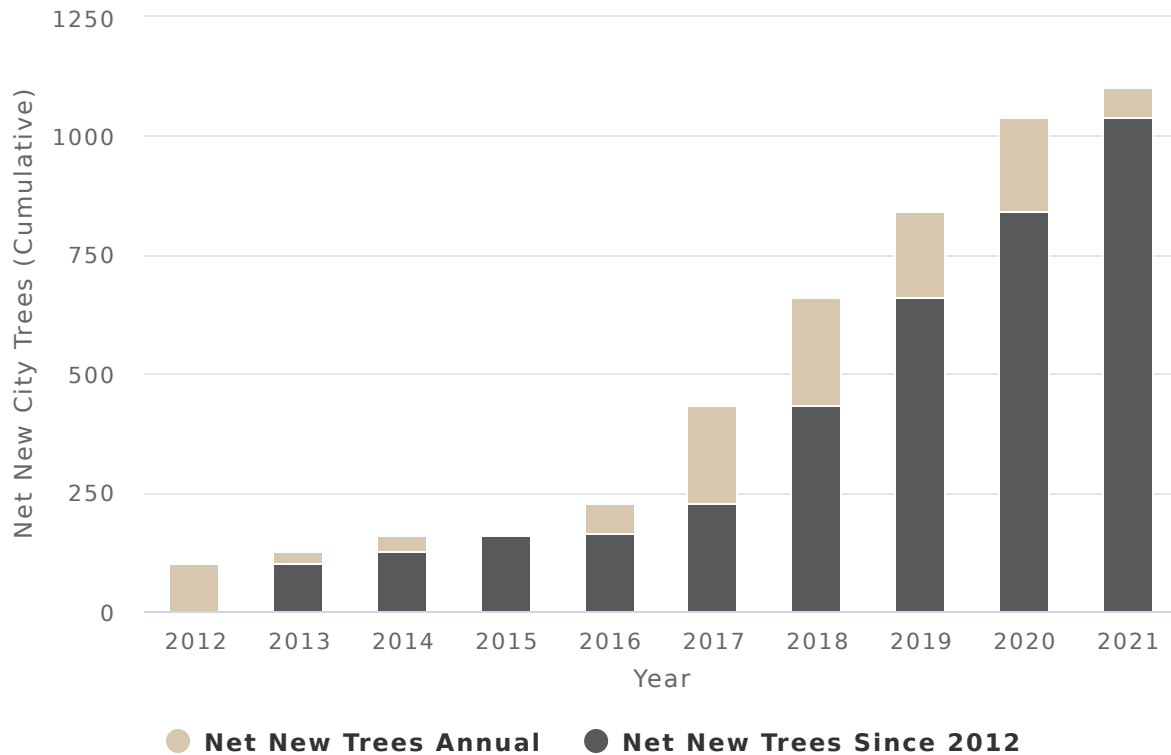
Urban Forestry



CS-1: Develop and Implement an Urban Tree Planting Program Urban Tree Canopy

City trees include trees in the public right of way, typically along streets and sidewalks, and trees growing in City parks. The City's Climate Action Plan (CAP) set a goal of planting **150 net new City tree by 2020** and **100 net new City trees annually** after that, for a total of **1,150 net new trees planted by 2030**.

In 2021, the City planted a total of **62 new trees**. Between 2012 and 2021, the City planted a total of **1,039 new trees**, averaging about **110 new trees planted per year**. At the end of 2021, the City's urban forest included **21,566 City trees** in the public right of way and in City parks.



Section 4

Social Equity & Green Jobs



To successfully implement the Climate Action Plan (CAP), economic and equity factors must be taken into consideration. Low-income, minority, and other communities of concern are expected to be most impacted by future climate changes. Therefore, the City's CAP includes the consideration of socially equitable climate adaptation, equitable implementation of mitigation measures, and a focus on green jobs.

Social Equity & Green Jobs

Social Equity Equity & the CAP

The impacts of climate change will affect members of the community in different ways and to varying degrees. Addressing equity in the implementation of greenhouse gas (GHG) reducing measures ensures the just distribution of the benefits of climate adaptation and mitigation efforts. Social equity is a broad subject that reaches beyond the capacity of the Climate Action Plan (CAP); therefore, the City continues to address equity in a holistic manner through the City's General Plan and across multiple departments. The following section summarizes the City's progress on addressing social equity through various well-established programs, in addition to new programs and initiatives.

Social Equity Equitable Energy

In 2019, City Council authorized the formation of a Community Choice Energy program, called [San Diego Community Power](#) (SDCP) along with four other member cities: San Diego, Chula Vista, Imperial Beach, and La Mesa. The new agency offers advantages over the incumbent utility, including less carbon intensive energy procured for customers over time at competitive prices and oversight by local jurisdictions instead of private shareholders. SDCEP also has the option to reinvest profits into expanding carbon-free service options and customer programs. In 2020, SDCEP established a Community Advisory Committee (CAC) to advise the SDCEP Board of Directors. Committee members are representatives of SDCEP's five member cities and its diverse citizenry. The CAC's Fiscal Year 2021-22 work plan included the following focus areas which promote social equity: prioritization of equitable outcomes, development of an equitable and inclusive workforce policy, and providing SDCEP Board with input on community outreach as it relates to electricity rates for disadvantaged communities and community solar.

Social Equity & Green Jobs

Equitable Housing Section 8 and Block Grants

The City continues to address equity by planning for future housing and through existing housing programs. Ongoing programs include the City's Section 8 Housing Program and Community Development Block Grant Program. Since 1995 the City of Encinitas Housing Authority (EHA) has operated a [Section 8 Rental Assistance Program](#). The Section 8 Program offers financial rental assistance to low-income Encinitas households through a voucher-based program. The program is very popular with an ongoing wait list. Additionally, the City has managed a [Community Development Block Grant](#) (CDBG) program since 2011. The CDBG program facilitates the administration of federal funding for housing related projects to create a suitable living environment, to provide decent housing, or to create economic opportunities for low-to-moderate-income households and communities.

Equitable Housing Housing Element

The City's [Housing Element](#) identifies existing and projected housing needs in order to preserve, improve and develop housing for all economic segments of the community, in addition to demonstrating how the City will accommodate its fair share of regional housing.

In 2021, the City initiated a review of the barriers to racial and ethnic equity in the City as part of its 6th Cycle Housing Element Program 3H which calls for an equity study of any potential discriminatory or inequitable, housing-related policies or practices. The study focused on examining existing policies and practices employed by the City and private actors in Encinitas' housing market, such as land-use policies, and lending and rental practices. The study conducted stakeholder engagement, city and regional data analysis, and community forums for residents and local businesses to engage in conversations about equity. The study's findings will compare national best practices and emerging research to address issues found. The study's recommendations will provide a guiding framework for the City of Encinitas to consider in addressing the drivers of racial and ethnic inequality in housing. The study is anticipated to be complete in late 2022.

Social Equity & Green Jobs

Green Jobs

Economic Development and Green Jobs

The City fosters green jobs in our local community and around the region through the implementation of the Climate Action Plan (CAP) and through the implementation of other various programs and partnerships.

Development and completion of various of the CAP measures will create a need for more green jobs in Encinitas. For example, once the new building ordinances are in place establishing requirements for energy efficiency and renewable energy, new workers will be needed in the development and construction industry who have technical knowledge and skills in solar photovoltaic systems, electric vehicles, and energy efficiency. Similarly, the City's [Water Efficient Landscape Regulations](#) (EMC 23.26) and the water districts' on-going water conservation programs foster a need of businesses specialized in green landscape design and installation.

The City's [Economic Development](#) program directly supports the growth of green jobs through targeted workshops, trainings, and support to the City's four economic development organizations: [Cardiff 101](#), [Encinitas 101](#), [Leucadia 101](#), and the [Encinitas Chamber of Commerce](#). These organizations are the heart of the City's business community and are encouraged to participate in implementation of the CAP. The City encourages organizations and businesses that have sustainable business models and practice and promote sustainable habits.

Many of the City's restaurants, non-profits, shops, service providers, and lodging locations are leading by example, setting green standards, and paving the way for others in Encinitas to do the same.

Social Equity & Green Jobs

Green Jobs

Encinitas BCycle

In 2021, the City entered into an agreement with [BCycle](#)—one of the largest and longest standing bike share companies in the United States—to manage a bikeshare program for the City of Encinitas. Most of the planning and preparation for the City's BCycle launch occurred in 2021. The bikes were officially made available for public use in January of 2022. The launch of BCycle bikeshare directly adds several green jobs to the region and promotes affordable alternative transportation, both of which are goals outlined in the City's CAP. A bike may be rented for as little as \$7 for a half hour. Passes may also be purchased on a monthly or annual basis for a cost of \$30 or \$150, respectively. The bikeshare program also plans to offer a discounted annual pass for qualifying low-income residents and visitors as part of a partnership incentive program with SANDAG.

Section 5

Climate Resilience & Coastal Adaptation



With the Pacific Ocean as our backyard, it is paramount that the City continues to prioritize projects and policies that promote coastal resilience and adaptation. The City recognizes the importance of protecting our six miles of coastline, which includes the people, plants, and animals that rely on the resources that the coast provides. The following section outlines ongoing and completed projects and programs the City implements to enhance our coastal environment and to adapt to future climate change, making our City more resilient to its impacts.

Climate Resilience & Coastal Adaptation

Resilience & Adaptation Coastal Storm Damage Reduction Project

The City is part of a collaborative coastal storm damage reduction project with the U.S. Army Corps of Engineers and the City of Solana Beach. The goal of the project is to reduce storm and sea level rise-related coastal damage and erosion by adding 340,000 cubic yards of compatible sand material along 7,800 feet of coastline, which encompasses D Street, Moonlight, and Stonesteps beaches. The project underwent the pre-construction, engineering, and design phases in 2020 and 2021. Monitoring will begin in the fall of 2022, to set baseline conditions of the shoreline environment and plan for future improvements. Funding is comprised of local, state, and federal sources and was previously delayed due to outstanding circumstances, such as COVID-19. In early 2022, the U.S. Army Corps of Engineers received \$30 million on behalf of the City of Encinitas and the City of Solana Beach from the Bipartisan Infrastructure Bill to begin initial construction in late 2023-early 2024.

Resilience & Adaptation Swami's State Marine Conservation Area and Marine Monitoring

Encinitas is home to the Swami's State Marine Conservation Area (SMCA), a state marine protected area (MPA) that spans from approximately Moonlight State Beach to South Cardiff State Beach and three miles of ocean westward from the shoreline. The Swami's SMCA was established in 2012. The effects of establishing the preserve are currently being evaluated by the [California Department of Fish and Wildlife](#) through the 2022 Decadal Management Review. The only allowable forms of fishing in the SMCA are recreational fishing (hook and line) from shore and spearfishing for white seabass and pelagic finfish. Fishing from boats is prohibited. The prevalence of healthy reefs in the Swami's SMCA are ideal for recreation but are unfortunately also a draw for poachers. To advance its priority of environmental stewardship, the City installed a marine monitoring (M2) radar in November 2020 on top of the Marine Safety Center at Moonlight State Beach in partnership with the designers of the radar program, [Protected Seas](#), and [WILD COAST](#), an international environmental non-profit organization. M2 is a low-powered, high frequency marine radar coupled with specially designed software to track boat activity and illegal fishing in nearshore waters. The M2 monitoring is ongoing and has provided data that is critical to both management and enforcement of fishing restrictions in the Swami's SMCA.

Climate Resilience & Coastal Adaptation

Resilience & Adaptation

Cardiff State Beach Living Shoreline Project

The Cardiff State Beach Living Shoreline Project, substantially completed in 2019, created a coastal dune with repurposed buried rock revetment and cobblestone and 30,000 cubic yards of sand dredged from the San Elijo Lagoon inlet. Native seeds and potted specimens were planted along the new shoreline with the aid of volunteers managed by the [Nature Collective](#). The Cardiff State Beach Living Shoreline Project is the first of its kind in Southern California to test coastal dunes as a natural-based solution to beach erosion and flood protection of a vulnerable coastal asset. This project has also created healthy and safe habitats for a variety of species, including the endangered western snowy plover. A 5-foot wide, decomposed granite footpath was installed with the project, just east of the dune system, activating pedestrian activity from South Cardiff State Beach (Seaside) north, past the Chart House and Pacific Coast Grill restaurants along South Coast Highway 101. Additional upgrades include the reconfiguration of beach parking (including ADA parking and ADA upgrades), the installation of a Mobi-Mat for ADA use during peak seasons, trash and recycling bins, and educational signage.

In 2019, a monitoring program was developed to study the Shoreline Project and to inform other coastal communities considering such adaptive measures. Monitoring data is also used to inform the project's long-term maintenance and will continue until 2024. This program is a collaborative effort between the City, California State Parks, [California State Coastal Conservancy](#), the [Nature Collective](#), [U.S. Fish and Wildlife](#), [Surfrider Foundation](#), University of California, Los Angeles (UCLA), and the [Scripps Institution of Oceanography](#). In March 2021, the City accepted a national award from the [American Shore and Beach Preservation Association](#) (ASBPA) for [Best Restored Beach of 2020](#).

Climate Resilience & Coastal Adaptation

Resilience & Adaptation

Beacon's Coastal Bluff Restoration Project

In 2020, the Beacon's Coastal Bluff Restoration Project was designed. The project was approved and permitted in early 2021. The primary objective of the project is to stabilize surface soils by planting native vegetation to protect the access trail, while also increasing coastal bluff habitat. The approximate 1.2-acre coastal bluff area largely sustained non-native species or bare ground prior to the project. With the installation of adapted native species—such as Coast Sunflower, Yucca, and California Sagebrush—the coastal bluff provides enhanced habitat for coastal species, stabilizes the bluff, and beautifies the trail. The restoration program also includes a pilot project which uses washed up kelp to encourage natural dune formation. The first round of bluff restoration was officially completed in November 2021. The City's Parks and Recreation Department plans to move forward with a second round of planting and restoration in the fall of 2022.

Resilience & Adaptation

Sand Compatibility and Opportunistic Use Program

The Sand Compatibility and Opportunistic Use Program, or SCOUP, facilitates the use of available sand from construction sites and other opportunistic sources, from both private and public development projects. SCOUP is part of a local sediment management plan intended to streamline beach nourishment projects. Beach nourishment is a process used to add additional sediment to a beach or nearshore area to provide increased storm protection, develop new habitat, and to enhance beach usage and recreation. The program includes stringent environmental regulations to ensure that the sand sources are compatible with receiver sites. The timing and location of sand placement are also strictly controlled to reduce any negative impacts on coastal habitats and recreation.

In collaboration with [San Diego Association of Governments](#) (SANDAG), [Caltrans](#), and the City, 70,000 cubic yards of beach-quality Torrey Sandstone material was removed from the San Elijo Lagoon beginning in the winter of 2021 as part of the [Build NCC](#) (North Coast Corridor) project. Over the course of four months, the material was dredged and piped or hauled by truck to Cardiff State Beach or trucked to Moonlight State Beach. The City has used beach nourishment for many years as a method of building coastal resilience and will continue to do so in the future.

Looking Ahead

With 5 Climate Action Plan (CAP) measures in progress and 2 awaiting resources, City staff will continue working diligently to ensure that all measures are accomplished and that the greenhouse gas (GHG) reduction targets outlined in the CAP are achieved. The CAP Implementation Plan calls for measures to be completed within varying timelines depending on complexity and cost. Looking ahead, City staff will focus on executing the following activities:

- Continue to support San Diego Community Power in its effort to serve all Encinitans 100% renewable energy.
- Re-adopt building code amendments related to energy efficiency, all-electric buildings, and renewable energy consistent with the 2022 CA Building Code cycle.
- Revamp the City's Green Building Incentive Program to be more accessible to residents with existing homes in the City of Encinitas.
- Develop an Electric Vehicle Charging Station Master Plan to increase the amount of publicly available charging stations within the City of Encinitas.
- Continue to install bike and pedestrian facilities to enhance mobility throughout the community.
- Complete the and evaluate the success of the Encinitas BCycle Bikeshare 1-year pilot program.
- Continue to maintain a healthy urban tree canopy and plant new trees in the City's Urban Forest.
- Support City projects relevant to the CAP including Leucadia Streetscape and coastal resilience projects.

Conclusion

The 2021 Climate Action Plan (CAP) Annual Monitoring Report (Annual Report) summarizes the City of Encinitas' progress toward overall greenhouse gas (GHG) reduction targets and evaluates the implementation status of each of the 20 measures established in the CAP. This Annual Report covers the City's efforts since implementation began in early 2018, and includes data tracked through the end of 2021.

Of the 20 CAP Measures, 13 have been completed, 5 are in progress, and 2 are awaiting resources. Moving forward, the City will produce reports annually, presenting the most recent data. Staff will continue to work and coordinate with a variety of consultants, San Diego Association of Governments (SANDAG), and other regional and business partners to further CAP implementation and continue to lower GHG emissions. Currently, the City is on-track with CAP implementation and expects to meet its citywide GHG emissions reduction targets of 13% below 2012 levels by 2020 and 44% below 2012 levels by 2030. Data on the status of the 2020 target is anticipated to be published in the 2022 Annual Report.

In Encinitas, some of the implications of climate change are already evident and will increasingly become a challenge that the community must address. Encinitas faces rising sea levels, increased drought risk, increased annual temperatures, and increased vulnerability of bluffs and beaches, in addition to other changes that pose a threat to the coast and community we call home. Apart from mitigating GHG emissions, the City also strives to strengthen the community's resiliency against climate change. The climate challenge poses a unique opportunity to develop a more sustainable, healthy, and equitable Encinitas community driven by the strategies outlined in the CAP. The City—with support from community members, local businesses, and regional partners—will continue to pursue emissions reductions goals and improve the well-being of Encinitas residents now and into the future.