



SEAP

STRATEGIC ENERGY ACTION PLAN

 CITY of CHARLOTTE

DECEMBER 2019

SEAP: YEAR ONE

**The City of
Charlotte Office of
Sustainability**

INTRODUCTION

Charlotte is a leader in sustainability and resiliency. In December of 2018, Charlotte City Council unanimously adopted the Strategic Energy Action Plan. That same week, Charlotte was named one of the winners of the American Cities Climate Challenge, an award to help strengthen and accelerate the City's goals. 2019 was the Year of Preparedness as we set ourselves up for success in the years ahead through data analysis and internal organization.

TABLE OF CONTENTS

PAGE 2.....INTRODUCTION & TABLE OF CONTENTS

PAGE 3.....MISSION, VISION, & VALUES

PAGE 4.....HISTORY & LOGO

PAGE 5.....AMERICAN CITIES CLIMATE CHALLENGE

PAGE 6.....TRANSPORTATION

PAGE 7.....BUILDINGS

PAGE 8.....ENERGY GENERATION

PAGE 9.....WORKFORCE DEVELOPMENT & EQUITY

PAGE 10-11.....SUSTAINABILITY PROGRAMS & INITIATIVES

PAGE 12.....ENGAGEMENT

PAGE 13.....AWARDS & NOMINATIONS

PAGE 14.....LOOKING FORWARD TO YEAR TWO

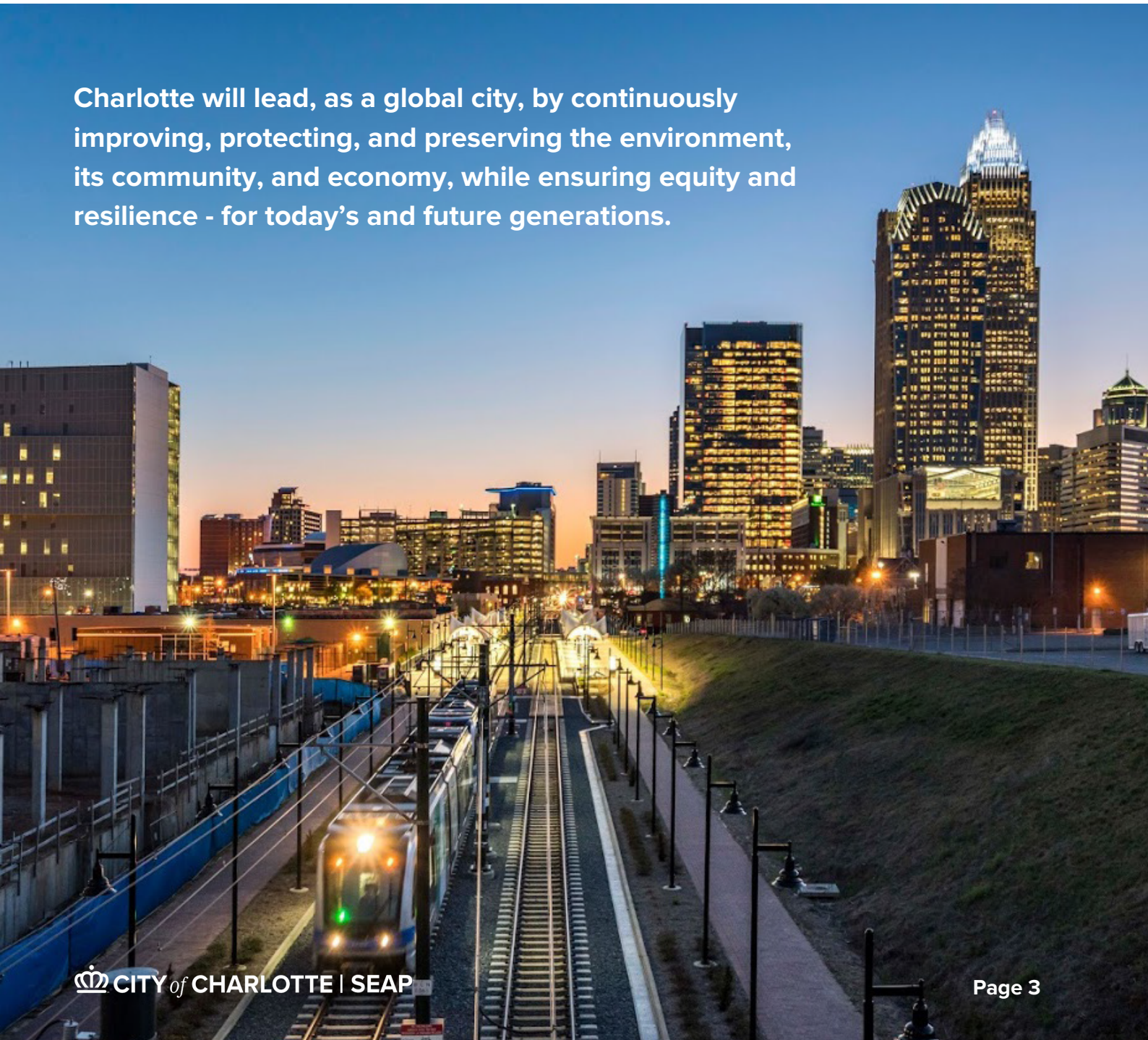
MISSION, VISION, & VALUES

THE OFFICE OF SUSTAINABILITY

OUR MISSION

Charlotte is America's Queen City, opening her arms to a diverse and inclusive community of residents, businesses, and visitors alike; a safe family-oriented city where people work together to help everyone thrive. Embedded in this vision is creating a livable city, with comprehensive and convenient transportation options and sustainable, distinct, and diverse neighborhoods for all. The City of Charlotte recognizes that protecting our natural resources, promoting conservation, and improving the environment are fundamentally important to the public's quality of life and essential to maintaining a vibrant economy.

Charlotte will lead, as a global city, by continuously improving, protecting, and preserving the environment, its community, and economy, while ensuring equity and resilience - for today's and future generations.



BRIEF HISTORY

THE STRATEGIC ENERGY ACTION PLAN

In June 2018, the Sustainable and Resilient Charlotte by 2050 Resolution was unanimously passed by City Council. This resolution set aggressive and aspirational municipal and community-wide greenhouse gas emissions reduction goals for the City of Charlotte. Specifically, it strives to have City fleet and facilities fueled by 100% zero-carbon sources by 2030. It also sets a community-wide goal for Charlotte to become a low carbon city by 2050 by reducing greenhouse gas emissions to below 2 tons of CO₂ equivalent per person annually. Lastly, it called for a Strategic Energy Action Plan to determine how Charlotte can reach its goals.

In December of 2018, City Council unanimously adopted the Strategic Energy Action Plan. Sustainability staff developed the SEAP in partnership with community stakeholders and City departments participating in greenhouse gas emission reduction scenario sessions and continuous engagement on the specific areas of the SEAP. This resulted in a comprehensive framework of 11 linked Action Areas containing internal and external actions, focused on transportation, buildings, energy generation, and workforce development & equity with steps on how to reach the goals set by the resolution. The Office of Sustainability, in the General Services department, is tasked with carrying out the vision of the SEAP and guiding its implementation. The SEAP is an ambitious, aggressive action plan that is dependent on many factors, including technological advancements, operational compatibility and risk management, and the availability of appropriate resources and funding.



MEANING BEHIND THE LOGO

The gray area represents the Buildings pillar of the SEAP, and the energy efficiency goals. It is also the shape of a hand, signifying the Workforce Development & Equity pillar, as every community member's commitment to the SEAP is critical to its success. The City is committed to equity and inclusion in the process of striving to become a low-carbon city.

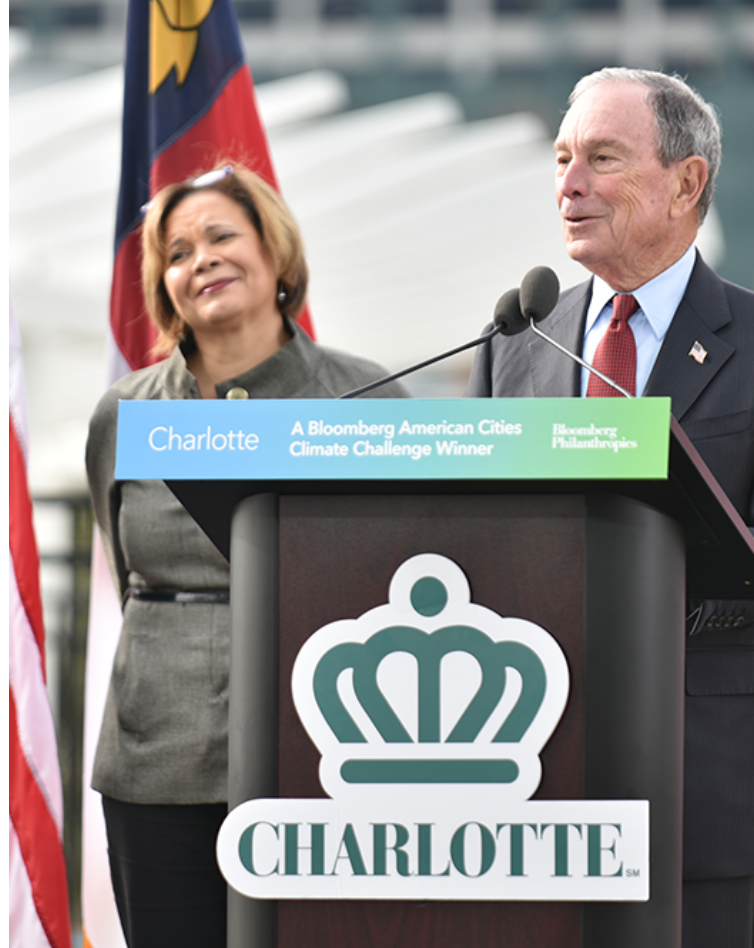
The yellow sun represents the Energy Generation pillar, including solar and renewable energy goals.

The dark green leaf is illustrative of a road and represents the Transportation pillar.

The light green leaf, when put together with the dark green leaf, creates a check mark which represents the commitment to achieve the SEAP goals to create a cleaner future for all Charlotteans.

BLOOMBERG PHILANTHROPIES AMERICAN CITIES CLIMATE CHALLENGE

The American Cities Climate Challenge is a Bloomberg Philanthropies' initiative that aims to accelerate and deepen U.S. cities' efforts to create the greatest climate impact through 2020 and showcase the benefits – good jobs, cleaner air, and cost savings – that climate solutions bring. Charlotte applied and was selected as one of the 25 cities in December of 2018.



CLIMATE CHALLENGE

by the numbers

2 Full-time
Climate Advisors

8 Action Areas that support
our SEAP goals

100+ City staff engaged on
these Action Areas

25 Technical assistance
partners

7 City Departments
working on these
Action Areas

TRANSPORTATION

**STRIVE TOWARD 100% ZERO CARBON
CITY FLEET BY 2030**

- ✓ Added 3 new electric vehicles to the City's motor pool
- ✓ Purchased 5 electric buses for the Aviation department's circular routes
- ✓ Created a total cost of ownership model to make improved decisions about vehicle life-cycle costs
- ✓ Drafted 2 fleet policies to promote electric vehicle adoption and inform infrastructure needs
- ✓ Hosted a National Drive Electric Week Event with over 300 attendees in order for the public to learn about electric vehicles
- ✓ Installed over 630 Automatic Vehicle Locators across City department vehicles to collect data that can be used to transform our City fleet to be low carbon
- ✓ Facilitated Scooter Safety workshops to promote safe and alternative low carbon transit options

As called for in the SEAP, the Office of Sustainability created four SEAP External Content Groups around the four SEAP pillars. They work to help push the SEAP community goals forward and engage the community on the 2050 low carbon city goal.



BUILDINGS

STRIVE TOWARD 100% ZERO CARBON
MUNICIPAL BUILDINGS BY 2030

- ✓ Began revising the Policy for Sustainable Facilities to align with the Sustainable and Resilient Charlotte by 2050 Resolution
- ✓ Completed energy audits at 7 Cultural Facilities in order to prioritize energy efficiency retrofits
- ✓ Designed 5 new police stations to LEED standards; 2 with solar photovoltaics and 3 designed "solar-ready"
- ✓ Designed 1 new fire station to LEED standards and will be "net-zero ready"





ENERGY GENERATION

**STRIVE TOWARD 100 %
ZERO CARBON ENERGY FOR
ALL MUNICIPAL BUILDINGS
AND FLEET BY 2030**

The City applied and was awarded capacity in Duke Energy's Green Source Advantage Program. Participation in the program provides the City with 35 MW of solar energy and moves the City 25% of the way to the 2030 Zero Carbon Energy Goal. For full details of this program, please see the GSA page at: charlottenc.gov/sustainability/seap.





The NC Department of Commerce predicts that local jobs in the Energy Efficiency Industry will grow by 25.6% in the next 5 years.

Source: Clean Energy & Clean Transportation in NC: A Workforce Assessment

WORKFORCE DEVELOPMENT & EQUITY

DEVELOP AN EQUITABLE GREEN WORKFORCE
PIPELINE IN SUPPORT OF ENERGY TRANSITION

- ✓ Partnered with Economic Development to provide job training for careers in commercial and residential energy efficiency for those with barriers to employment
- ✓ Formed a Corporate Advisory Council with representatives from 7 local companies to support workforce development initiatives

OFFICE OF SUSTAINABILITY PROGRAMS & INITIATIVES

GREEN CROWN

The City of Charlotte Green Crown Program is a citywide program that shines a spotlight on establishments in the restaurant industry implementing environmentally sustainable practices. This voluntary and free program currently recognizes 23 eating and drinking establishments that actively minimize waste and maximize sustainability through 4 categories: Waste Management, Energy and Water Conservation, Pollution Reduction, & Commitment to the Community.



OFFICE OF SUSTAINABILITY PROGRAMS & INITIATIVES

NORTH END SMART DISTRICT

Charlotte's North End Smart District (NESD) is a smart cities initiative leveraging technology, data, and partnerships to deliver city services more efficiently and improve quality of life for residents of eight neighborhoods north of Uptown. This year, participating residents in the NESD completed the Smart Homes project which sought to maximize energy efficiency across participating homes. The residents realized an aggregate 6.93% energy savings through the installation of smart homes technologies.

FRESHLIST

The Office of Sustainability organized a pilot program to bring locally-sourced groceries to the Government Center through a local start-up called Freshlist. This program allowed City employees to purchase groceries online and pick them up weekly at the Charlotte Mecklenburg Government Center Plaza. People walking by could also purchase seasonal items directly from the stand. Freshlist is a small, Charlotte business that works with over 21 local, family farms and food artisans that are implementing sustainable practices.



ENGAGEMENT

COMMUNITY & EMPLOYEE

COMMUNITY



1,385
attendees

Various SEAP education & engagement events including schools, universities, places of worship, & other organizations



400
attendees

Earth Day event



1,100
followers

Office of Sustainability
social media



300
attendees

National Drive
Electric Week



23
**establish-
ments**

Green Crown
Certifications

EMPLOYEE



88
users

Freshlist users during
6 week pilot



90
attendees

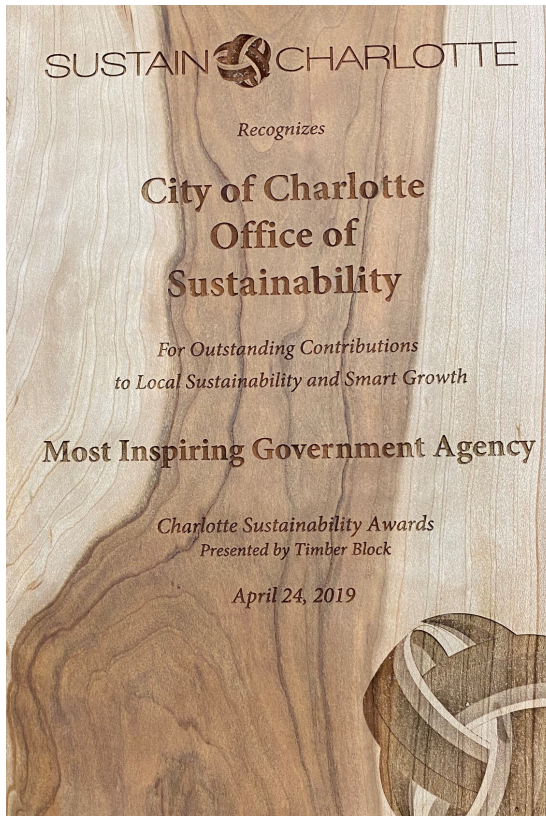
Three Sustainable Transportation Lunch & Learns in
partnership with CATS



17
**City De-
partments**

Represented on the SEAP Operations Team, an
internal leadership team dedicated to striving to reach
SEAP goals through collaboration

2019 AWARDS



SUSTAIN CHARLOTTE'S MOST INSPIRING GOVERNMENT AGENCY



2019 SMART FLEET CHAMPION



2020: YEAR OF MOMENTUM

A FEW OF OUR UPCOMING GOALS

BUILDINGS

- Analyze 7 Cultural Facility energy audits to prioritize deep energy efficiency retrofits
- Partner to bring Cool Globes art exhibit to Charlotte to educate and engage community on the impacts of climate change

ENERGY GENERATION

- Continue to analyze municipal rooftops for on-site solar opportunities
- Explore Utility Green Tariff opportunities for large-scale off-site solar

WORKFORCE DEVELOPMENT & EQUITY

- Enroll students in workforce development program for careers in building energy efficiency
- Provide students with additional wraparound services to support career success

IMPLEMENTATION & ENGAGEMENT

- Further leverage the SEAP Operations Team structure with leadership from all City departments to advance goals and work collaboratively across the City
- Engage with SEAP External Content Groups focused on community-wide 2050 SEAP goals
- Embed sustainability and resiliency into Comprehensive Plan and UDO
- Maximize American Cities Climate Challenge technical resources

TRANSPORTATION

- Advance the installation of Automatic Vehicle Locators across City's entire vehicle fleet with a goal of over 1,000 AVLs
- Educate and engage community around alternative transportation options
- Implement sustainable fleet policies to support the transition to a low-carbon City fleet

American Cities
Climate Challenge

CHARLOTTE
FUTURE

2040
COMPREHENSIVE
PLAN



SEAP

STRATEGIC ENERGY ACTION PLAN

 CITY *of* CHARLOTTE