Resiliency and Sustainability Advisory Committee Meeting

August 25, 2022

Agenda

1.	Welcome, Moment of Silence	Mayor John Tecklenburg
2.	Climate Action Plan Implementation Progress, Next Steps & Budget Considerations	Katie McKain
3.	Strategies for Electric Vehicle Infrastructure Policy in New Construction and Research Findings	Katie McKain Stewart Weinberg
	Committee Discussion on Next Steps	
4.	Review Draft Amendment To Address Extra Thick Plastic Bags	Katie McKain
5.	Public Comment Period*	

Welcome and Moment of Silence

By: Mayor John Tecklenburg, Chairman

Climate Action Plan Implementation Progress, Next Steps & Budget Considerations

By: Katie McKain,
Director of Sustainability

Track Real Time CAP Progress Any Day

Climate Action Plan Implementation Chart : Champion Chart

TRACK PROGRESS ON INITIATIVES! | MAYOR | CITY OF CHARLESTON

2021 Climate Action Plan | www.charleston-sc.gov/climate-action

KEY: Completed or Ongoing | Started | Not Started

Climate Action Plan Champions

ID	BUILDINGS	TRANSPORTATION	WASTE	CARBON SINKS
	City Council (CC); Resilience & Sustainability (R&S); Planning (PL); Budget & Finance (BFRC); Parks (PK); Capital Projects (CP); Building Inspections (BI)	Planning (PL); Resilience & Sustainability (R&S); Budget & Finance (BFRC); Human Resources (HR); Public Service (PS); Police (CPD); Fire (CFD); Traffic and Transportation (T&T)	Resilience & Sustainability (R&S); Public Service (PS); Parks (PK)	Resilience & Sustainability (R&S); Stormwater (SW); Parks (PK); Planning (PL)
1	CC: Support efforts to strengthen the energy code at the state level and advocate for state building policies that align with carbon neutrality by 2050 and other initiatives in the SC Energy Efficiency Roadmap	PL: Require new large development projects located along existing or planned transit corridors to install bus stop shelters and transportation infrastructure like turnouts	R&S: Continue supporting the elimination of single-use plastics	R&S: Collaborate with regional and state partners to increase preservation and restoration of saltwater ecocsystems like our marshes and wetlands as these are key carbon sequestering assets
2	R&S: Support state efforts and explore local equitable gap funding opportunities for energy efficiency in new construction and upgrades to existing construction	R&S, BFRC: Explore opportunities with CARTA to create an employer transit program for part-time City staff riders, such as charging fees based on use	PS: Perform a garbage can audit and use the data to evaluate and restructure the way garbage and trash are collected to incentivize recycling and composting	SW, PK: Continue with opportunities to acquire flood damaged properties and convert the land use to natural conditions that capture carbon and water
3	PL: Consider expanding incentives for sustainable construction and renewable energy via the zoning code, such as building certification programs like Charleston RISES	HR: Review existing temporary City telecommuting policy and adopt permanent policy	R&S: Promote zero waste office practices for City staff to reduce, reuse and recycle and consider establishing sustainable procurement standards for City operations	PL: Examine land use policy to make room for existing marshes to migrate, such as adjusting zoning and developing more stringent marsh buffers

www.charleston-sc.gov/climate-action

Notable Year 1 Achievements

Implementation of the 2021 Climate Action Plan

- New bike share program
- Lowline $7M Grant Award
- Permanent teleworking policy
- BAR policy statement on solar
- Food donation at farmers markets

Notable Year 1 Achievements

Implementation of the 2021 Climate Action Plan

- Climate Ambassador program
- Leaf blower transition to electric
- Adopt a Drain now a regional program with County drains
- New compost program*
- New mattress recycling program*
- Charleston Rainproof mini grant*

*secured grant award to fund pilot

Climate Action Plan 2023 Budget Priorities

FloodStat

Next Meeting is Nov 3 at 9:30am

(before the next RSAC meeting)

Data driven performance management system addressing Mayor Tecklenburg's top priority, flooding.

FloodStat tracks emission goals and goes over metrics related to sustainability programs.

http://innovate.charleston-sc.gov/priorityst at/floodstat/

Mattress Recycling: Restart

PROJECTED PROGRAM IMPACTS

- 500 pieces recycled (426)
- 11 tons diverted from landfill
- 15,000 cubic feet saved in landfill
- 15 MT CO_2e offset

2023 Budget Request

- $10,000 annual hauling

Charleston Rainproof Mini Grant Program

PROJECTED PROGRAM IMPACTS

- 50 new rain gardens (23)
- 1,000,000 gallons diverted annually

  (507,850)

2023 BUDGET REQUEST

- $10,000 for 50 new rain gardens

Charleston Rainproof

every drop counts

Compost Program: Continue & Expand

PROJECTED PROGRAM IMPACTS

- 3,000 Households Participating (950)
- 220 tons of food scraps collected (62)
- 360 MT CO_2e offset annually (102)

Doesn't include potential regional impacts!

2023 BUDGET REQUEST

- $20,000 for hauling
- (Grant award of $12,000 will cover marketing and new signage)

CHARLESTON COMPOSTS

Other Priority Funding Requests

- Communication and Community Engagement Manager
- 2nd Grants Manager

- Street Tree Inventory- ARPA
- Leaf blower transition (90 blowers)
- Operational funding to maintain existing facilities
- Capital Plan funding to build City facilities more resilient and sustainable
- Garbage can audit

Strategies for Electric Vehicle Infrastructure Policy in New Construction

By: Katie McKain,
Director of Sustainability

“EV Make Ready” Codes

Enables new construction to prepare a certain proportion of parking spots to be electrified.

Hilton Head Island charging its way into an electric car future

BY ZACH MURDOCK - ZMURDOCK@ISLANDPACKET.COM

UPDATED FEBRUARY 20, 2015 6:38 PM

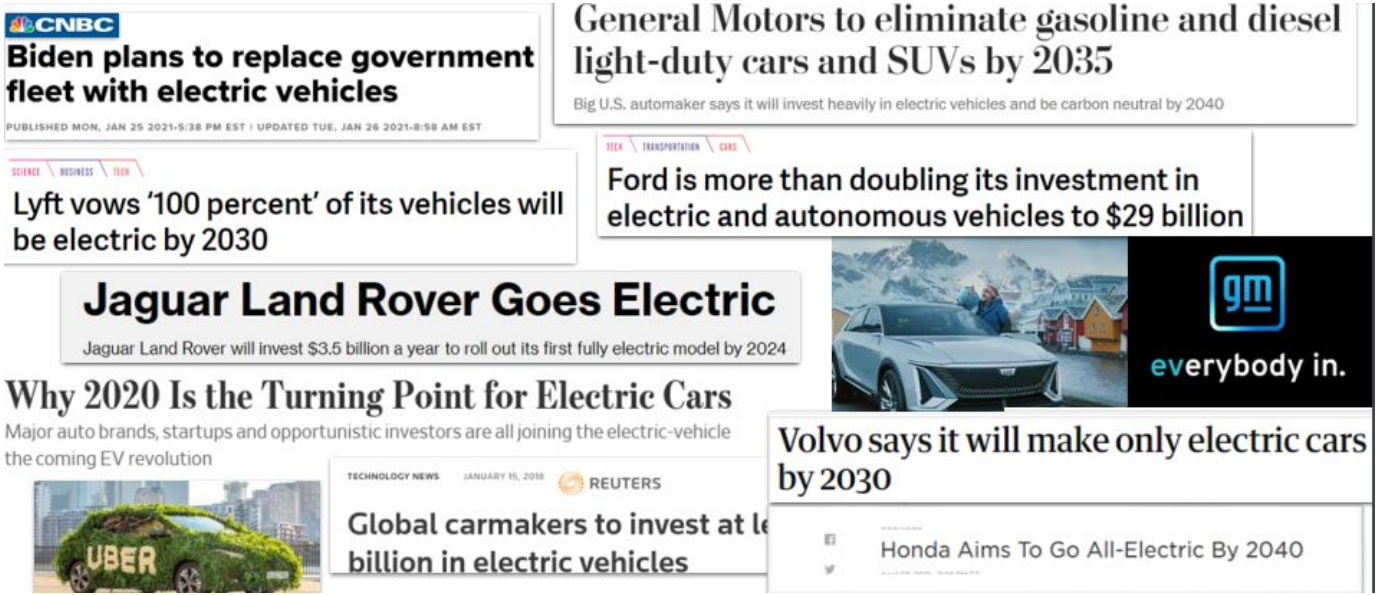
Hilton Head Island is plugging in to the future of clean energy with a new requirement that will add an electric car charging station at every new development that sprouts up on the island in the coming years.

EV Market Trends

- Market projections show that by 2030, nearly 30% of registered vehicles will be powered by electric –manufacturers have shifted and demand is rising.
- Preparing a parking site for future installation of EVSE (Electric Vehicle Supply Equipment) saves significant money compared to retrofitting the property later
- Over 80% of charging occurs at home or work.

SC EV Investment Booming

- Volvo/Polestar: $118M
- Mercedes Benz Sprinter: $59M
- Proterra: $76M



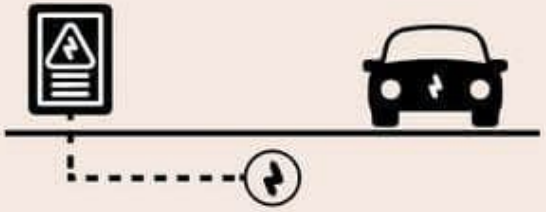
Strategies to Increase EV Readiness

1. EV-Capable

Install electrical panel capacity with a dedicated branch circuit and a continuous raceway from the panel to the future EV parking spot.

Aspen, CO: 3% of parking is EV-Capable (IBC)

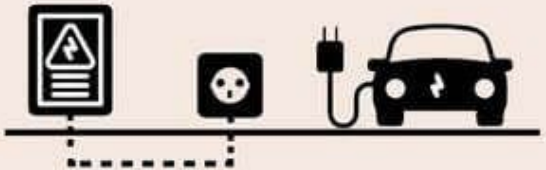
Atlanta, GA: 20% is EV-Capable (Ordinance)



2. EVSE-Ready Outlet

Install electrical panel capacity and raceway with conduit to terminate in a junction box or 240-volt charging outlet (typical clothing dryer outlet).

Boulder, CO: 10% of parking is EV-Ready Outlet



3. EVSE-Installed

Install a minimum number of Level 2 EV charging stations.

Palo Alto, CA: 5-10% of parking is EV-Installed

Single Family Residential

If a 208/240 V outlet is available in a garage or outside near driveway, a charger can be installed in minutes.

Cost

- $ 300 (approx) if included in construction plans
- > $1,000 if retrofit after

Commercial and Multi-Family

Challenges:

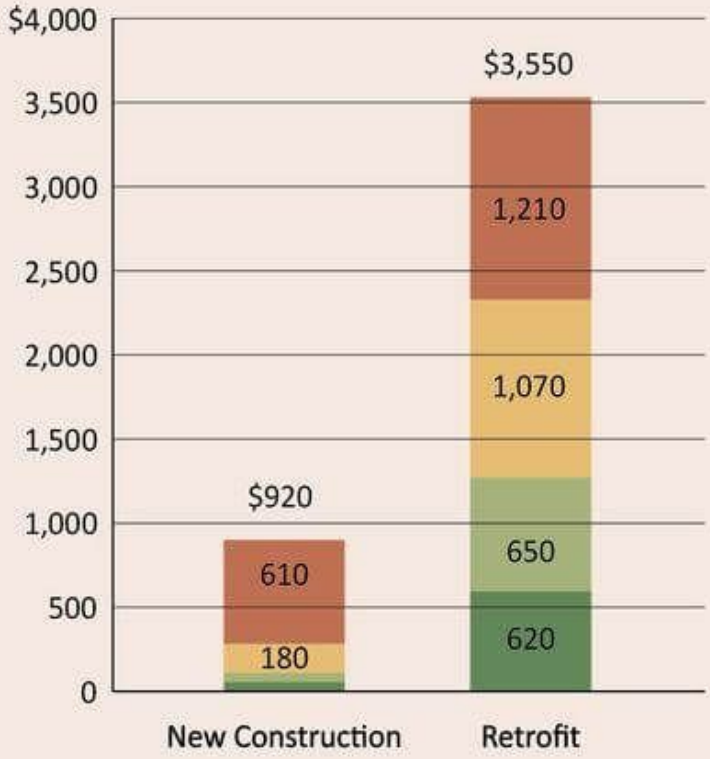
- Infrastructure retrofits are costly and difficult (limited electrical capacity is a main issue)
- HOA and Apartment Management have decision making authority

Cost Comparison

EV readiness typically **saves around 75%** compared to retrofit costs.

Cost per EV Parking Space: New Construction vs Retrofit

Case Study prepared for the City and County of San Francisco (2016)



The case study considers a parking lot with ten total spaces and two EV parking spaces, and compares the EV infrastructure installation costs at the time of new construction versus building retrofit. "EV parking spaces" define spaces that have an EV-ready outlet, and include the electrical panel capacity, raceways, breakers, outlet boxes, and wiring to install an EV charger at any given time in the future.

- Balance of Circuit
- Raceway
- Permitting & Inspection
- Construction Management

EV Code Examples

	Single-Family Residential	Commercial/ Multi-Family
Hilton Head, SC	n/a	1 EV Installed space
Coral Gables, FL	n/a	15% EV Capable, 3% EV Ready, 2% EV Installed
Atlanta, GA	1 space EV Ready	20% EV Ready
Orlando, FL	n/a	20% EV Capable, 2% Installed
Miami Beach, FL	1 EV Ready space	20% EV Ready
Salt Lake City, UT	n/a	1 EV Installed per 25 spaces
Chicago, IL	20% EV Ready	20% EV Ready or Installed

Climate Action Plan item:

Create policy to require charging stations in new large commercial/ multi-family construction and consider EV Ready requirements for smaller projects.

Research Findings

Stewart Weinberg,
RSAC Committee Member

Committee Discussion on Next Steps

Review Draft Amendment To Address Extra Thick Plastic Bags

By: Katie McKain,
Director of Sustainability

Major Impacts, Affects Few Businesses

REUSABLE CARRYOUT BAG shall mean a carryout bag that is specifically designed and manufactured for multiple reuse, and meets the following criteria:

(1) Displays in a highly visible manner on the bag exterior language describing the bag's ability to be reused and recycled;

(2) Has a handle **which is stitched and not heat-fused**;

(3) Is constructed out of any of the following materials:

(a) Cloth, other **machine**-washable fabric, or other durable materials whether woven or non-woven capable of being cleaned and disinfected; **or**

(b) Plastic film with a minimum thickness of four (4.0) mils and capable of being cleaned and disinfected.

(4) Has a minimum lifetime of 125 uses, which for purposes of this section means the capability of carrying a minimum of 22 pounds 125 times over a distance of at least 175 feet.

(h) While cutlery is considered exempt pursuant to Sec. 14-55(i), Food Providers in the City of Charleston shall only provide, distribute or deliver disposable to-go cutlery (i.e. forks, spoons, knives) and straws for prepared food and beverages upon the request or affirmative response of a customer or person being provided the prepared food or beverage, or in a self-service area or dispenser.

Public Comment Period