



City of Solana Beach

Climate Action Plan Implementation Plan

June 2018

City of Solana Beach
Final Climate Action Plan Implementation Plan

PREPARED BY:
City of Solana Beach

IN CONSULTATION WITH:
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Energy Policy Initiatives Center

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1. Introduction

1.1. Climate Action Plan Overview

The City of Solana Beach (City) 2017 Climate Action Plan (CAP) provides the City with a roadmap to address two climate change challenges: how the City will reduce its greenhouse gas (GHG) emissions, and how the City will improve its resilience to climate change over the long term. The CAP not only builds upon past and current City efforts in combating climate change, but also enables the City to meet State legislative and regulatory guidance. It builds upon the goals and policies of the City's General Plan policies by establishing GHG emissions targets and identifying achievable actions to reduce GHG emissions.

Key highlights from the CAP include:

- A baseline GHG inventory (2010) for community activities occurring in the City. Emissions sectors evaluated include: Transportation, Electricity, Natural Gas, Solid Waste, and Water Consumption.
- In 2010, communitywide sources in the City emitted 139,216 metric tons of carbon dioxide equivalent (MTCO_{2e}), with the greatest emissions coming from the Transportation sector, followed by the Electricity sector.
- In consideration and support of State GHG reduction targets, the City's CAP includes GHG reduction targets of reaching 15 percent below 2010 baseline levels by 2020 and 50 percent below 2010 levels by 2035. To meet reduction targets, the City will need to reduce emissions to 118,334 MTCO_{2e} by 2020 and 69,608 MT CO_{2e} by 2035.
- To achieve 2020 and 2035 targets, the CAP includes strategies, measures, and actions, focused in four key policy sectors (Transportation, Renewable Energy and Buildings, Waste and Water, and Carbon Sequestration [Urban Tree Planting]), that focus on GHG reductions for communitywide activities.

The CAP outlines strategies developed to lower community GHG emissions to the identified reduction targets. Specific measures and associated actions for each strategy are outlined in detail in the CAP document. The CAP also outlines strategies and measures for the City to improve community resiliency and to adapt to the current and future impacts of climate change.

1.2. Implementation Plan

Achieving the 2020 and 2035 reduction targets will require implementation of the reduction strategies, measures, and actions identified in the CAP. This CAP Implementation Plan (Implementation Plan) builds upon the CAP's Implementation and Monitoring Chapter (Chapter 5) and outlines in more detail how the City will implement CAP measures and how the CAP will be updated and monitored over time to ensure continued effectiveness in reducing GHG emissions. Implementation of certain strategies, measures, and actions will require that the City develop and implement new ordinances, programs, and plans, or modify existing ones. This requires careful consideration of the operational and capital resources needed, as well as timing, phasing, and monitoring of implementation.

As the City begins to implement the CAP, the Implementation Plan will serve as a guidance document for City staff. The Implementation Plan provides detailed information for each of the measures set forth in the CAP. It is important to note that this Implementation Plan does not contain information on costs for implementation.

While high-level staffing needs are presented by City department in this Implementation Plan, more detailed information regarding costs and staffing needs for implementation is provided in the City's 2018 CAP Implementation Cost Study (Cost Study). The Cost Study, along with this Implementation Plan, are meant to be used together as the initial roadmap for City staff. The Implementation Plan will specifically assist City staff in monitoring progress towards established targets and will provide a framework for assessing the success and effectiveness of the various measures and actions. Monitoring and assessment of the CAP implementation process will provide key insights into which measures and actions have been most successful in terms of implementation, and GHG reductions will serve to inform policy and strategy development for future CAP updates.



Given that the GHG reduction strategies included in the CAP span a variety of activity sectors, the CAP implementation process will be a collaborative and inter-departmental City effort with various departments taking primary responsibility or secondary responsibility for the implementation of specific measures and actions. Public participation will also be crucial in implementing specific actions of the CAP.

1.2.1. Implementation Timeframe

The Implementation and Monitoring Chapter (Chapter 5) of the CAP estimates the basic timeframe for implementation of each measure. In this Implementation Plan, additional information is provided for each action. Many measures and actions will take years to fully implement; however, it is imperative that their implementation begin within the next few years to reach the GHG reduction targets of the CAP. This is especially true of City actions that require community participation after initial implementation and those that will help achieve the 2020 GHG reduction target.

1.2.2. Funding

Success of the CAP will require capital improvements, investments, and increased operations and maintenance costs. The Implementation Plan and associated Cost Study will serve as a resource when considering what programs, projects, and staffing need to be included in City budgets to implement the CAP. While some of the measures and actions in the CAP can be funded by allocated monies from departmental budgets or the City's general fund, the City will need to be diligent in seeking cost-effective implementation, strategic funding opportunities, and using partnerships to share overall costs. All measures with potentially significant costs will be brought to City Council for consideration and approval.

There are many regional, statewide, and federal programs and grant opportunities that may be used to help fund and implement certain elements of the CAP. The City should also monitor private and public funding sources for new grant and rebate opportunities. The following table summarizes funding and financing options for CAP implementation.

Potential Funding Sources for CAP Implementation

Potential Funding Sources for CAP Implementation	
Resource	Description
Affordable Housing and Sustainable Communities (AHSC) Program	AHSC distributes California greenhouse gas reduction fund (GGRF) funds to disadvantaged communities. Eligible projects include: providing affordable housing, transit-oriented development (TOD), transit, complete streets, and active transportation projects that reduce greenhouse gas (GHG) emissions and vehicle miles traveled.
California Air Resources Board Programs (CARB)	CARB offers several grants, incentives, and credit programs to reduce on-road and off-road transportation emissions. Residents, businesses, and fleet operators can receive funds or incentives depending on the program. The following programs can be used to fund local measures: Air Quality Improvement Program AB 118), Loan Incentives Program, California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Program, Clean Vehicle Rebate Project, and the Low Carbon Transportation Program.
California Department of Transportation Programs	Caltrans offers several programs and grants supporting sustainable transportation initiatives, including: Low Carbon Transit Operations, Active Transportation Grant Program, Transit and Intercity Rail Capital Program, Strategic Partnership Grants, and the Sustainable Transportation Planning Grant.
California Department of Resource Recycling and Recovery (CalRecycle) GHG Reduction Grant and Loan Program	CalRecycle provides financial incentives for capital investments to build composting/digestion infrastructure and recycling manufacturing facilities that will result in reduced GHG emissions
California Energy Commission (CEC) and California Public Utilities Commission (CPUC) Programs	CEC and CPUC offer a variety of programs and grants that are specific to local government, business, and residential applications. They include: Multi-Family Affordable Housing Solar Roofs Programs (CPUC), Local Government Challenge Program (CEC), Electric Program Investment Challenge (CPUC), Alternative and Renewable Fuel and Vehicle Technology Program (CEC), and the Energy Upgrade California Program (CEC and CPUC).
California Natural Resources Agency (CNRA) Urban Greening Grant Program	CNRA funds projects that reduce GHGs by sequestering carbon, decreasing energy consumption and reducing vehicle miles traveled, while establishing and enhancing parks and open space, using natural solutions to improve air and water quality and reducing energy consumption, and creating more walkable and bike-able trails.
Center for Sustainable Energy (CSE)	CSE is a mission-driven nonprofit organization providing clean energy program design and management and technical advisory services. Governments, regulators, utilities, businesses, property owners and consumers can utilize CSE partnerships to develop customized solutions that help lower energy costs and increase accessibility to clean energy technologies.
Community Choice Aggregation (CCA) Revenue	If implemented by a local public partnership or through the City, a local CCA program would generate revenue that may be used to fund or incentivize GHG reduction measures and actions.
Department of Energy	Qualified Energy Conservation Bonds (QECCBs) enable qualified State, tribal, and local government issuers to borrow money at attractive rates to fund energy conservation projects. QECCBs are taxable bonds, but QECCBs are issued as direct subsidy bonds and are among the lowest-cost public financing tool.

Potential Funding Sources for CAP Implementation	
Resource	Description
	Clean Renewable Energy Bonds (CREBs) finance public renewable energy projects. The bondholder receives federal tax credits in lieu of a portion of the traditional bond interest, resulting in lower effective interest rates for the borrower.
Federal Housing Administration's Energy Efficient Mortgages (EEM) Program	Credits a home's energy efficiency features in the mortgage itself. To verify a home's energy efficiency, an EEM typically requires a home energy rating of the house by a home energy rater before financing is approved. EEMs typically are used to purchase a new home that is already energy efficient, such as an ENERGY STAR® qualified home.
Federal Income Tax Credits for Energy Efficiency	Provides tax credits for energy efficiency upgrades for homes.
Federal Transit Administration (FTA) Programs	FTA has a variety of available grants and programs available for transit agencies and local governments including: Job Access and Reverse Commute and New Freedom Programs and Buses and Bus Grants Program.
Municipal Bonds	There are two basic types of municipal bonds: General Obligation Bonds and Revenue Bonds. General Obligation Bonds often require voter assent and tend to have lower interest rates than Revenue Bonds. With Revenue Bonds, the principal and interest are secured by revenues derived from tolls, charges, or rents from the facility built with the proceeds of the bond issuance.
Partnership for Sustainable Communities	A multi-agency partnership between U.S. Department of Housing and Urban Development, U.S. Department of Transportation, and the U.S. Environmental Protection Agency that offers grant funding to help build more viable, walkable, and environmentally sustainable communities.
Private Funding	<p>Private equity can be used to finance energy improvements, with returns realized as future cost savings.</p> <p>Power Purchase Agreements involve a private company that purchases, installs, and maintains a renewable energy technology through a contract that typically lasts 15 years. After 15 years, the company would uninstall the technology or sign a new contract.</p> <p>On-Bill Financing (OBF) can be promoted to businesses for energy-efficiency retrofits. Funding from OBF is a no-interest loan that is paid back through the monthly utility bill. Lighting, refrigeration, heating, ventilation, and air conditioning, and light-emitting diode (LED) streetlights are all eligible projects.</p>
Property Assessed Clean Energy (PACE) Programs	PACE programs allow property owners to finance energy efficiency, water efficiency, and renewable energy projects on existing and, in some cases, new residential and commercial structures through a voluntary special tax assessment on the property. PACE programs provide financing for these types of improvements without requiring a down payment or payment of the full or partial up-front capital cost of the improvement.
Proposition 1: State Coastal Conservancy Grant	Provides funds for multi-benefit ecosystem and watershed protection and restoration projects.
Proposition 39: California Clean Energy Jobs Act Grants	Funds energy efficiency and clean energy projects at eligible local educational agencies — including county offices of education, school districts, charter schools and State special schools.

Potential Funding Sources for CAP Implementation	
Resource	Description
San Diego Association of Governments (SANDAG)	<p>The TransNet Extension Ordinance provides funding for two competitive grant programs that support local efforts to increase walking, biking, and transit use throughout the region: the Smart Growth Incentive Program and Active Transportation Grant Program.</p> <p>The Energy Roadmap Program is a collaboration between SANDAG and San Diego Gas & Electric (SDG&E). It is funded primarily by California utility customers under the auspices of the CPUC. The SANDAG Energy Roadmap Program provides free energy assessments and energy management plans, as well as energy engineering and climate planning technical services, to SANDAG member agencies.</p>
SDG&E Programs	<p>SDG&E offers a number of programs tailored to support local governments. The Local Government Partnerships Program and the Power Your Drive Program help cities and counties more efficiently use energy and reduce their greenhouse gas emissions. SDG&E also offers many customer programs that promote energy efficiency, including EcoChoice and the Comprehensive Audit Program.</p> <p>The Go Solar Initiative provides a variety of rebates for existing and new homes for projects such as solar photovoltaics, lighting, refrigeration, heating and ventilation, thermal technologies, and solar hot water projects. Single-family homes, commercial development, and affordable housing are eligible. Offers on-Bill Financing (OBF), a no-interest loan that is paid back through the monthly utility bill. SDG&E is one of the utilities participating in the Go Solar initiative.</p>
Solar Tax Credits	<p>The federal solar tax credit, also known as the investment tax credit, allows residents and businesses to deduct 30 percent of the cost of installing a solar energy system from your federal taxes through 2019.</p>
Statewide Energy Efficiency Collaborative (SEEC)	<p>SEEC provides support to cities and counties to help them reduce GHG emissions and save energy. SEEC is an alliance between three statewide non-profit organizations and California's four Investor-Owned Utilities. SEEC provides the following at no cost: education and tools for climate action planning and reducing energy use; opportunities for peer-to-peer networking; and technical assistance and recognition for local agencies that that promote sustainability. Resources through SEEC include ClearPath and the CivicSpark fellowship program.</p>
Strategic Growth Council (SGC)	<p>SGC provide grants to fund sustainable community planning, natural resource conservation, and development and adoption. These include the Sustainable Communities Planning Grant and Incentives Program that supports local land use planning related to climate and the State's statutory planning opportunities. These grants will support the development and/or implementation of a specific portion of a land use plan, land protection or management practice, or development project (e.g., Climate Action or Adaptation Plans, GHG inventories).</p>
<p><i>Notes: AB = Assembly Bill; AHSC = Affordable Housing and Sustainable Communities Program; CARB = California Air Resources Board; CalRecycle = California Department of Resources Recycling and Recovery; Caltrans = California Department of Transportation; CCA = Community Choice Aggregation; CEC = California Energy Commission; CNRA = California Natural Resources Agency; CREB = Clean Renewable Energy Bond; CSE = Center for Sustainable Energy; CPUC = California Public Utilities Commission; EEM = Energy Efficient Mortgages; FTA = Federal Transit Administration; GHG = greenhouse gas; GGRF = Greenhouse Gas Reduction Fund; On Bill Financing = OBF; PACE = Property Assessed Clean Energy; QECB = Qualified Energy Conservation Bond; SANDAG: San Diego Association of Governments; SDG&E = San Diego Gas and Electric; SEEC = Statewide Energy Efficiency Collaborative SGC = Strategic Growth Council; TOD = Transit-Oriented Development</i></p> <p>Source: Ascent Environmental 2018</p>	

1.2.3. Implementation Coordination

Implementation of the CAP will require extensive collaboration between City departments, as well as local and regional agencies. City departments that will be required to play a key role in the implementation of the CAP include, but are not limited to, the City Manager’s Office, Engineering and Public Works, Community Development, and Finance and Budget.

The following table outlines the potential City department staffing costs associated with implementation of the CAP. Costs for the first five years are presented in terms of staffing impact and the number of full-time equivalent (FTE) employees needed to implement CAP measures, monitor CAP progress, update the CAP and GHG inventory, and prepare the CAP Monitoring Report. The City Manager’s Office account for more than half of the staffing impact from the CAP, with the majority of work occurring in the first year of CAP implementation. The City Manager’s Office would serve as the primary department responsible for monitoring and reporting progress towards meeting CAP goals and emission reduction targets. The City Manager’s Office will also be the primary department to seek regional and grant funding and to coordinate larger outreach efforts. Engineering and Public Works account for the second greatest staffing impact, followed by Community Development, and Finance and Budget. Both Engineering and Public Works and Community Development will play a significant role in helping to coordinate and collaborate on CAP implementation. For more detailed information on staffing costs by position and overall staffing impacts, refer to the City’s Cost Study.

Department Staffing Costs by Fiscal Year					
Department	Fiscal Year 2017/18 (FTE)	Fiscal Year 2018/19 (FTE)	Fiscal Year 2019/20 (FTE)	Fiscal Year 2020/21 (FTE)	Fiscal Year 2021/22 (FTE)
City Manager ¹	1.05	0.57	0.56	0.51	0.57
Engineering & Public Works ²	0.13	0.14	0.19	0.21	0.13
Community Development ³	0.05	0.08	0.11	0.11	0.11
Finance & Budget ⁴	0.03	0.04	0.04	0.04	0.04
TOTAL	1.27	0.83	0.90	0.87	0.84
<p><i>Notes: FTE = Full-Time Equivalent</i></p> <p><i>Columns may not add to totals due to rounding</i></p> <p>¹ Assumes staffing for the following positions: City Manager, Assistant City Manager, Management Assistant, and Administrative Assistant.</p> <p>² Assumes staffing for the following positions: Principal Engineer, and Assistant Engineer.</p> <p>³ Assumes staffing for the following positions: Community Development Director, and Junior Planner.</p> <p>⁴ Assumes staffing for the following positions: Finance Manager, and Senior Accountant.</p> <p>Source: Ascent Environmental 2018, EPIC 2018</p>					

2. CAP Implementation

This section outlines a detailed plan for implementation of each City measure and action that will help the City ensure goals and targets of the CAP are achieved. Through implementation of the CAP, the City will be required to modify or develop new ordinances, policies, programs, and projects. The City will incur costs to implement the CAP, including, but not limited to, initial start-up, ongoing administration, and enforcement costs. While some actions and supporting measures will only require funding from public entities, others will result in increased costs for businesses, contractors, and residents. Under each strategy and measure, each action is analyzed in this section with tables that summarize details for implementation. The actions were evaluated to assess tasks, timeline, and responsible parties required for implementation.

The implementation tables are meant to be updated regularly and to provide a snapshot of the implementation strategy; they are not meant to be static and do not provide a complete analysis of all considerations needed for implementation. It is also important to note that the scope of this Implementation Plan does not include consideration of the adaptation strategies and measures outlined in Chapter 4 of the CAP. The City’s Cost Study will also need to be considered to support this Implementation Plan.

2.1. Measure and Action Implementation

This section provides an implementation plan for each strategy and measure proposed in the CAP, with action implementation presented in a table format. Implementation is first organized by the four strategies identified in the CAP: Transportation, Renewable Energy and Buildings, Waste and Water, and Carbon Sequestration (Urban Tree Planting).

Following each strategy are details on the CAP’s GHG-reducing measures:

- Measures** High-level programs, policies, or projects the City will implement that will cause a direct and measurable reduction in GHG emissions. The CAP has a total of 30 GHG-reducing measures.
- GHG Reduction Potential** The estimated reduction in local GHG emissions if the performance metric is met. The reduction is presented in MTCO_{2e}.

The action implementation tables that follow each measure consist of the following information:

- Actions** Specific details on the types of programs, policies, projects, and steps that will help the City achieve the GHG reduction potential of each City measure. While actions are not quantified, they each contribute to the total GHG reduction potential of a measure.
- Responsible Department** The department(s) that will primarily be responsible for planning, implementing, and tracking specific measures and actions. Departments refer to those within the City structure (i.e., City Manager, Engineering & Public Works, Community Development, and Finance & Budget Departments).
- Supporting Department** The department(s) that will support the responsible department in planning, implementing, and tracking actions. Supporting departments refer to those within the City structure (i.e., City Manager, Engineering & Public Works, Community Development, and Finance & Budget Departments).
- Task Type** Categorizes the main procedure or task associated with implementation of each action.

Implementation Timeline The estimated time frame for which the major implementation effort will occur. Can be categorized as Short-Term (will occur within the next three years), Mid-Term (will occur within the next five years), Long-Term (will occur within the next 10 years), or Ongoing (already occurring).

Implementation Tasks The steps and/or tasks that need to be completed to accomplish the action.

2.1.1. Transportation

Measure T-1: Increase electric vehicles (EVs) and alternative fuel vehicles (AFVs) vehicle miles traveled (VMT) to 30 percent of total VMT

This measure would reduce emissions by replacing fossil fuel-driven vehicles with EVs and other AFVs that have lower GHG emissions. The CAP goal is to increase the percentage of VMT driven by EVs and other AFVs to 30 percent of total VMT by 2035.

T-1
GHG Reduction Potential
17,495 MTCO_{2e}

T-1.1: Support public and private sector provisions of alternative fueling stations in the City and adjacent cities.			
Implementation Details			
Responsible Department	City Manager	Supporting Departments	Community Development/ Engineering & Public Works
Task Type	Research	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Use other cities and jurisdictions who have used public-private partnerships to provide alternative fueling stations as case studies. Research EV charging companies operating in the region to gain pricing and service information. Use Center for Sustainable Energy and other similar resources to research the EV auto industry market in the region to understand EV sales trends and driver characteristics. Seek opportunities for pilot projects with regional EV charging companies and businesses operating in the City. 		
<i>Notes: EV = Electric Vehicle</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

T-1.2: Require EV charging stations and EV charger-ready wiring in commercial/multi-family and residential structures (both new construction and substantial remodels) as follows: residential EV charger-ready wiring; commercial and multi-family EV charger-ready wiring at all garages; and EV chargers in quantities proportional to the total parking spaces available.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Ordinance	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> Continue to implement Ordinance 480 (October 2017). Consider passing an ordinance that requires EV charging stations in new developments, as well as significant redevelopments. 		

T-1.2: Require EV charging stations and EV charger-ready wiring in commercial/multi-family and residential structures (both new construction and substantial remodels) as follows: residential EV charger-ready wiring; commercial and multi-family EV charger-ready wiring at all garages; and EV chargers in quantities proportional to the total parking spaces available.

Notes: EV = Electric Vehicle

Source: Ascent Environmental 2017, EPIC 2017.

T-1.3: Collaborate with SANDAG to increase EVs in the region.

Implementation Details

Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Work with neighboring cities to increase EV infrastructure along major thoroughfares and throughout the region. • Identify opportunities to collaborate with SANDAG on current strategies to promote EV charging infrastructure in the region. 		

Notes: EV = Electric Vehicle; SANDAG = San Diego Association of Governments

Source: Ascent Environmental 2017, EPIC 2017.

T-1.4: Provide incentives for the City’s residents to increase use of EVs.

Implementation Details

Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Continue process to streamline the residential permitting process for EVSE to incentivize residents. • Promote benefits of CARB’s Clean Vehicle Rebate Project and provide specific information on incentives, prices, and qualifications for the rebate. • Promote State and Federal websites which promote EV benefits and provide information on vehicle types, fuel economy, and vehicle performance (i.e. fueleconomy.gov). • Identify opportunities to promote benefits of EVs at local events (e.g., farmers markets), at relevant City offices, on the City website, including the City’s Green Flash homepage, and through targeted media campaigns. • Conduct outreach and education to encourage businesses and commercial property owners convert private parking spaces to EV and AFV preferred parking. 		

Notes: AFV =Alternative Fuel Vehicle; CARB = California Air Resources Board; EV = Electric Vehicle; EVSE = Electric Vehicle Service Equipment

Source: Ascent Environmental 2017, EPIC 2017.

T-1.5: Explore grant funding for EV chargers.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Research	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Participate in the San Diego Regional Clean Cities Coalition Grant Assistance program to seek grant funding opportunities for EV charging infrastructure and pilot projects. Research qualifying tax credits for commercial and residential properties for EVSE installation. Promote SDG&E Power Your Drive Program, or potential CCA equivalent program, to City residents and businesses. 		
<p><i>Notes: EV = Electric Vehicle; EVSE = Electric Vehicle Service Equipment; SDG&E = San Diego Gas and Electric</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-1.6: Advocate for an EV car sharing fleet network to serve the City.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Advocacy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify car sharing services operating in the County, specifically companies using EVs or AFVs in their fleet. Identify opportunities to promote EV car sharing fleet network through industry collaboration and pilot projects. Identify opportunities to promote EV car sharing programs that specifically promote EV vehicle fleets. For non-EV vehicle fleet, prioritize low-carbon fuels for City fleet, including biodiesel, compressed natural gas, and propane. Coordinate with SANDAG's iCommute program and other regional EV efforts. 		
<p><i>Notes: AFV =Alternative Fuel Vehicle; EV = Electric Vehicle; SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-1.7: Explore barriers for EV charging for garage-free homes; install charging infrastructure integrated into streetlights; support use of electric bikes.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development/ Engineering & Public Works
Task Type	Research/Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify areas with barriers for EV charging in the City. Identify areas throughout the City where charging infrastructure could be integrated into streetlights. Promote the use of electric bikes in City operations, where feasible. Explore a Citywide and regional bike sharing program. 		
<p><i>Notes: EV = Electric Vehicle; N/A = Not Applicable</i></p>			

T-1.7: Explore barriers for EV charging for garage-free homes; install charging infrastructure integrated into streetlights; support use of electric bikes.

Source: Ascent Environmental 2017, EPIC 2017.

Measure T-2: Increase commuting by vanpools to 20% of labor force

This measure would reduce VMT from single-occupancy vehicles by promoting ridesharing. The City will increase vanpooling to 20 percent of its labor force.

T-2
GHG Reduction Potential
608 MTCO₂e

T-2.1: Collaborate with SANDAG to identify the longest commute distances and associated employers to add vanpooling.

Implementation Details

Responsible Department	Community Development	Supporting Department	N/A
Task Type	Collaboration	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Provide information on tax incentives for businesses who participate in the Qualified Transportation Fringe Benefit program (governed under Section 132[f] of the IRS Code). Conduct a business commute survey with participating City businesses to gather employee commute data including commute distance, frequency and transportation mode choice. Gather and utilize available commute data for the City, prepared by SANDAG. Consider adopting a TDM plan/ordinance for any new large employer (i.e., 50 employees or more). 		

Notes: IRS = Internal Revenue Service; N/A = Not Applicable; SANDAG = San Diego Association of Governments; TDM = Transportation Demand Management

Source: Ascent Environmental 2017, EPIC 2017.

T-2.2: Collaborate with SANDAG on successfully implementing its North Coast TDM Plan (SANDAG 2013) and connect the City’s employers and residents to travel-planning resources.

Implementation Details

Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Advocacy	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Utilize existing data in the North Coast TDM Plan regarding commute characteristics in future transportation planning efforts. Use multiple methods of communication and marketing to promote TDM measures for employers and employees. Partner with local businesses and community-based organizations to carry-out initiatives included in the North Coast TDM Plan. Advocate for Interstate 5 high-occupancy vehicle lanes to and from City on-ramps and off-ramps to relieve congestion and reduce commute times. 		

T-2.2: Collaborate with SANDAG on successfully implementing its North Coast TDM Plan (SANDAG 2013) and connect the City’s employers and residents to travel-planning resources.

Notes: SANDAG = San Diego Association of Governments; TDM = Transportation Demand Management

Source: Ascent Environmental 2017, EPIC 2017.

T-2.3: Review KPIs in SANDAG’s TDM Implementation Plan (SANDAG 2012) at least once annually.

Implementation Details

Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Administrative	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> Review KPIs in SANDAG’s TDM Implementation Plan and choose the most relevant indicators to be measured and monitored related to vanpool commuting. Annually evaluate goal implementation measures and refine implementation practices based on measure performance. 		

Notes: KPI = Key Performance Indicators; SANDAG = San Diego Association of Governments; TDM = Transportation Demand Management

Source: Ascent Environmental 2017, EPIC 2017.

T-2.4: Explore modifying the Solana Beach Municipal Code parking standard requirements to incentivize provision of parking stalls for carpool or vanpool vehicles as a credit toward parking requirements.

Implementation Details

Responsible Department	Community Development	Supporting Department	City Manager
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Utilize SANDAG Smart Growth Tool Box and Regional Parking Management Toolbox to research options for new parking standards for car and vanpool priority parking. Use similar jurisdictions who have updated parking standards as case studies to gain insight on best practices (i.e. MTC Parking Code Guidance). Utilize USGBC guidance on green parking standards and reduced parking footprint measures. 		

Notes: SANDAG = San Diego Association of Governments; MTC = Metropolitan Transportation Commission; USGBC = United States Green Building Council

Source: Ascent Environmental 2017, EPIC 2017.

T-2.5: Advocate for Interstate 5 high-occupancy vehicle lanes at least to and from City on-ramps and offramps.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	N/A
Task Type	Advocacy	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify agencies and stakeholders to work with on advocating for high-occupancy vehicle lanes on Interstate 5. Support the SANDAG/Caltrans Build NCC Project that is extending HOV lanes on I-5. Research funding opportunities to promote high-occupancy vehicle lanes. 		
<i>Notes: Caltrans = California Department of Transportation; HOV = High-Occupancy Vehicle; N/A = Not Applicable; NCC = North Coast Corridor; SANDAG = San Diego Association of Governments</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure T-3: Reduce average commuter trip distance by 1 mile

This measure would reduce average trip distance from commuter trips by the labor force by one mile. The current average commute distance in the City is 15 miles. The City contains adequate sites designated for mixed-use and higher density residential to accommodate its share of the regional housing need. These sites are generally located where mixed-use and compact infill development is encouraged, such as along the planned multi-modal boulevards and adjacent to existing commercial areas. Accommodating additional housing in these locations would serve to reduce commuter trip distances. The City will reduce average commuter trip distance of its labor force by one mile.

<p>T-3 GHG Reduction Potential 464 MTCO₂e</p>

T-3.1: Improve land use and transportation planning to provide a well-connected transportation network. Higher-density and mixed-use neighborhoods with complete street design provide infrastructure for vehicles, bicycles, and pedestrians, allowing a shift from single-occupancy vehicles.			
Implementation Details			
Responsible Department	Community Development/ Engineering & Public Works	Supporting Department	City Manager
Task Type	Policy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Utilize SANDAG Smart Growth Tool Box and Regional Parking Management Toolbox to research strategies for a well-connected transportation network. Use similar jurisdictions who have well-connected transportation networks as case studies to gain insight on best practices. Identify areas suitable in the City to provide increased bicycle and pedestrian access. Utilize USGBC Council guidance on green parking standards and reduced parking footprint measures, including bicycle parking requirements. Prioritize development of projects that include a well-connected transportation network and access to alternative modes of transportation. Support projects that prioritize mass transit and a well-connected transportation network over projects that prioritize the automobile. 		
<i>Notes: SANDAG = San Diego Association of Governments; USGBC = United States Green Building Council</i>			

T-3.1: Improve land use and transportation planning to provide a well-connected transportation network. Higher-density and mixed-use neighborhoods with complete street design provide infrastructure for vehicles, bicycles, and pedestrians, allowing a shift from single-occupancy vehicles.

Source: Ascent Environmental 2017, EPIC 2017.

T-3.2: Concentrate commercial, mixed-use, and medium to high density residential development along transit corridors and near activity centers that can be served efficiently by public transit and alternative transportation modes (Policy LU-3.1).

Implementation Details

Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Policy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Utilize SANDAG TOD resources, including TOD white papers, to guide policy for implementation of Policy LU-3.1. Utilize SANDAG TOD Strategy "Recommended Strategies" in future General Plan and Specific Plan updates. Consider Zoning Code update to include TOD overlay zones. Prioritize active transportation projects that connect TOD areas with surrounding areas. 		

Notes: SANDAG = San Diego Association of Governments; TOD = Transit-Oriented Development

Source: Ascent Environmental 2017, EPIC 2017.

T-3.3: Enable residents to reduce their commutes by allowing and encouraging the creation of live/work units for artists, craftspeople, and other professions, promoting home occupations and telecommuting, and supporting other means of achieving a jobs/housing balance (Policy LU-3.2).

Implementation Details

Responsible Department	Community Development	Supporting Department	N/A
Task Type	Policy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Use cities that have adopted live/work ordinances as case studies and use policies appropriate to the City to be included in a Live/Work Ordinance, Live/Work Overlay Zone, or Live/Work District. Use the City of San Diego Regulation (Ch.14 General Regulations §141.0311 Live/Work Quarters) for guidance on updating planning standards regarding live/work units and districts. Consider adopting development incentives or streamlined permitting for mixed-use and live/work projects within designated live/work districts. Consider adopting development incentives or streamlined permitting to encourage live/work units within designated areas of the City. 		

Notes: N/A = Not Applicable

Source: Ascent Environmental 2017, EPIC 2017.

T-3.4: Identify and prioritize infrastructure improvements needed to support increased use of alternatives to private vehicle travel, including transit, bicycle, and pedestrian modes (Policy LU-3.3).			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Policy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Utilize SANDAG Smart Growth Planning Toolbox regarding multi-modal streets to inform transportation planning in the City. Consult SANDAG's Regional Plan to guide City and regionally relevant transportation planning projects. Prioritize projects in the City's 2005 Bicycle Transportation Plan that will reduce VMT for trips within the City and create important regional connections. Update/Compile existing information within the Bikeway Master Plan and associated documents into a comprehensive Active Transportation Plan. 		
<p><i>Notes: N/A = Not Applicable; SANDAG = San Diego Association of Governments; VMT = Vehicle Miles Travelled</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

Measure T-4: Increase commuting by mass transit to 10% of labor force

This measure would reduce VMT by single-occupancy vehicles by promoting use of public transportation. The City will achieve 10 percent mass transit ridership by its labor force.

<p>T-4 GHG Reduction Potential 429 MTCO_{2e}</p>

T-4.1: Advocate for funding of bus enhancements (i.e., Express [limited stops]) or BRT on the 101 Coast Highway.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	City Manager
Task Type	Advocacy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify potential partnerships with UCSD and NCTD in advocating for bus transit improvements (i.e. Route 101: Oceanside to V.A./UCSD via Hwy. 101) including but not limited to, express buses, transit stop improvements, and outreach and marketing for students. Promote the UCSD Triton U-Pass for UCSD students living in Solana Beach or commuting to work in Solana Beach. Advocate with other cities in northern San Diego County for increased transit services and frequency, focusing on specific strategies to reduce regional traffic congestion and commute-related VMT for City residents. Continue to apply for transit planning and project grants from regional, State, and federal agencies the focus on increasing local and regional transit ridership (e.g., Caltrans Sustainable Transportation Planning Grant for the Lomas Santa Fe Corridor Study). 		
<p><i>Notes: BRT = Bus Rapid Transit; Caltrans = California Department of Transportation; NCTD = North County Transit District; UCSD = University of California San Diego; VMT = Vehicle Miles Travelled</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-4.2: Advocate to NCTD and SANDAG to improve transit service and promote east-west shuttle on Lomas Santa Fe Drive. Support measures that prioritize mass transit over automobile projects.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Advocacy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Seek potential grant funding to research shuttle service systems for east-west shuttle on Lomas Santa Fe Drive, including partnerships with San Diego MTS, NCTD, and SANDAG (e.g., Caltrans Sustainable Transportation Planning Grant for the Lomas Santa Fe Corridor Study). Research and consider public-private partnerships with transportation network companies to provide shuttle and/or ride hailing services to City residents. Conduct feasibility study for shuttle on Lomas Santa Fe Drive, focused specifically on better connecting City residents to Amtrak and regional transit services. Continue to research and apply for any available grants from regional, State, and federal agencies focused on shuttle services, transit connections and/or increasing transit ridership (i.e. FAST act grant opportunities). 		
<p><i>Notes: Caltrans = California Department of Transportation; FAST = Fixing America's Surface Transportation; MTS = Metropolitan Transit System; NCTD = North County Transit District; SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-4.3: Collaborate with SANDAG on successfully implementing its North Coast TDM Plan and connect the City's employers and residents to travel-planning resources.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Utilize mode share data in the SANDAG NCC TDM Plan specific to the City and the NCC and TDM strategies to track mode split and mode shift. Connect residents and business owners with iCommute and Shiftsandiego.com website for commute planning and information. Provide information highlighting the benefits of TDM measures (e.g., SANDAG website) for employees, business owners, and City residents. Provide residents and business owners with information about mobile apps for trip planning, commute cost calculators, and real-time transit information. Utilize NCC TDM Plan targets and consider adoption of City-specific targets for SOV trip reductions. Actively promote mass transit to residents through outreach and targeted educational and marketing materials (e.g., website or e-blast). 		
<p><i>Notes: NCC = North Coast Corridor; SANDAG = San Diego Association of Governments; SOV = Single-Occupancy Vehicle; TDM = Transportation Demand Management</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-4.4: Improve connectivity (by public transit, bicycle infrastructure, and pedestrian walkways) to the Solana Beach train station for access to commuter rail.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> • Use SANDAG’s Smart Growth Toolbox, specifically the Smart Growth Design Guidelines and the Complete Streets resources, to inform active transportation planning and the development of an Active Transportation Plan. • Use the San Diego Regional Bicycle Plan to inform priority projects in the City and in the NCC. • Work with Amtrak to develop first-last mile solutions for City residents to encourage transit commuting using the SANDAG First-Last Mile Solutions for Transit Centers document. • Ensure the development of the Active Transportation Plan includes connections to the City train station for active transportation modes using the SANDAG Smart Growth Design Guidelines. 		
<p><i>Notes: NCC = North Coast Corridor; SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-4.5: Implement the General Plan’s Circulation Element for a “Complete Streets” approach in designing streets, which considers every transportation mode and user for applicable arterial streets and incorporates multi-modal design and principles in all projects.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Policy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Incorporate “Complete Streets” designs into all future right of way projects within the City, and use SANDAG Smart Growth Toolbox resources to inform discretionary project review. • Consider official City adoption of chosen Complete Streets design guidelines to inform transportation planning projects in the City (i.e. NACTO guidelines, SANDAG Smart Growth Design Guidelines). • Continue to seek funding from active transportation planning grant opportunities from State and federal agencies (e.g., Caltrans Sustainable Transportation Planning Grant for the Lomas Santa Fe Corridor Study) and use funds to develop an Active Transportation Plan. 		
<p><i>Notes: Caltrans = California Department of Transportation; NACTO = National Association of City Transportation Officials; SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

Measure T-5: Increase preferred parking for EVs and AFVs to 20% of eligible parking spots

Providing increased parking for EVs and AFVs would encourage the transition from conventional vehicles to low-emission vehicles. The City will increase preferred parking for EVs and AFVs.

T-5
GHG Reduction Potential
325 MTCO_{2e}

T-5.1: Identify eligible on-street parking spots and spots in City-owned lots for conversion to preferred parking for EVs and AFVs.			
Implementation Details			
Responsible Department	Engineering & Public Works/ Community Development	Supporting Departments	City Manager
Task Type	Research	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Conduct a Parking Inventory Study to identify eligible public parking spaces and areas in the City for EV and AFV Charging Stations. Utilize San Diego REVI Working Group resources to inform EV/AFV planning in the City (e.g., Regional Planning for Public Charging in San Diego, San Diego Regional Plug-In EV Readiness Plan, 2014, San Diego Regional Alternative Fuel Readiness Plan, 2016). Work with EV vendors and utility (i.e. SDG&E Power Your Drive Program or potential CCA equivalent program) to install EV charging stations at City-owned parking lots, parks, and properties, and set target for charging stations in the City. 		
<p><i>Notes: AFV = Alternative-Fueled Vehicle; EV = Electric Vehicle; REVI = Regional Plug-in Electric Vehicle Infrastructure; SDG&E = San Diego Gas and Electric</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-5.2: Explore modifying the Solana Beach Municipal Code parking standard requirements to incentivize parking stalls for EVs and charging stations as a credit toward parking requirements.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	City Manager
Task Type	Ordinance	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Conduct a Parking Inventory Study to identify eligible EV parking spaces and track progress towards 20% EV/AFV parking space goal. Use cities that have implemented EV parking programs as case studies to understand options for future updates to the Municipal Code. Explore options for incentivizing EV parking spaces as credits towards parking requirements, including preferred location, free parking for EV/AFV in City owned spaces, and free limited charging. Review suggested Code Changes for Nonresidential Buildings Technical and Cost Analysis Report for deeper understanding of costs and benefits of code changes and mechanisms to implement changes. Use OPR's Plug-In Electric Vehicle Infrastructure Permitting Checklist and the Zero-Emission Vehicles in California: Community Readiness Guidebook to inform EV planning decisions. Use model EV Ordinance from OPR and California Building Officials AB1236 Tool Kit to update City building code to be "EV ready." 		

T-5.2: Explore modifying the Solana Beach Municipal Code parking standard requirements to incentivize parking stalls for EVs and charging stations as a credit toward parking requirements.

- Conduct outreach with the City’s businesses and commercial property owners to encourage the conversion of private parking spaces to EV and AFV preferred parking.

Notes: AB = Assembly Bill; AFV = Alternative-Fueled Vehicle; EV = Electric Vehicle; OPR = Governor’s Office of Planning and Research

Source: Ascent Environmental 2017, EPIC 2017.

T-5.3: Install dedicated stalls for EV parking and charging stations at City facilities.

Implementation Details

Responsible Department	Engineering & Public Works	Supporting Department	City Manager
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Set specific parking standard ratios for EV to non-EV spaces (i.e. 1:5). • Install 25 (or new appropriate number based on calculations) publicly accessible 240-V charging stations at locations community-wide. 		

Notes: EV = Electric Vehicle; V = Volt

Source: Ascent Environmental 2017, EPIC 2017.

T-5.4: Conduct outreach and education for the City’s businesses and commercial property owners to encourage the conversion of private parking spaces to EV and AFV preferred parking.

Implementation Details

Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Set specific parking standard ratios for EV to non-EV spaces (i.e. 1:5). • Install 25 (or new appropriate number based on calculations) publicly accessible 240-V charging stations at locations community-wide. • Research and explore options for implementing an EV car sharing network to serve the city. • Consider options for installing EV chargers as part of street lamp infrastructure. 		

Notes: AFV = Alternative-Fueled Vehicle; EV = Electric Vehicle; V = Volt

Source: Ascent Environmental 2017, EPIC 2017.

Measure T-6: Retime four traffic signals

Retiming traffic signals would have traffic flow smoothing effects leading to reduced fuel use by on-road vehicles at affected intersections. The City will retime four traffic signals.

T-6
GHG Reduction Potential
144 MTCO₂e

T-6.1: Conduct a traffic study to identify candidate traffic lights along arterials that could be re-timed.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	N/A
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify staff resources and/or consulting resources needed to conduct a traffic signal study. Use study results to analyze options for traffic system timing improvements and implement most appropriate option(s). Initiate ongoing monitoring of changes and track long-term results and GHG reductions associated with measure. 		
<i>Notes: N/A = Not Applicable; CAC = Climate Action Commission; GHG = greenhouse gas</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

T-6.2: Retime identified traffic signals to reduce delays and vehicle idling.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	N/A
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Ensure traffic study and traffic signal system updates include recommendations to reduce delays and vehicle idling. Ensure traffic study and subsequent recommendations include GHG reduction quantification of recommended traffic signal system updates. 		
<i>Notes: GHG = greenhouse gas; N/A = Not Applicable</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure T-7: Promote telecommuting to achieve 10% participation

Telecommuting can contribute to VMT reduction by allowing employees to work from home and avoid a daily commute. The CAP goal is to achieve participation from 10 percent of the eligible labor force. The City will promote telecommuting and increase telecommuting participation to 10 percent.

T-7
GHG Reduction Potential
86 MTCO₂e

T-7.1: Collaborate with SANDAG on successfully implementing its North Coast TDM Plan (SANDAG 2013) and connect the City’s employers and residents to travel-planning resources.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Collaboration	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Connect residents and business owners with iCommute and Shiftsandiego.com website for information about telecommuting options. • Provide information highlighting the benefits of telecommuting (see SANDAG’s website) for employees and employers on City’s website. • Consider adopting telecommuting policy for City staff (i.e. flexible work schedules, remote working, and condensed work schedules). 		
<p><i>Notes: SANDAG = San Diego Association of Governments; TDM = Transportation Demand Management</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-7.2: Review KPIs in SANDAG’s TDM Implementation Plan at least once annually.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Administrative	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> • Use some or all the KPIs in the NCC TDM Plan to monitor progress on TDM and related measures in the City: <ul style="list-style-type: none"> ➤ Activities: quantification of TDM program marketing and outreach activities; ➤ Awareness: exposure to and awareness of TDM programming and knowledge of access to non-SOV modes; ➤ Participation: participation in TDM programming aimed to facilitate use of non-SOV modes; ➤ Satisfaction: satisfaction with execution and delivery of TDM programming; and ➤ Impacts: initial and continued shifts to non-SOV modes with TDM program assistance. 		
<p><i>Notes: KPI = Key Performance Indicators; NCC = North Coast Corridor; SOV = Single-Occupancy Vehicle; TDM = Transportation Demand Management</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-7.3: Work with local office-based businesses to encourage telecommuting. Telecommuting should not impede on normal business practices and may not be suitable for businesses that require physical employee presence, such as retail storefronts and warehouses.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Outreach	Implementation Timeline	Mid-Term

T-7.3: Work with local office-based businesses to encourage telecommuting. Telecommuting should not impede on normal business practices and may not be suitable for businesses that require physical employee presence, such as retail storefronts and warehouses.	
Implementation Tasks	<ul style="list-style-type: none"> • Work with eligible employers (i.e. office-based) to conduct Employee Travels Surveys to understand telecommuting preferences and characteristics for employees. Use commuting patterns mapped by SANDAG to further inform the process. • Provide information on benefits of telecommuting to employers in the City, targeting ideal candidates for telecommuting (i.e. computer-based work, long commute distances).
<p><i>Notes: SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>	

T-7.4: Conduct educational outreach to residents and businesses to disseminate information about resources, such as SANDAG's iCommute program, to reduce commuter trips.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Outreach	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Identify 3-5 largest employers appropriate for increased telecommuting and provide information on benefits of telecommuting, as well as resources and tools (see SANDAG TDM Program Resources). • Utilize SANDAG Telework Pilot Project resources to highlight regional relevance and feasibility of telecommuting practices for employers in the City. • Use SANDAG Telework Pilot Project results to inform targeted outreach for employees and employers likely to switch to telecommuting. • Explore other forms of outreach to disseminate information to a wider audience including, but not limited to, posting to the City's website and preparing outreach materials. 		
<p><i>Notes: SANDAG = San Diego Association of Governments; TDM = Transportation Demand Management</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

Measure T-8: Convert municipal gasoline-fueled vehicle fleet to EVs to achieve 50% gasoline reduction

The City maintains a vehicle fleet for municipal operations use. Converting municipal gasoline-fueled vehicle fleet to EVs or AFVs will reduce gasoline use and reduce GHG emissions. The current fleet gasoline consumption is approximately 12,000 gallons. The CAP goal is to reduce gasoline consumption in the municipal fleet by 50 percent. The City will reduce its current gasoline consumption by 50 percent.

<p>T-8 GHG Reduction Potential 56 MTCO₂e</p>
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T-8.1: Replace the City’s municipal fleet with EVs and AFVs to achieve the 50 percent reduction in gasoline consumption from current levels.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	City Manager
Task Type	Program	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Allocate specific funds or funding mechanisms to cover increased cost of purchasing EV’s and AFV’s. Utilize San Diego Regional Clean Cities resources and services to plan the fleet transition process and apply for available grant funding. Develop fleet transition timeline to achieve 50% gasoline reduction target from City fleet vehicles and continually track and report on fleet transition progress. 		
<i>Notes: AFV = Alternative-Fueled Vehicle; EV = Electric Vehicle</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

T-8.2: Adopt a clean vehicle purchasing policy for new fleet vehicles.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Policy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify staff resources and stakeholders involved in vehicle purchasing policy decision and explore fuel options for various vehicle types. Develop policy with relevant stakeholders and City staff that will implement the policy (I.e. Public Works, General Services). Adopt policy through appropriate planning process (i.e. City Council adoption). 		
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure T-9: Increase commuting by walking to 5% of labor force

This measure would reduce emissions by encouraging more commuters to walk to work. The City will increase the labor force commuting by walking to five percent.

<p>T-9 GHG Reduction Potential 16 MTCO₂e</p>
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T-9.1: Implement the General Plan’s Circulation Element for a “Complete Streets” approach in designing streets, which considers every transportation mode and user for applicable arterial streets and incorporates multi-modal design and principles in all projects.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development

T-9.1: Implement the General Plan’s Circulation Element for a “Complete Streets” approach in designing streets, which considers every transportation mode and user for applicable arterial streets and incorporates multi-modal design and principles in all projects.			
Task Type	Policy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Use SANDAG Smart Growth Tool Box and Design Guidelines to inform complete streets projects and the development of the Active Transportation Plan. • Consider conducting a Community Travel Survey to better understand residents commute behavior and opportunities to promote walking. • Incorporate walking commute goals into relevant land use decisions, specifically those that address jobs-housing balance issues. • Promote and prioritize live/work and mixed-use development projects to increase number of residents who can easily walk to work. • Monitor implementation of the General Plan through tracking of pedestrian-specific improvements (i.e. miles of new sidewalk installed, number of intersection safety improvements). 		
<p><i>Notes: SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-9.2: Implement the General Plan’s Circulation Element and develop and implement a Pedestrian Master Plan that would comprehensively review and plan for pedestrian improvements and identify mobility linkages to promote walkability and safety for pedestrians.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Plan	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Prioritize projects in the City’s Comprehensive Active Transportation Strategy that promote walking trips and would increase ability for walking commute trips. • Identify gaps in the sidewalk network within the City and prioritize projects that would increase connectivity to employment centers in the City. • Prioritize implementation of Goal B-8.0 in the Comprehensive Active Transportation Strategy document and corresponding policies to inform design decisions for discretionary projects in the City. • Work with Bike Walk Solana and other advocacy groups to help develop and support pedestrian infrastructure projects in the City. • Consider development of a Pedestrian Master Plan or incorporating pedestrian planning into an Active Transportation Plan. 		
<p><i>Notes:</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

Measure T-10: Increase commuting by bicycling by achieving approximately 17 bike lane miles

The City currently has 10 miles of bicycle lanes within its 3.5 square mile jurisdiction, translating to approximately three bike lane miles per square mile. The City is currently implementing a plan to increase this number to 13 lane miles by 2019, or approximately four bike lane miles per square mile. The CAP goal is to achieve an additional mile per square mile by 2035, or approximately five bike lane miles per square mile. This converts to approximately 17 bike lane miles by 2035.

T-10
GHG Reduction Potential
11 MTCO₂e

T-10.1: Implement the General Plan’s Circulation Element and continue to update and implement the City’s Bicycle Transportation Plan that identifies optimal bicycle routes to optimal destinations in the City, connects the regional bicycle path network, and prioritizes effective bicycle path routes for implementation.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Plan	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Use recommendations in Ch. 6 Active Transportation Network Recommendations of the Comprehensive Active Transportation Strategy document to prioritize bicycle planning and projects in the City. Use SANDAG’s Smart Growth Tool Box and Design Guidelines to inform bicycle planning projects and the development of a future Active Transportation Plan. Conduct a Community Travel Survey to better understand residents’ commute behavior and opportunities to promote biking to work and other destinations. Incorporate bike commute mode share goals into relevant future land use decisions that may increase City’s bike mode share. Monitor implementation of the general plan through tracking of bicycle specific improvements (i.e. miles of new sidewalk installed, number of intersection safety improvements). 		
<i>Notes: SANDAG = San Diego Association of Governments</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

T-10.2: Adopt and implement the Comprehensive Active Transportation Strategy that provides the foundation for improved bicycle and pedestrian facilities within the City and connections to adjacent jurisdictions and greater regional networks over the next 15 years.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Policy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Prioritize projects in the City’s Comprehensive Active Transportation Strategy that promote walking trips and would increase ability for walking commute trips. Identify gaps in sidewalk network within the City and prioritize projects that would increase connectivity to employment centers in the City. Prioritize implementation of Goal B-8.0 in the Comprehensive Active Transportation Strategy document and corresponding policies to inform design decision for discretionary projects in the City. 		

T-10.2: Adopt and implement the Comprehensive Active Transportation Strategy that provides the foundation for improved bicycle and pedestrian facilities within the City and connections to adjacent jurisdictions and greater regional networks over the next 15 years.	
	<ul style="list-style-type: none"> • Work with Bike Walk Solana and other advocacy groups to help develop and support pedestrian infrastructure projects in the City. • Prioritize bicycle infrastructure projects in the Comprehensive Active Transportation Strategy that would increase bike commute mode share in the City.
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>	

T-10.3: Make existing bike lanes more user-friendly.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Identify locations to install additional bicycle racks and repair stations. • Implement green bike boxes at key locations, e.g., Hwy 101 at Lomas Santa Fe going north. Green bike boxes are painted queuing areas for bicyclists to wait safely at intersections and get through an intersection before vehicles. This would improve bicycle positioning, increase bicycle safety, and decrease right turn waiting times and, in turn, vehicle idling. • Add buffered bike lanes, as well as wider bike lanes wherever mentioned to continue to improve bicycle facilities in the City. • As part of active transportation planning efforts, during special events, locate the first new bicycle repair station directly in front of City Hall to continue Bike Solana Beach branding. 		
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

T-10.4: Increase the number of publicly available bike parking spaces in the City .			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Update the City's development code to increase bike parking requirements for new development and large renovations in the City. • Reference CALGreen Tier 1 bicycle parking requirements to increase requirements in the City. • Include measures in the anticipated Active Transportation Plan to increase bike parking for all appropriate land uses. 		
<i>Notes: CALGreen = California Green Building Standards Code</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure T-11: Promote alternative work schedule to achieve participation from 1% of labor force

An alternative work schedule serves to reduce VMT by avoiding commuter trips during rush hour traffic. The City will increase the labor force with a four-day-a-week work schedule to one percent.

T-11
GHG Reduction Potential
9 MTCO₂e

T-11.1: Identify employers in the City that could be candidates for alternative work schedules.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	City Manager
Task Type	Research	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Conduct a Community Travel Survey to better understand residents' commute behavior and opportunities to promote alternative work schedules. Identify potential employers through the Travel Survey and conduct a pilot program with one or two participating employers. After successful implementation of the pilot program, expand advocacy and education to other employers. 		
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

T-11.2: Collaborate with SANDAG to encourage alternative work schedules for the City's employers.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A
Task Type	Collaboration	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Use NCC TDM Plan's alternative work schedule strategies to work with employers in the City to develop a pilot program. Use available staff and resources at SANDAG to provide educational workshops for employers wishing to implement alternative work schedule policies. 		
<i>Notes: N/A = Not Applicable; NCC = North Coast Corridor; SANDAG = San Diego Association of Governments; TDM = Transportation Demand Management</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

T-11.3: Conduct surveys for City residents to identify opportunities for alternative work schedules for commuters that work outside the City.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	City Manager
Task Type	Research	Implementation Timeline	Long-Term

T-11.3: Conduct surveys for City residents to identify opportunities for alternative work schedules for commuters that work outside the City.	
Implementation Tasks	<ul style="list-style-type: none"> • Use SANDAG resources and/or consultant resources to conduct a City Commuter Travel Survey. • Identify the 3-5 largest employers in the City and region with employees that work outside the City to begin surveying the population.
<p><i>Notes: SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>	

T-11.4: Collaborate with SANDAG on successfully implementing its North Coast TDM Plan and connect the City’s employers and residents to travel-planning resources.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Collaboration	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Connect residents and business owners with Shiftsandiego.com website for information about alternative work schedules. • Provide information highlighting the benefits of alternative work schedules (see SANDAG Website) for employees and employers on City website. • Adopt targets to achieve a 1% labor force participation rate for a condensed four-day work week. • Adopt alternative work schedules policy for City staff to promote benefits of the policy. 		
<p><i>Notes: SANDAG = San Diego Association of Governments</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-11.5: Review KPIs in SANDAG’s TDM Implementation Plan at least once annually.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Administrative	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> • Consider using some or all the KPIs in the NCC TDM Plan to monitor progress on TDM and related measures in the City: <ul style="list-style-type: none"> ➤ Activities: quantification of TDM program marketing and outreach activities; ➤ Awareness: exposure to and awareness of TDM programming and knowledge of access to non-SOV modes; ➤ Participation: participation in TDM programming aimed to facilitate use of non-SOV modes; ➤ Satisfaction: satisfaction with execution and delivery of TDM programming; and ➤ Impacts: initial and continued shifts to non-SOV modes with TDM program assistance." (KPIs NCC TDM Plan P. 46). 		
<p><i>Notes: KPI = Key Performance Indicators; NCC = North Coast Corridor; SANDAG = San Diego Association of Governments; SOV = Single-Occupancy Vehicle; TDM = Transportation Demand Management</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

T-11.6: Conduct educational outreach to residents and businesses to disseminate information about resources such as SANDAG's iCommute program to reduce commuter trips.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Outreach	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify the 3-5 largest employers in the City and region eligible for increased alternative work schedules and provide information on benefits of alternative work schedules, as well as resources and tools (e.g., SANDAG TDM Program Resources). Utilize SANDAG's Telework Pilot Project resources to highlight regional relevance and feasibility of alternative work schedule practices for employers in the City. 		
<i>Notes: SANDAG = San Diego Association of Governments; TDM = Transportation Demand Management</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

2.1.2. Renewable Energy and Buildings

Measure E-1: Implement a Community Choice Aggregation program, and provide 100 percent renewable energy by 2035

The CAP goal is to achieve 100 percent renewable electricity supply from this measure by 2035. The City can expand its supply of renewable energy through Community Choice Aggregation (CCA). CCA programs enable local governments to aggregate electricity demand within their jurisdictions to procure alternative energy supplies while maintaining the existing electricity provider for transmission and distribution services. Typically for these programs, residents are automatically enrolled but can opt-out at any time. A CCA program would aid in reducing GHG emissions in the City by reducing the emissions factor for electricity. The goal of this measure is to supply 100 percent renewable electricity through a CCA program. It should be noted that while the majority of the electricity supply in the City is anticipated to be from the CCA, a portion of the electricity may still be supplied by other sources, including SDG&E (which is assumed to achieve the mandated 50 percent renewable mix in 2030), and the installation of residential and commercial solar PV systems. Because SDG&E's supply is assumed to meet the 50 percent renewable mix by 2030, consistent with State regulations, the overall mix of electricity in the City would be 96 percent renewables. For more information on the renewable electricity mix in 2035 and assumptions made, please refer to Appendix B to the CAP.

<p>E-1 GHG Reduction Potential 10,466 MTCO₂e</p>
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E-1.1: Continue with implementation of a CCA to achieve the 100 percent renewable energy goal, based on the technical analysis conducted previously.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Finance & Budget
Task Type	Program	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> Continue to develop the CCA program for a potential June 1, 2018 launch. Finalize Risk Management Policy and Procurement Strategy for City Council approval. 		

E-1.1: Continue with implementation of a CCA to achieve the 100 percent renewable energy goal, based on the technical analysis conducted previously.	
	<ul style="list-style-type: none"> • Procure power and complete all necessary regulatory requirements through the CPUC and CAISO. • Finalize rates through approval of City Council. • Launch the CCA.
<p><i>Notes: CCA = Community Choice Aggregation; CAISO = California Independent System Operator; CPUC = California Public Utilities Commission</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>	

E-1.2: Explore opportunities to collaborate with other cities in the region for a regional CCA for San Diego County.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> • Continue to collaborate with neighboring jurisdictions in the San Diego region to assist them with CCA development or a potential partnership in a CCA JPA • Conduct joint meetings to share information and share resources, where feasible 		
<p><i>Notes: CCA = Community Choice Aggregation; Joint Powers Authority = JPA</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-1.3: Explore opportunities to source renewable energy – whether via CCA or otherwise – from our region.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Research	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Promote the City’s CCA 100% renewable energy opt in option, or roof-top solar incentive program for City residents, businesses, and relevant organizations to encourage individuals to purchase or generate 100% renewable energy for their home or business. • Enroll the City in the CCA’s 100 renewable energy opt in option. 		
<p><i>Notes: CCA = Community Choice Aggregation; SDG&E = San Diego Gas and Electric</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-1.4: Support statewide energy decarbonization, renewable energy, and similar initiatives and consider supporting the State call for federal carbon fee and dividend legislation, pending Council consideration and approval.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A

E-1.4: Support statewide energy decarbonization, renewable energy, and similar initiatives and consider supporting the State call for federal carbon fee and dividend legislation, pending Council consideration and approval.			
Task Type	Advocacy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Work with relevant State agencies and organizations to advocate for statewide energy decarbonization and renewable energy by participating in public meetings, writing letters of support for relevant legislation and initiatives, and working with regional and state representatives. Include all relevant information and materials about statewide energy decarbonization, carbon fee and dividend program, and other related initiatives in the City's outreach efforts for implementation of the CAP, including, but not limited to, the City's Green Flash homepage. 		
<p><i>Notes: CAP = Climate Action Plan; N/A = Not Applicable;</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

Measure E-2: Achieve 10.8 MW residential rooftop solar photovoltaic systems

Residential solar PV capacity was approximately 0.4 megawatts (MW) from approximately 18 interconnected systems in 2010. In the past few years, residential solar system installation has increased rapidly in the City, with more than 70 systems interconnected in 2015 alone, and a total of 1.6 MW at the end of 2015. This measure assumes that this trend will continue, with 0.5 MW capacity added every year in the residential sector. The City will reach 10.8 MW, or approximately 2,000 single-family and multi-family homes, of residential rooftop solar PV systems.

<p>E-2 GHG Reduction Potential 5,858 MTCO₂e</p>

E-2.1: Work with SDG&E and local non-profit organizations, or through the City's CCA, to reach 100 percent of households annually with targeted educational and marketing materials (e.g., website or e-blast).			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Conduct outreach using materials from the CSI rebate program to highlight the benefits of residential solar and financing opportunities for purchasing and installation of residential solar systems. Set out targets and timeline for conducting outreach. Periodically monitor outreach progress and conduct analysis on effectiveness of outreach measures used and change accordingly. Work with SDG&E and PACE to promote residential solar and financing opportunities through targeted outreach campaigns, including, but not limited to, the City's Green Flash homepage, at local events (e.g., farmers markets), and through targeted media campaigns. 		
<p><i>Notes: CCA = Community Choice Aggregation; CSI = California Solar Initiatives; N/A = Not Applicable; PACE = Property Assessed Clean Energy; SDG&E = San Diego Gas and Electric</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-2.2: Continue to provide expedited permitting incentives for installation of rooftop solar PV systems on residential buildings.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Ordinance	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> Continue to implement Ordinance 456 (September 2015). Monitor performance of Ordinance 456 and track the rate of PV system installation before and after establishment of the Ordinance. 		
<p><i>Notes: PV = Photovoltaic</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-2.3: Conduct educational outreach to residents about incentives available for installation of PV systems.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify opportunities to promote solar PV resources and programs at local events (e.g., farmers markets), at relevant City offices, on the City website (including the City's Green Flash homepage), and through targeted media campaigns. Provide solar system information pertaining to permitting, financing, and installation in the City's Planning Department and planning counter to promote installation of residential solar systems. 		
<p><i>Notes: PV = Photovoltaic</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-2.4: Explore the development of an ordinance requiring installation of solar PV systems for major remodel/renovation projects.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Analyze historic permitting data on remodeling and renovations in the City to assess feasibility and pertinence of adopting a solar PV ordinance for major remodel/renovation projects. Use other cities who have adopted similar ordinances as case studies to gain insight on best practices and feasibility of ordinance for the City. Consider options for incentivizing homeowners to install solar PV during the renovation or remodeling process, such as waiving permitting fees, streamlined permitting processes, and providing information about financing options. 		

E-2.4: Explore the development of an ordinance requiring installation of solar PV systems for major remodel/renovation projects.

Notes: PV = Photovoltaic

Source: Ascent Environmental 2017, EPIC 2017.

Measure E-3: Achieve 2 MW commercial rooftop solar photovoltaic systems

The commercial solar PV capacity in the City was less than 0.1 MW, with less than five systems interconnected in 2010. Ten new systems have been interconnected at commercial spaces since 2010 and new opportunities for commercial solar PV systems are available citywide. Under this measure, the City will reach 2 MW of commercial rooftop solar PV systems.

E-3
GHG Reduction Potential
1,085 MTCO_{2e}

E-3.1: Work with SDG&E, or through a CCA, to reach 100 percent of businesses and schools annually with targeted educational and marketing materials (e.g., website or e-blast).

Implementation Details

Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Conduct outreach using materials from CSI rebate program to highlight the benefits of non-residential solar systems and financing opportunities. Set targets and timeline for conducting outreach. Periodically monitor outreach progress and conduct analysis on effectiveness of outreach measures used and change accordingly. Work with CCA, SDG&E, and other organizations to promote non-residential solar and financing opportunities through targeted outreach campaigns, including, but not limited to, the City's Green Flash homepage, at local events (e.g., farmers markets), and through targeted media campaigns. Work with local schools to encourage solar PV development. 		

Notes: CCA = Community Choice Aggregation; California Solar Initiatives; N/A = Not Applicable; PV = Photovoltaic; SDG&E = San Diego Gas and Electric

Source: Ascent Environmental 2017, EPIC 2017.

E-3.2: Continue to provide expedited permitting incentives for installation of rooftop solar PV systems on commercial buildings.

Implementation Details

Responsible Department	Community Development	Supporting Department	N/A
Task Type	Ordinance	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> Continue implementation of Ordinance 456 (September 2015). 		

E-3.2: Continue to provide expedited permitting incentives for installation of rooftop solar PV systems on commercial buildings.	
	<ul style="list-style-type: none"> Monitor performance of Ordinance 456 and track the rate of PV system installation before and after establishment of the Ordinance.
<p><i>Notes: N/A = Not Applicable; PV = Photovoltaic</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>	

E-3.3: Conduct educational outreach to local businesses about incentives available for installation of PV systems.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify opportunities to promote solar PV resources and incentives at local events (e.g., farmers markets), at relevant City offices, on the City website (including the City's Green Flash homepage), and through targeted media campaigns. Work with regional green building organizations to conduct workshops with local green building contractors on non-residential solar systems. Explore opportunities for public/private partnership for rooftop solar on commercial buildings and large residential projects. 		
<p><i>Notes: PV = Photovoltaic</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-3.4 Through the City's CCA, support the development of community solar projects that benefit all residents, including lower-income communities.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Promote working with San Diego GRID Alternatives to expand residential solar installations in the low-income communities. Identify subsidies available, including, but not limited to, the Go Solar California Initiative for low-income residents to install solar PV. Identify opportunities for community solar projects at schools, public parking lots (solar carport), and community organizations. Promote the development of community solar projects through outreach and targeted educational and marketing materials. 		
<p><i>Notes: CCA = Community Choice Aggregation; N/A = Not Applicable; PV = Photovoltaic</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-3.5: Explore the development of a mandatory ordinance requiring “solar ready” or the installation of solar PV systems for new commercial development and major remodel/renovation projects, pending Council consideration and approval.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Use OPR’s Solar Permitting Guidebook to inform the type of ordinance the City should consider adopting. • Use other cities (e.g., City of San Francisco) that have adopted similar ordinances as case studies to gain insight on best practices and how to best design a non-residential solar PV ordinance for new non-residential construction. • Work with City Council and key stakeholders on adoption of an ordinance requiring mandatory solar system installation for future non-residential projects. 		
<i>Notes: N/A = Not Applicable; OPR = Governor’s Office of Planning and Research; PV = Photovoltaic</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

E-3.6: Establish policies, programs, and ordinances that promote the siting of new onsite PV generation and energy storage, pending Council consideration and approval.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Use OPR, CEC, and related resources (i.e. AB 2713) to inform the type of ordinance the City should consider adopting. • Use other cities that have adopted similar ordinances as case studies to gain insight on best practices and how best to design an ordinance requiring energy storage systems and how best to integrate with PV solar systems. • Work with City Council and key stakeholders on adoption of mandatory solar system installation for energy storage systems. 		
<i>Notes: AB = Assembly Bill; CEC = California Energy Commission; N/A = Not Applicable; OPR = Governor’s Office of Planning and Research; PV = Photovoltaic</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure E-4: Install solar hot water heating at 20 percent of existing commercial spaces

On average, six percent of commercial building energy use is for water heating. The CAP aims to retrofit 20 percent of existing commercial spaces in the City with solar hot water heaters (SHW). It was assumed that 60 percent of existing water heaters are fueled by natural gas, while the remaining 40 percent are fueled by electricity. The City will retrofit 20 percent of its existing commercial spaces with SHWs.

<p>E-4 GHG Reduction Potential 2,811 MTCO₂e</p>

E-4.1: Work with SDG&E, or through a CCA, to reach 100 percent of businesses annually with targeted educational and marketing materials (e.g., website or e-blast).			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Conduct outreach using materials from CSI rebate program to highlight the benefits of commercial SHWs (i.e. savings) and include resources from CCA, gosolarcalifornia.com, SDG&E, and the CEC. Set targets and timeline for conducting outreach. Periodically monitor outreach progress and conduct analysis on effectiveness of outreach measures used and change accordingly. Work with CCA and SDG&E to promote non-residential solar hot water heating systems and financing opportunities through targeted outreach campaigns, including, but not limited to, the City's Green Flash homepage, at local events (e.g., farmers markets), and through targeted media campaigns. 		
<p><i>Notes: CCA = Community Choice Aggregation; CEC = California Energy Commission; CSI = California Solar Initiatives; N/A = Not Applicable; SDG&E = San Diego Gas and Electric</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-4.2: Promote the installation of SHWs by publicizing incentives, rebates, and financing options, such as PACE financing, CSIs, or CSI-Thermal Program, for existing commercial buildings by posting on the City's website or e-blast.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Provide solar hot water system information pertaining to permitting, financing and installation at the City's Planning Department planning counter, on the Planning Department website, and in City promotional materials to promote installation of residential SHW systems. Partner with key local organizations and businesses (i.e. contractors, green building council) to assist in outreach efforts and promotion of SHW systems. 		
<p><i>Notes: CSI = California Solar Initiatives; PACE = Property Assessed Clean Energy; SHW = Solar Hot Water Heaters</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-4.3: Explore the development of a mandatory ordinance requiring installation of SHWs for major remodel/renovation projects.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	City Manager
Task Type	Ordinance	Implementation Timeline	Mid-Term

E-4.3: Explore the development of a mandatory ordinance requiring installation of SHWs for major remodel/renovation projects.	
Implementation Tasks	<ul style="list-style-type: none"> • Use CSI resources to inform the type of ordinance the City should consider adopting. • Use other cities that have adopted similar ordinances as case studies to gain insight on best practices and how best to design a SHW ordinance. • Consult with City Council and key stakeholders on adoption of SHW ordinance for major commercial remodels and renovations.
<p><i>Notes: California Solar Initiatives; SHW = Solar Hot Water Heaters</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>	

Measure E-5: Install solar hot water heating at 25% of new homes and home retrofits

E-5
GHG Reduction Potential
539 MTCO₂e

The CAP goal is retrofit 25 percent of existing homes with SHWs and install SHWs in 25 percent of new homes in the City

E-5.1: Work with SDG&E, or through a CCA, to reach 100 percent of households annually with targeted educational and marketing materials (e.g., website or e-blast).			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Conduct outreach to highlight the benefits of residential SHWs (i.e. savings) and include resources from CCA, gosolarcalifornia.com, SDG&E, and the CEC. • Set targets and timeline for conducting outreach. • Periodically monitor outreach progress and conduct analysis on effectiveness of outreach measures used and change accordingly. • Work with CCA and SDG&E to promote residential SHWs and financing opportunities through targeted outreach campaigns, including, but not limited to, the City's Green Flash homepage, at local events (e.g., farmers markets), and through targeted media campaigns. 		
<p><i>Notes: CEC = California Energy Commission; N/A = Not Applicable; SDG&E = San Diego Gas and Electric; SHW = Solar Hot Water Heaters</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-5.2: Promote the installation of SHWs by publicizing incentives, rebates, and financing options, such as PACE financing, CSI, or CSI-Thermal Program, for existing residential buildings by posting on the City's website or e-blast.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Short-Term

E-5.2: Promote the installation of SHWs by publicizing incentives, rebates, and financing options, such as PACE financing, CSI, or CSI-Thermal Program, for existing residential buildings by posting on the City’s website or e-blast.	
Implementation Tasks	<ul style="list-style-type: none"> • Provide SHW information pertaining to permitting, financing, and installation at the City’s Planning Department planning counter, on the Planning Department website, and in City promotional materials to promote installation of residential solar hot water heating systems. • Partner with key local organizations and businesses (i.e. contractors, green building council) to assist in outreach efforts and promotion of SHWs.
<p><i>Notes: CSI = California Solar Initiatives; N/A = Not Applicable; PACE = Property Assessed Clean Energy; SHW = Solar Hot Water Heaters</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>	

E-5.3: Explore the development of an ordinance requiring installation of SHWs for new homes and major remodel/renovation projects.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Use CSI resources to inform the type of ordinance the City should consider adopting. • Use other cities that have adopted similar ordinances as case studies to gain insight on best practices and how best to design a SHW ordinance. • Consult with City Council and key stakeholders on adoption of a residential SHW ordinance for new homes and large remodels and renovations. 		
<p><i>Notes: CSI = California Solar Initiatives; N/A = Not Applicable; SHW = Solar Hot Water Heaters</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

Measure E-6: Reduce in non-space/water heating residential natural gas use by 15%

In California, approximately 22 percent of household end-use natural gas consumption is from non-space and water heating natural gas use. Other natural gas use includes cooking appliances, clothes washers and dryers, dishwashers, and other small appliances. The CAP goal is to reduce 15 percent of the non-space/water heating natural gas use by 2035. The City will reduce non-space/water heating residential natural gas use by promoting energy efficient appliance upgrades, rebates, and expedited permitting services.

<p>E-6 GHG Reduction Potential 359 MTCO₂e</p>

E-6.1: Provide incentives to reduce 15 percent of non-space/water heating natural gas use, such as dryers, ovens, and cooktops, for new and existing residential buildings by 2035.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development

E-6.1: Provide incentives to reduce 15 percent of non-space/water heating natural gas use, such as dryers, ovens, and cooktops, for new and existing residential buildings by 2035.			
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Provide energy efficiency appliance upgrade information pertaining to permitting, financing, and installation at local events (e.g., farmers markets), at relevant City offices, on the City website (including the City's Green Flash homepage), and through targeted media campaigns. Partner with key local organizations and businesses (i.e. contractors, green building council) to assist in outreach efforts and promotion of energy efficient appliance upgrades, rebates, and financing. 		
Source: Ascent Environmental 2017, EPIC 2017.			

E-6.2: Provide expedited permitting incentives for replacement of natural gas space and water heaters.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Use CEC, ACEEE, USGBC, and other resources to help inform the type of streamlining the City should consider adopting. Use other cities that have adopted similar ordinances/procedures as case studies to gain insight on best practices and how best to design a streamlined process for replacement of natural gas space and water heaters Consult with key stakeholders (i.e. contractors) to develop streamlining framework for replacement of natural gas space and water heaters. Adopt streamlined process to incentivize replacement of natural gas space and water heaters and continually monitor to track progress of replacements. 		
Notes: ACEEE= American Council for an Energy-Efficient Economy; CEC = California Energy Commission; N/A = Not Applicable; USGBC = United States Green Building Council			
Source: Ascent Environmental 2017, EPIC 2017.			

E-6.3: Explore the development of an ordinance requiring non-natural gas appliances in new residential development.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Explore the development of an ordinance requiring non-natural gas appliances in new residential development. 		
Notes: N/A = Not Applicable			
Source: Ascent Environmental 2017, EPIC 2017.			

Measure E-7: Promote residential energy efficiency retrofits to achieve 15% reduction

E-7
GHG Reduction Potential
59 MTCO₂e

The City will achieve 15 percent reduction in energy from programs for single-family and multi-family homes.

E-7.1: Work with SDG&E, or through a CCA, to reach 100 percent of households annually with targeted educational and marketing materials (e.g., website or e-blast).			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Conduct outreach to highlight the benefits of residential energy efficiency retrofits and include resources from ACEEE, USGBC, CEC, SDG&E, and other relevant organizations. Set targets and timeline for conducting outreach. Periodically monitor outreach progress and conduct analysis on effectiveness of outreach measures used and change accordingly. Work with CCA, SDG&E, and other organizations to promote residential energy efficiency retrofits through targeted outreach campaigns, including, but not limited to, the City's Green Flash homepage, at local events (e.g., farmers markets), and through targeted media campaigns. 		
<i>Notes: ACEEE= American Council for an Energy-Efficient Economy; CEC = California Energy Commission; N/A = Not Applicable; SDG&E = San Diego Gas and Electric; USGBC = United States Green Building Council</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

E-7.2: Publicize incentives, rebates, and financing options, such as PACE financing and/or CSI for existing residential buildings, by posting on the City's website or e-blast.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Provide energy efficiency upgrade incentives, rebates, and financing information at local events (e.g., farmers markets), at relevant City offices, on the City website (including the City's Green Flash homepage), and through targeted media campaigns. Partner with key local organizations to assist in outreach efforts and promotion of energy efficiency strategies. 		
<i>Notes: N/A = Not Applicable; SDG&E = San Diego Gas and Electric</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure E-8: Promote commercial energy efficiency retrofits to achieve 15% reduction

<p>E-8 GHG Reduction Potential 37 MTCO₂e</p>
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The City will achieve 15 percent reduction in electricity and natural gas consumption from commercial spaces.

E-8.1: Work with SDG&E, or through a CCA, to reach 100 percent of businesses annually with targeted educational and marketing materials (e.g., website or e-blast).			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Conduct outreach to highlight the benefits of commercial energy efficiency strategies and include resources from ACEEE, USGBC, CEC, SDG&E, and other relevant organizations. • Set targets and timeline for conducting outreach. • Periodically monitor outreach progress and conduct analysis on effectiveness of outreach measures used and change accordingly. • Work with CCA, SDG&E, and other local organizations to promote commercial energy efficiency strategies through targeted outreach campaigns, including, but not limited to, the City's Green Flash homepage, at local events (e.g., farmers markets), and through targeted media campaigns. 		
<p><i>Notes: ACEEE= American Council for an Energy-Efficient Economy; CEC = California Energy Commission; N/A = Not Applicable; SDG&E = San Diego Gas and Electric; USGBC = United States Green Building Council</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-8.2: Publicize incentives, rebates, and financing options, such as PACE Financing, CSI, or CSI-Thermal Program, for existing commercial buildings by posting on the City's website or e-blast.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Provide energy efficiency upgrade incentives, rebates, and financing information at local events (e.g., farmers markets), at relevant City offices, on the City website, including the City's Green Flash homepage, and through targeted media campaigns. • Partner with key local organizations to assist in outreach efforts and promotion of energy efficiency strategies. 		
<p><i>Notes: CSI = California Solar Initiatives; N/A = Not Applicable; PACE = Property Assessed Clean Energy</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-8.3: Increase use of solar technology on municipal-owned buildings.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Conduct solar siting feasibility study to assess opportunities for installation of PV solar on municipal-owned buildings and facilities. • Develop timeline for solar technology installation on City buildings that enables City to reach the 15 percent energy use reduction goal. • Incorporate solar installation projects into the City's Capital Improvement Program to reach the 15 percent energy use reduction goal. 		
<p><i>Notes: PV = Photovoltaic</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-8.4: Develop a ZNE policy for municipal-owned buildings.			
Implementation Details			
Responsible Department	City Manager	Supporting Departments	Community Development/ Engineering & Public Works
Task Type	Policy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Use OPR, CEC, CPUC, and related resources to inform the type of policy the City should consider adopting. • Use other cities that have adopted similar ordinances as case studies to gain insight on best practices and how best to design a policy to achieve ZNE use for municipal building operations. • Work with City Council and key stakeholders on adoption of a ZNE policy for municipal-owned buildings. • Consider adopting a more stringent ZNE policy, such as achieving ZNE by 2018. 		
<p><i>Notes: CEC = California Energy Commission; CPUC = California Public Utilities Commission; N/A = Not Applicable; OPR = Governor's Office of Planning and Research; ZNE = Zero Net Energy</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

E-8.5: Prepare and adopt an energy efficiency and reduction plan for municipal facilities.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Plan	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Identify staff resources and/or consulting resources needed to prepare an energy efficiency and reduction plan (Energy Plan). • Develop energy plan in line with State policy regarding building energy use, production, and storage, as well as in accordance set forth in the City's CAP. 		
<p><i>Notes: CAP = Climate Action Plan; N/A = Not Applicable</i></p>			

E-8.5: Prepare and adopt an energy efficiency and reduction plan for municipal facilities.
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>

E-8.6: Explore City government carbon accountability at the departmental level.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Policy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> • Include in the Energy Plan a department-level energy use analysis to benchmark and identify high energy users. • Include in the Energy Plan policies and strategies to reduce unnecessary or wasteful energy use at the department level. • Conduct Citywide energy use competition to see which City department can reduce their average energy use the most. 		
<i>Notes: N/A = Not Applicable</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

2.1.3. Waste and Water

Measure W-1: Divert 90% of waste from landfills and capture 85% of landfill gas emissions

The CAP goal is to achieve 90 percent waste diversion by 2035. In addition, the CAP goals also include achieving a landfill gas capture rate of 85 percent by 2035. Landfill gas is a mix of predominantly methane and carbon dioxide that can be captured and utilized onsite as a fuel to operate boiler systems and/or to generate electricity. Increasing gas capture reduces direct emissions and reduces energy consumption and associated emissions.

<p>W-1 GHG Reduction Potential 3,389 MTCO₂e</p>

W-1.1: Adopt a policy that requires all City-sponsored events (and City-funded non-profit events) to be zero-waste (e.g., use recyclable and compostable materials and provide corresponding waste receptacles), and promote zero-waste events to community organizations and businesses.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Policy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Adopt a Zero-Waste Events policy for the City and City-sponsored or affiliated events, and monitor and report on compliance with the policy. 		

W-1.1: Adopt a policy that requires all City-sponsored events (and City-funded non-profit events) to be zero-waste (e.g., use recyclable and compostable materials and provide corresponding waste receptacles), and promote zero-waste events to community organizations and businesses.	
	<ul style="list-style-type: none"> • Use existing resources (e.g., the Solana Center for Environmental Innovation and Eco-Cycle Zero-Waste Event Toolkit) and examples (e.g., City of San Francisco Zero-Waste Event Checklist) to develop and implement the policy. • Develop and implement a City Green Purchasing Plan to use recyclable and compostable purchased goods and services.
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>	

W-1.2: Adopt a policy that requires a minimum of 75 percent of construction and demolition waste be recycled or re-used.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	City Manager
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Update the City's Construction and Demolition Recycling Ordinance to increase recycling minimum from 50% to 75%. • Consider lowering the project valuation requiring compliance with the updated Ordinance (current valuation is \$100,000). • Conduct educational outreach to builders and construction companies about ways to reuse and recycle construction and demolition waste. 		
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

W-1.3: Develop an Organics Diversion Program to eliminate organic waste from landfills.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Develop an Organics Diversion Program to eliminate organic waste from landfills. • Use existing resources (e.g., CalRecycle Organics Material Management Page, Institute for Local Government) and relevant legislation (i.e. AB 1826) to inform development of the program. • Coordinate with other agencies in San Diego that operate landfills to facilitate development of organics processing facilities. Work through the Regional Solid Waste Association to partner with other jurisdictions to provide education/outreach. • Use educational materials from existing resources (e.g., Solana Center for Environmental Innovation) to educate residents and business owners to reduce organic waste. Work with local waste haulers to upgrade recycling facilities to recycle organic waste. 		
<i>Notes: AB = Assembly Bill; CalRecycle = California Department of Resources Recycling and Recovery</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

W-1.4: Start and implement a pilot education program on organics recycling.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development/ Engineering & Public Works
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify grant funding opportunities for pilot organics recycling programs for City residents and schools. Partner with local schools to develop organic recycling programs. Partner with waste management contractors to develop content and presentations for a pilot education program. Use educational materials from existing resources (e.g., the Solana Center for Environmental Innovation) to reduce organic waste. 		
<p><i>Notes: CalRecycle = California Department of Resources Recycling and Recovery</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-1.5: Develop a food waste prevention plan for restaurants in the City and collaborate with other municipalities to develop a regional plan.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development/ Engineering & Public Works
Task Type	Plan	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Develop a food waste prevention plan for restaurants in the City. Track grant funding opportunities to prepare a plan under CalRecycle's Food Waste Prevention and Rescue Grant Program. Through RSWA and the County TAC, work with other municipalities to develop a regional food waste prevention plan. 		
<p><i>Notes: CalRecycle = California Department of Resources Recycling and Recovery; RSWA = Regional Solid Waste Association; TAC = Technical Advisory Committee</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-1.6: Provide public education to promote textile recycling (e.g., mattresses, carpets, clothing, and other textiles).			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Education	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Provide information regarding the benefits of textile and mattress recycling at participating City businesses and City buildings. Prepare educational materials that promote and educate residents and business owners on the benefits of textile recycling. Work with City contracted waste haulers to promote textile and mattress recycling services or resources. 		

W-1.6: Provide public education to promote textile recycling (e.g., mattresses, carpets, clothing, and other textiles).

Source: Ascent Environmental 2017, EPIC 2017.

W-1.7: Advocate to the agencies that own and operate landfills serving the City to encourage increased methane capture at the landfills.

Implementation Details

Responsible Department	City Manager	Supporting Department	N/A
Task Type	Outreach	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Support City contracted waste haulers and regional landfill operator efforts to increase methane capture at landfills. Identify potential grant funding opportunities to assist landfill agencies in capturing more methane at facilities. Consider specifying minimum methane capture in City contracts with landfill operators, making it one of the criteria for landfill selection. 		

Notes: N/A = Not Applicable

Source: Ascent Environmental 2017, EPIC 2017.

W-1.8: Explore creation of regional compost facility with other municipalities.

Implementation Details

Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Collaboration	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Partner with local agencies and/or private entities that operate/oversee major landfills to develop regional compost facilities. Identify potential areas suitable for a regional compost facility. 		

Notes: N/A = Not Applicable

Source: Ascent Environmental 2017, EPIC 2017.

W-1.9: Expand opportunities for food production and neighborhood-scale distribution, including community gardens, especially for low-income communities.

Implementation Details

Responsible Department	Community Development	Supporting Department	City Manager
Task Type	Program	Implementation Timeline	Mid-Term

W-1.9: Expand opportunities for food production and neighborhood-scale distribution, including community gardens, especially for low-income communities.	
Implementation Tasks	<ul style="list-style-type: none"> Use St. Leo Mission Catholic Church's community garden and the Boys and Girls Club La Colonia Branch as case studies to determine best management practices, including funding opportunities, for developing community gardens. Identify sites suitable for community gardens in the City, prioritizing locations that would be accessible to low-income residents.
<p><i>Notes: N/A = Not Applicable</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>	

W-1.10: Develop and implement a City Green Purchasing Plan and set targets to reduce carbon emissions associated with purchased goods and services.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Plan/Policy	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Adopt a Zero-Waste Events policy for the City and City-sponsored or affiliated events and monitor and report on compliance with the policy. Use existing resources (e.g., the Solana Center for Environmental Innovation and Eco-Cycle Zero-Waste Event Toolkit) and examples (e.g., City of San Francisco Zero-Waste Event Checklist) to develop and implement the policy. Develop and implement a City Green Purchasing Plan to use recyclable and compostable purchased goods and services. 		
<p><i>Notes: N/A = Not Applicable</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-1.11: Explore and support development of local and regional biogas resources, including anaerobic digestion of food scraps.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Collaboration	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Partner with local agencies and/or private entities that operate/oversee major landfills to develop regional compost facilities. Identify potential areas suitable for a regional compost facility. Promote the siting and use of an anaerobic digester in the region. 		
<p><i>Notes: N/A = Not Applicable</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-1.12: Develop and implement a Zero-Waste Plan, pending Council consideration and approval.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development/ Engineering & Public Works
Task Type	Plan	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Identify cities with Zero-Waste Plans to determine best practices. Track achievement of 90% diversion goal to determine next steps for Zero-Waste Plan. Continue coordination with local and regional agencies to expand organics waste reduction to allow achievement of zero-waste. 		
<i>Notes: N/A = Not Applicable</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure W-2: Implementation of existing water rate and billing structure

In October 2015, the board of directors of Santa Fe Irrigation District approved a rate proposal to raise the rates by an average of nine percent annually over the following three years beginning in February 2016, thereby achieving a compounded increase of 30 percent in the three years from 2016 to 2018. Reduction in water use would reduce the energy associated with upstream water supply, water treatment, and distribution. This measure does not have specific City actions but would aid in reducing GHG emissions from water consumption beyond the 2010 baseline.

W-2
GHG Reduction Potential
407 MTCO₂e

W-2.1: Implementation of existing water rate and billing structure.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	N/A
Task Type	N/A	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> No City actions, as reductions are already occurring under existing rate structure. 		
<i>Notes: N/A = Not Applicable</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure W-3: Expand recycled water program to reduce potable water consumption by 10%

This measure aims to achieve a 10 percent reduction in potable water use by 2035 by specifically targeting irrigation water use in commercial and multi-family landscaping. Replacing potable water with recycled water reduces the upstream, conveyance, and treatment energy use associated with the potable water supply.

W-3
GHG Reduction Potential
292 MTCO₂e

W-3.1: Expand the current recycled water program and purple pipe infrastructure.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	N/A
Task Type	Program	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Develop and implement an expanded purple pipe network and recycled water program in coordination with the Santa Fe Irrigation District. Promote new development to utilize recycled water. 		
<i>Notes: N/A = Not Applicable</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure W-4: Capture 100 percent of emissions from wastewater treatment

The goal of the CAP is to achieve a 100 percent methane capture rate from wastewater treatment by 2035 by collaborating with the wastewater treatment operators.

W-4
GHG Reduction Potential
66 MTCO₂e

W-4.1: Advocate to the San Elijo Wastewater Treatment Plant for 100 percent methane capture.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Advocacy	Implementation Timeline	Long-Term
Implementation Tasks	<ul style="list-style-type: none"> Work with the San Elijo Treatment Plant to conduct a feasibility study to achieve 100 percent methane capture. 		
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

Measure W-5: Water conservation

The City will reduce water use by implementing a variety of actions that include but are not limited to, promoting water conservation practices, educating property owners on water efficiency financing tools, implementing PACE programs in the City, and providing incentives for rainwater catchment systems.

W-5
GHG Reduction Potential
66 MTCO₂e

W-5.1: Implement PACE Programs in the City and continue to assess other efficiency financing tools for possible use in the community.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A

W-5.1: Implement PACE Programs in the City and continue to assess other efficiency financing tools for possible use in the community.			
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Continue to work with PACE financing programs to promote energy efficiency and water conservation upgrades for residents in the City. Use results of the smartphone water monitoring app opportunity with HydroSmart Technologies to inform future water conservation policies and programs for the City. 		
<p><i>Notes: N/A = Not Applicable; PACE = Property Assessed Clean Energy</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-5.2: Educate property owners about eligibility for PACE financing.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Education	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Explore new opportunities to promote PACE programs through City promotional materials and City website, including the City's Green Flash homepage. Provide PACE financing information at the City planning counter and other City buildings. 		
<p><i>Notes: PACE = Property Assessed Clean Energy</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-5.3: Actively promote water efficiency rebate programs offered by San Diego County Water Authority and Metropolitan Water District.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Provide information on water efficiency rebate programs offered by the San Diego County Water Authority and Metropolitan Water District (i.e. San Diego WaterSmart) at the City planning counter, City buildings, and the City website. Work with relevant environmental organizations to support volunteer promotion of water efficiency rebate programs for residents. Identify opportunities to promote rebate programs at local events (e.g., farmers markets), on the City website (including the City's Green Flash homepage), and through targeted media campaigns. 		
<p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-5.4: Maintain a water waste reporting public education and enforcement program to repair leaks and decrease over-irrigation.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	N/A
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Work with Public Works, Parks, and other relevant departments to conduct water waste report to identify leaks and opportunities for decrease irrigation. • Provide information to the public on results of the report on the City website and continually update and educate the public on water waste prevention efforts. 		
<p><i>Notes: N/A = Not Applicable</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-5.5: Promote programs/resources to help customers convert to more water-efficient landscaping.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Community Development
Task Type	Program	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Provide information on water-efficient landscaping rebates and information offered by the San Diego County Water Authority (i.e. Turf Replacement Program) at the City planning counter, City buildings, and the City website, including the City's Green Flash homepage. • Work with relevant local organizations to support volunteer promotion of water-efficient landscaping rebates and programs. • Identify opportunities to promote water-efficient landscaping resources and programs at local events (e.g., farmers markets), on the City website, and through targeted media campaigns. 		
<p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

W-5.6: Encourage greywater use for landscaping.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works/ Community Development
Task Type	Outreach	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Provide information on water-efficient landscaping rebates and information offered by the San Diego County Water Authority (i.e. Turf Replacement Program) at the City planning counter, City buildings, and the City website, including the City's Green Flash homepage. • Work with relevant local organizations to support volunteer promotion of water-efficient landscaping rebates and programs. • Identify opportunities to promote water-efficient landscaping resources and programs at local events (e.g., farmers markets), on the City website, and through targeted media campaigns. 		

W-5.6: Encourage greywater use for landscaping.			
<i>Notes: N/A = Not Applicable</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

W-5.7: Provide incentives for installation of rainwater catchment systems from roofs to use rainwater generated.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	N/A
Task Type	Program	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Develop a rain barrel or underground cistern rebate program that includes an educational component. Review programs from other cities (e.g., City of San Diego) to determine potential program components. 		
<i>Notes: N/A = Not Applicable</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

W-5.8: Work with the Santa Fe Irrigation District to track per capita water consumption in the City separately.			
Implementation Details			
Responsible Department	City Manager	Supporting Department	Engineering & Public Works
Task Type	Project	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Coordinate with the Santa Fe Irrigation District to track per capita water consumption and allow measurement of progress against City goals. 		
<i>Notes: N/A = Not Applicable</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

W-5.9: Support water rate structures that provide incentives to conserve and reuse water, including greywater use.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	N/A
Task Type	Project	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> Coordinate with local water districts on rate studies. If rate study recommendations are deemed feasible, develop timeline for implementation and implement new water rate structures according to the timeline. 		
<i>Notes: N/A = Not Applicable</i>			
<i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

W-5.10: Continue to implement the City's outdoor landscaping ordinance.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A
Task Type	Ordinance	Implementation Timeline	Ongoing
Implementation Tasks	<ul style="list-style-type: none"> Continue implementation of City Ordinance 467 (December 2015). 		
<i>Notes: N/A = Not Applicable;</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

2.1.4. Carbon Sequestration (Urban Tree Planting)

Measure U-1: The City will achieve 30 percent of developed areas covered by urban tree canopy (Urban Tree Planting Program)

Trees and vegetation can provide shade and cooling through transpiration and evaporation processes, which reduce the temperature of the environment around them. Well-shaded streets and parking areas can reduce the heat-island effect of higher air and structure temperatures in an urban setting. Trees and vegetation also reduce GHG emissions through sequestration by decreasing the concentration of carbon dioxide in the atmosphere. The City's goal is to achieve urban tree canopy coverage in 30 percent of developed areas by 2035, or 2,107 acres of land in the City. The most recent urban tree canopy assessment in San Diego region, based on high-resolution Light Detection and Ranging (LiDAR) data, shows that Solana Beach has 22 percent existing urban tree canopy.

<p>U-1 GHG Reduction Potential 986 MTCO₂e</p>

U-1.1: Implement the Urban Tree Planting Program to achieve the City's goal to cover 2,107 acres of developed areas with urban tree canopy by 2035. The program would require new development to plant trees to achieve an equivalent canopy coverage. Furthermore, the City would plant trees at City-owned properties and public areas to achieve the same canopy coverage. Public areas would cover open space, streets, and parking lots.			
Implementation Details			
Responsible Department	Engineering & Public Works	Supporting Department	Community Development
Task Type	Ordinance	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> Develop a new ordinance or update the existing Landscape Ordinance to require new development to plant trees to achieve equivalent canopy cover. Develop an Urban Forest Management Plan to identify planting locations and maintenance procedures at City-owned properties and public areas to achieve identified canopy coverage. Use existing resources (e.g., U.S. Forest Service, California Urban Forests Council) and examples from other cities (e.g., San Diego) to inform the type of Urban Forest Management Plan to be developed by the City. Coordinate with the City of San Diego to track tree canopy LiDAR measurements for future years. 		
<i>Notes: LiDAR = Light Detection and Ranging</i> <i>Source: Ascent Environmental 2017, EPIC 2017.</i>			

U-1.2: Educate and encourage residents and businesses to maintain and care for existing trees and plant new trees.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	Engineering & Public Works
Task Type	Education	Implementation Timeline	Short-Term
Implementation Tasks	<ul style="list-style-type: none"> • Develop educational materials and workshops for residents and business owners to provide information on tree care and maintenance. • Rely on existing resources, such as the California Urban Forests Council and City of San Diego, to leverage educational materials and resources. • Identify key program champions and develop volunteer network to implement the program with residents and businesses. 		
<p><i>Notes: N/A = Not Applicable</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

U-1.3: Continue to research and monitor developments of Blue Carbon for sequestration.			
Implementation Details			
Responsible Department	Community Development	Supporting Department	N/A
Task Type	Administrative	Implementation Timeline	Mid-Term
Implementation Tasks	<ul style="list-style-type: none"> • Identify staff member responsible for tracking and reporting science related to Blue Carbon sequestration. • Research and identify materials from The Blue Carbon Initiative for consideration. • Coordinate with the San Diego Regional Climate Collaborative on Blue Carbon science. • Coordinate with local universities to track Blue Carbon research. 		
<p><i>Notes: N/A = Not Applicable</i></p> <p><i>Source: Ascent Environmental 2017, EPIC 2017.</i></p>			

3. Implementation Monitoring and CAP Updates

The CAP will need to be updated and maintained in order to remain relevant and effective. Key City staff will evaluate and monitor plan performance over time and make recommendations to alter or amend the CAP if it is not achieving the proposed reduction targets. This process allows City staff to make timely adjustments to existing measures; replace ineffective or obsolete measures; or add new measures as technology, federal and State programs, and circumstances change. Adjustments will be made to the CAP if measures fall short of their targets or additional actions become available. The Implementation Plan strives to maintain flexibility to allow for the City to implement and achieve the most effective CAP.

The implementation tables in Section 2 are designed to highlight the key implementation metrics for all measures and actions. As implementation begins, it is anticipated that the City will spend two years after the CAP's adoption for initial start-up and to initiate data tracking. City staff will need to track implementation tasks and pertinent metrics for each action. Similar to CAP implementation, the monitoring process will be a collaborative, inter-departmental effort in which monitoring for each measure and action will be conducted primarily by the departments and staff tasked with responsibility for implementation. This process allows monitoring of CAP implementation to remain accurate and allows various City departments to play an integral role in the CAP implementation process.

3.1. CAP Presentations and Reporting

CAP reporting will consist of presentations to City Council, as well as the development of publicly available Monitoring Reports tracking the City's progress. City staff will prepare an initial presentation to the City Council in 2018 and, starting in 2019, City staff will prepare a yearly presentation to City Council that summarizes the inventory, achievements to date, and provides a status of implementation using data and content collected through CAP monitoring.

The CAP Monitoring Report will serve as a publicly available document that provides regular updates on CAP implementation progress, GHG reductions achieved, and other important milestones in the CAP implementation process. The report will inform the City Council and the general public about implementation progress on the specific actions and supporting measures being implemented, as well as overall progress towards the City's GHG reduction targets. The CAP Monitoring Report will also serve to inform City staff on the success and cost-effectiveness of the various actions and supporting measures being implemented, allowing future CAP updates to prioritize effective supporting measures and eliminate inefficient or ineffective policies.

The CAP Monitoring Report will be developed using the information gathered during the implementation monitoring process. The report will identify ways to adapt the CAP to maintain the desired reduction path. The CAP Monitoring Report will be developed every two years, with the first CAP Monitoring Report completed in 2019, and will be presented to City Council once complete.

3.2. CAP and GHG Inventory Updates

GHG Emissions Inventory Updates

In conjunction with CAP monitoring, GHG inventory updates will be necessary to assess progress and inform future CAP updates. An updated GHG inventory, using current data and assumptions, will allow the City to more accurately monitor GHG emissions occurring in the City over time, observe how CAP implementation is affecting overall emissions rates for each emission category, and observe how the City's emissions are

affected by various external factors (i.e. State policy and economic growth in the region). This helps to inform future CAP policy decisions.

Through climate planning services offered via its Energy Roadmap Program, the San Diego Association of Governments (SANDAG) will update the City's GHG emissions inventory every two years, with the first scheduled update to occur in 2018. The collaboration with SANDAG's Energy Roadmap Program will provide a regularly scheduled and consistent GHG inventory update process, allowing the City to observe how emissions categories perform over time in relation to the CAP implementation process. The GHG inventory updates will provide a comparison to the 2010 baseline inventory and the 2020, 2030, and 2050 emission projections. The Energy Roadmap Program will also provide consistency for GHG inventory updates, through the use of the consistent regional data sources that will provide a useful comparison of emissions between updates.

Although these updates will be conducted by SANDAG and their supporting contractors, City staff time and resources will be required to coordinate and participate in the GHG inventory updates.

Measure Review and CAP Updates

In addition to updating the City's emissions inventory, City staff will also evaluate the capacity, cost, effectiveness, and benefits of each individual measure. Evaluating CAP measure performance entails monitoring the level of community participation, costs, and barriers to implementation, as well as actual reductions in fuel consumption, vehicle miles traveled, energy usage, water usage, landfilled waste, or other activities that result in GHG emissions reductions. By evaluating whether the implementation of a measure is on track to achieve its reduction potential, the City can identify successful measures and reevaluate or replace under-performing ones.

As the City continues to implement the CAP actions and supporting measures, regularly scheduled CAP updates will be required. Beginning in 2022, CAP updates will be prepared every five years and will be based on the findings from the City Council presentations, CAP Monitoring Report, and GHG inventory updates. The CAP updates are necessary to account for any new State or federal legislation that may affect the CAP or implementation of the CAP, any new technologies that may affect or inform CAP policies, and information gathered in the CAP implementation monitoring process that may be useful for future CAP policy decisions. Future CAP updates can also serve to provide renewed focus on emissions categories that may not have been the focus of past CAP implementation efforts or may not have been feasible at the time. For example, innovations in renewable energy and energy efficiency in recent years have allowed for cost-effective and rapid deployment of these technologies to achieve GHG reductions. Future CAP updates may focus on GHG reductions strategies that were previously more difficult to implement, such as transportation strategies, due to a lack of appropriate technologies or a high upfront implementation cost.

CAP updates will include an assessment and update of the GHG inventory, updated progress towards overall GHG reduction goals, adjustments to reduction measures and actions, as necessary, and any changes to land use projections to achieve consistency with zoning and General Plan land use designations and policies. Once complete, future CAP updates will be recommended for adoption by City Council. City staff time and resources will be necessary to complete the CAP update process.

The figure below outlines the CAP implementation and monitoring schedule.

CAP Implementation and Monitoring Schedule	
2017	CAP Adopted City Council adopts plan and staff begins to implement CAP measures.
2017-2019	Initial Set-up Staff performs initial start-up tasks and implementation of data tracking.
2018	GHG Inventory Update City staff conducts update to inventory every two years starting with the 2016 inventory year.
2018	Initial Presentation to City Council City Staff prepares initial presentation to City Council. Presentations to City Council will continue annually.
2019	Presentation to City Council City Staff prepares presentation to the City Council annually starting in 2019. The presentation summarizes the inventory and achievements to date and provides a status of implementation.
2019/2021/2022	Measure Status Review/CAP Monitoring Report/CAP Update City staff, in coordination with the City Council, conducts updates to inventory, reviews performance of CAP measures, provides an initial review of the status of implementation, summarizes achievements to date, and makes recommended changes to the CAP if measures prove infeasible, and prepares report to City Council. The report will identify ways to adapt the plan to maintain the desired reduction path. City staff prepares a CAP update based on the recommendations and findings in the report. The report is conducted every two years, starting in 2019, while the CAP update is conducted every five years.

4. Ongoing Engagement

As the City continues to implement and monitor progress on the CAP, continued engagement with and participation by the community is a critical component in successfully achieving progress towards meeting GHG reduction goals. Continued support and political will to implement the CAP can be achieved through meaningful and continued engagement with the community. Active community engagement throughout the CAP implementation process will also support residents’ and business’ sense of ownership over the CAP and responsibility for its successful implementation. This will ensure CAP implementation continues to be a priority

for City staff and elected officials. Engagement will include outreach to individual residents and businesses, community organizations, developers, property owners, schools, and other local and regional government agencies. While the CAP focuses on measures and actions in which the City has a primary role, a number of measures and actions require partnerships and collaboration in order to be effective. Ongoing engagement will be overseen by key City staff, as outlined in the Implementation Tables in Section 2.

Educating the public about the CAP implementation process, how the public can help support CAP implementation, how the CAP may affect City residents, and the variety of community benefits (i.e. cost savings, walkability, etc.) that will be realized through CAP implementation is critical for meeting CAP goals and targets. Public education strategies for the CAP implementation process will cover a broad range of topics related to various components of the City's CAP. Along with general public education about the CAP, outreach efforts will include focused educational campaigns specific to sectors of the public that will be directly involved and/or impacted by the various actions being implemented. While not all actions will require outreach efforts, several actions must include public education outreach efforts to ensure successful implementation (see Implementation Tables in Section 2). Specific organizations and stakeholders most appropriate for outreach efforts will be finalized during the implementation process.

5. Conclusion

Achieving significant and permanent GHG reductions for the City through CAP measures and actions remains a difficult task that requires thoughtful and careful implementation and monitoring. CAP implementation requires funding and resources for administration and staffing, financing and budgeting, implementation of measures and actions, monitoring and reporting, and continued public engagement.

Information in this Implementation Plan and the associated Cost Study will be used by City staff to begin allocating funding and staff resources for implementation, implementing measures and actions, establishing tracking and monitoring mechanisms, and planning for future GHG inventory and CAP updates. The City will be diligent in seeking cost-effective implementation mechanisms and strategic funding opportunities, using partnerships and grants to share the costs where feasible. This Implementation Plan is the first step towards effectively implementing the CAP. Additional resources will be needed to create a workplan and allocate budget for each measure and action outlined in the CAP.