

SC Electric Transportation Network



History



•Statewide forum for collaboration between entities involved in or supportive of the equitable advancement of transportation electrification in SC.

•Members participate in monthly virtual calls & educational briefings, a Network Directory and listserv for collaboration.

•Membership is free & open to any organization involved in or supportive of electric transportation in the state.





Main Goals: Education & Collaboration



ABB E-Mobility inc.
Alliance for Transportation Electrification
Apprenticeship Carolina - SC Technical College System
bp pulse
Arrival
Autel
BCDCOG
Berkeley Electric Cooperative
Blink Charging
Border States
CBRE
ChargePoint
Charleston County Government
City of Charleston
City of Columbia
City of Greenville/Public Works
Clemson University iCar
Climate Ready Columbia
Clipper Creek/Enphase Energy
Coastal Conservation League
Colite
College of Charleston; Itron Inc; independent consultant
Conservation Voters of SC
Conservatives for Clean Energy / First Tuesday Strategies
Columbia's City's Climate Protection Action Campaign (CPAC)
Delta Bravo AI
Dream Corps - Green For All
Drive Electric Columbia
Duke Energy
E4 Carolinas
Edelman Public Relations
Electrification Coalition

SC Auto Dealers Association
SCDOT
SCDP Environmental Caucus
Schneider Electric
SC Health Professionals for Climate Action
Shell Recharge Solutions
Sierra Club National
Solapave USA
South Carolina Association of Community Action Partnerships
South Carolina Interfaith Power and Light
SC Manufacturers Alliance/ SC Auto Council Southeast Energy Efficiency
Alliance
Southern Alliance for Clean Energy
Specialty Publishing Media
Speedwell Group LLC
Studio 2LR, Inc.
Sustain SC
Sustaining Way
Tesla Owners of Columbia
The Climate Reality Project
The COMET
Timberlake Communications Inc
University of South Carolina
Upper Savannah Council of Governments
Upstate Forever
Upstate Mobility Alliance
US Green Building Council SC
Waccamaw RTA & TASC
Watershed Consulting Group
WMB Charging / Future Fuels



Perspectives on EV Charging



**Can the
energy
provider
support the
demand in the
area?**

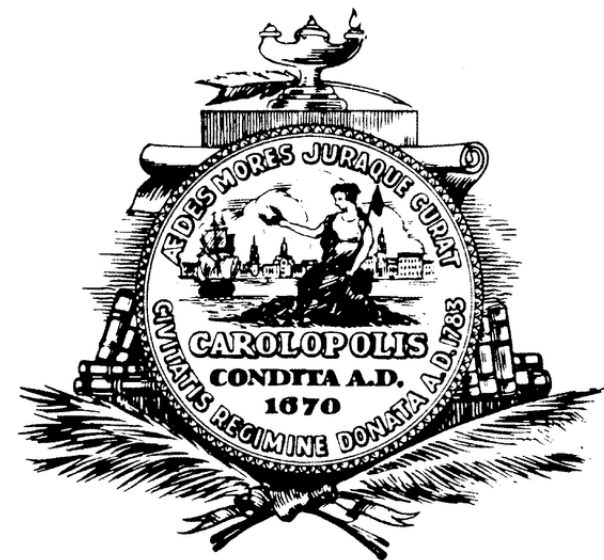


EV-Ready/EV Charging at Multi-Family Units



ALTERNATIVE FUELS CORRIDOR

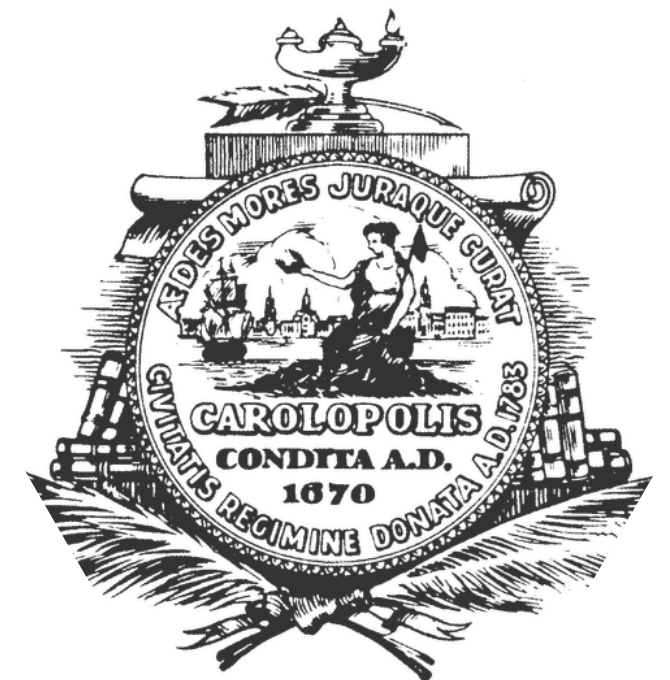
Desire to use NEVI dollars for or to make sure there are fast chargers along Hwy 17, Hwy 378, & I-526.



City of Charleston



- signage and pavement markings of the new stations consistent with the SC Energy Office's suggested markings, for consistency across the state





- **chargers need maintenance just like all other infrastructure**
- **curious to see where the Circle Ks, QTs, and Spinxs are on these opportunities (for electrification) and see how to leverage private money**



- **Many retirees travel throughout SC and will need charging stations.**
- **Charging access is needed for folks needing to evacuate due to hurricanes and flooding who rely on EVs.**

- **The Myrtle Beach area is experiencing a surging demand for electric vehicle charging infrastructure, driven by the increasing number of residents and visitors.**

Partnership
GRAND STRAND

- **By strategically integrating a network of charging stations along the proposed Interstate 73, we have the chance to transform it into one of the most technologically advanced and EV-friendly interstates in the entire nation.**

**A NEW CHAMBER
FOUNDATION**



- **Coordinate with local governments!**
Many rural communities do not simply want to become a rest stop, so leveraging the one-mile radius to try and include as many historic downtowns, commercial centers, or historic landmarks will be a great way to boost local support.
- **Funding for security monitors**
- **Guidelines on Parking**



Municipal Association of South Carolina

- **Local elected leaders would like to see federal investment in EV charging infrastructure come further within their municipalities - oftentimes in large shopping areas.**
- **SC has 27 cities and towns with municipal-owned charging stations. We'd like to see that number grow.**



Concerns Include:

- **price fluctuations**
- **having an adequate number of EV chargers in low-income neighborhoods and areas with large concentrations of other underserved populations, especially rural areas**
- **standardization so that tools/methods for chargers by people with disabilities will work for all EV stations across the state rather than a select few**



Concerns Include:

- **adequate space in the charging areas for wheelchairs and other assistive devices**
- **residents of low income, underserved, and rural areas having longer charging times or seeking charging in high-income areas**
- **technical assistance and education for funding opportunities is needed**





I am happy to see this (ADA, Section 504, and Civil Rights integrated into NEVI & an emphasis on benefiting low income communities) and I hope that when this plan is put into action that these considerations laid out in the plan are fully integrated into the final project.



**Coastal
Conservation
League**

- **EV-specific rate design that encourages off-peak charging**
- **Incentives for managed & networked charging across different customer classes to carefully manage load growth**
- **Requirements for evaluation, management, and verification (EM&V) analyses**



- **Enable use of the South Carolina Welcome Centers**
- **Promote electric vehicle charging equity by giving fast charging operators access to rural Post Office sites, serving customers with insufficient home charging options**
- **Support electric utilities implementing time of use rate incentives for overnight charging**

• **Tesla Columbia Owners Group**

• **Drive Electric Columbia**

- **Grants need to be given to city parks and recreational organizations for more level 2 charging. Interest free loans given to multi-tenant dwellings and business for level 2 charging that add solar to the level 2 charging. Solar parking canopies should be added with any charging infrastructure.**
- **Excited about momentum of NACS plug**





- **Align transportation planning investments with public health, health equity and emissions-reductions goals.**
- **Ensure equitable access to the benefits of zero-emission transportation, including ensuring community leaders and organizations are included in the development of plans**
- **Wherever possible, design infrastructure programs to safely and efficiently serve the widest range of vehicles – ie, light- and heavy-duty vehicles.**
- **We ask South Carolina to make additional state-level investments toward this goal beyond federal funds.**



SEE EA
SOUTHEAST ENERGY EFFICIENCY ALLIANCE



- **A systems approach, including battery storage, mobile charging, and public fast charging stations from the NEVI program are opportunities not just to support electric vehicle drivers but also to support all South Carolinians with resources during peak loads on the electric grid, including during natural disasters.**



SEE A
SOUTHEAST ENERGY EFFICIENCY ALLIANCE

- **We recommend leverage exisisting state grants and private dollars to increase application competitiveness in federal grant programs. Also recommend SC identify investment opportunities in staff or through public private partnerships to implement formula programs related to electric vehicles.**



- **SCADA suggests that the Working Group have conversations with the Petroleum Marketers to work on a plan that would financially incentivize fueling stations and c-stores to build out a network of EV charging stations. The physical space and location are already present and seem like a natural place for EV Charging Stations to be.**



- **Urge SC to move forward with an RFP process and not delay installation of much needed public charging infrastructure w/ NEVI funds**
- **Discourage any technical or equipment requirements that go beyond the FHWA guidance & rule**



- **More technical support, funding, and utility grid make-ready efforts are needed to enable fleets and medium-heavy duty vehicle operators to switch to EVs**
- **Workforce development grants and support for EVSE service and maintenance technicians are needed, separate from EV charging grants and incentives**

ETHERO

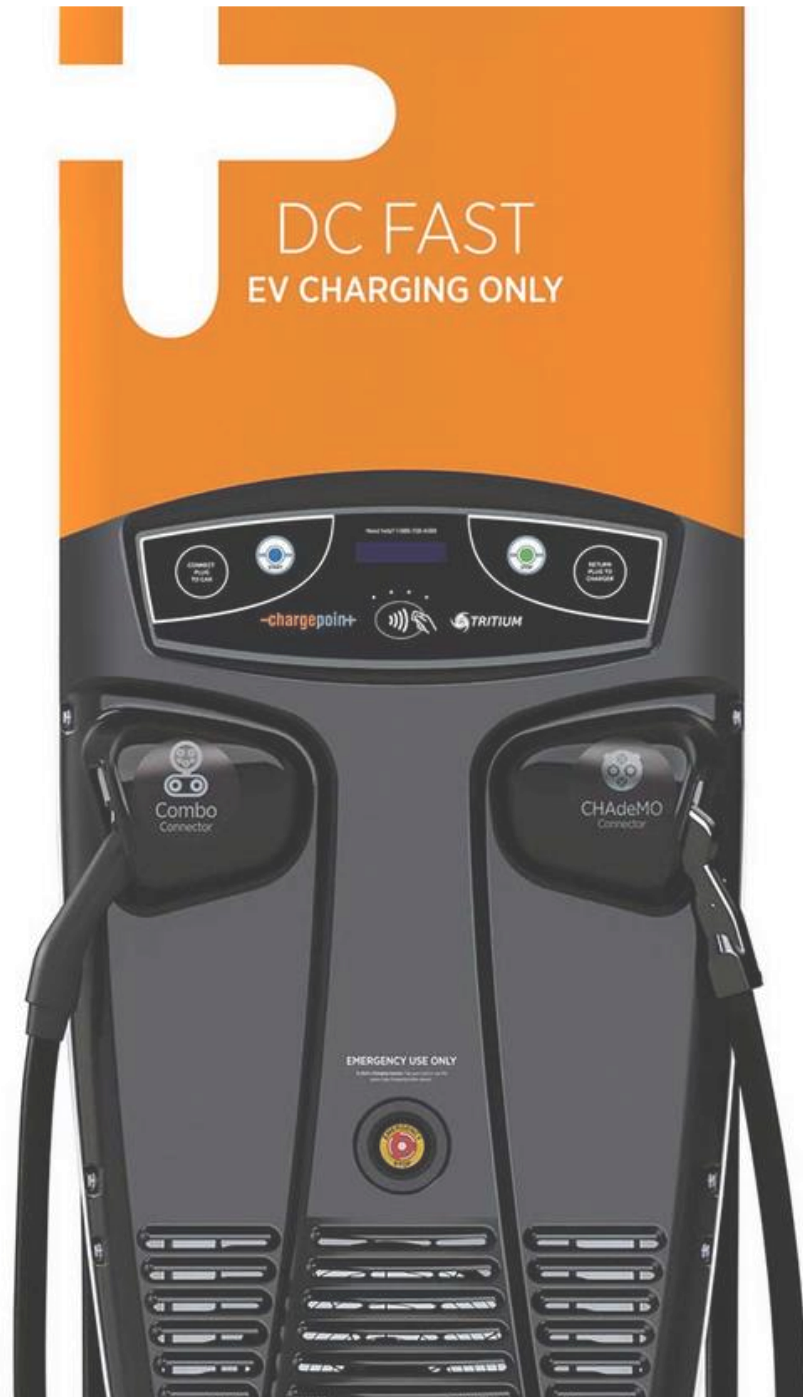
T R U C K + E N E R G Y



- **Would love to see SC lead the Eastcoast with CCS-1 (Level 3) EV charging for trucks up to class 8 with a 53' trailer attached.**
- **Large EV trucks and equipment will not be adopted by trucking companies without incentive to purchase them at or near the diesel equivalent cost of ownership. A state-funded program using some federal funds to support would help solve this.**



- **Our vehicles in development would benefit from having charging stations in downtown areas and along roads like 276, Wade Hampton, highway intersections such as the 385 to 85 junction, and tourist destinations.**
- **EV funding seems to be concentrated around charging stations. Unfortunately, we have been given little assistance for electric vehicle development in SC.**



colite

- **South Carolina is benefitting from EV suppliers and OEMs starting or expanding operations in the state.**
- **Green loans or grants should be available to help businesses add charging equipment.**



Resources

SC Transportation Equity Storymap

Advancing South Carolina's Electric Transportation

Equitable clean transportation, job expansion, and economic development opportunities for the Palmetto State

Developed by: Justin Brightharp, Will Bryan, Jaylan Jacobs, & Joy Ward (SEEA)

February 1, 2023

SC-Specific Data

www.Lung.org/EV

Electric Vehicle Reports

A series of reports illustrating the urgency of a widespread and rapid transition to zero-emission vehicles, coupled with clean, non-combustion electricity, to protect health across the United States.





The **Climate Portal** tracks investments from the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA).

ClimateProgramPortal.org/register

A photograph of an electric vehicle charging station. The station is white with a blue charging cable plugged into it. The background shows a blurred outdoor setting with trees and a building.

Charging Toward Justice: How States Can Lead on Racial and Economic Equity through the National Electric Vehicle Infrastructure (NEVI) Program

(Link is in Your Packet)



Join the SC Electric Transportation Network

- Visit **SCETNetwork.org** to learn more
- Twitter **[@SCETNetwork](https://twitter.com/SCETNetwork)**
- Contact **katie@cvsc.org** with questions



SUSTAIN  SC

commerce + conservation

OUR MISSION

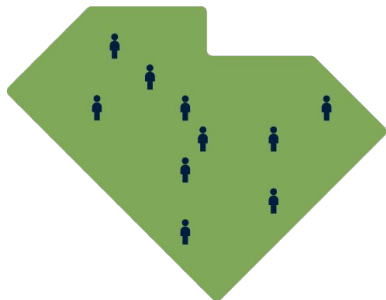
Connect the sustainability goals of business in South Carolina with local solutions for the benefit of our economy, environment, and people.



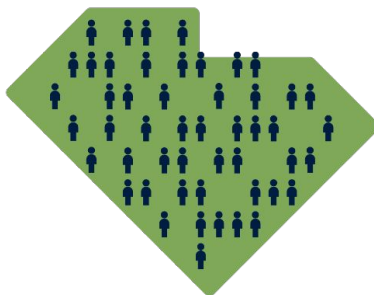


Growth is inevitable, sustainable growth is **imperative.**

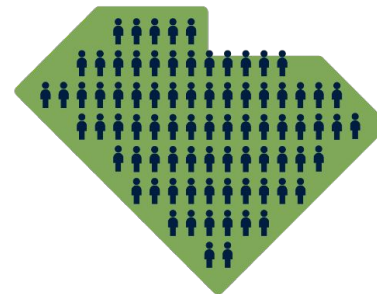
1890 | **20** MILLION ACRES
1 MILLION PEOPLE



2020 | **20** MILLION ACRES
5 MILLION PEOPLE



2070 | **20** MILLION ACRES
10 MILLION PEOPLE



= 100,000 PEOPLE



If leaders unite in a systemic net-zero transition, the global economy could see new five-decade gains of **\$43 trillion** by 2070 — a boost to global GDP of 3.8%.



Shifting from the Industrial to the Sustainable Revolution



The collage features several news articles and images:

- US 'battery belt' widens with \$3.5 billion Redwood Materials plant** (Bloomberg, December 14, 2022). The article includes a photograph of a large industrial facility with multiple buildings and parking lots.
- Volkswagen subsidiary Scout building \$2B plant near Columbia as SC's EV business grows** (The Post and Courier, 2022). The article includes a photograph of two silver SUVs.
- Bosch turns South Carolina diesel facility into \$260 million EV motor plant** (ars TECHNICA, 10/24/2022). The article includes a photograph of a large industrial building at night, illuminated with blue lights, with a large blue 'X' structure in the foreground.
- Bosch will invest \$200 million to build fuel cells for electric trucks in South Carolina** (ars TECHNICA, 10/24/2022).
- BMW Invests \$1.7 Billion to Expand South Carolina EV Plant** (Bloomberg). The article lists two bullet points:
 - Supplier Envision AESC to build new battery plant in the state
 - BMW revamping global battery supply chain for new EV platform



Unchecked climate change could cost the global economy **\$178 trillion** over the next 50 years, — or a 7.6% cut to global GDP by the year 2070.

-Deloitte Center for Sustainable Progress (DCSP)



Sustain SC Launches

Land and Water Action Fund



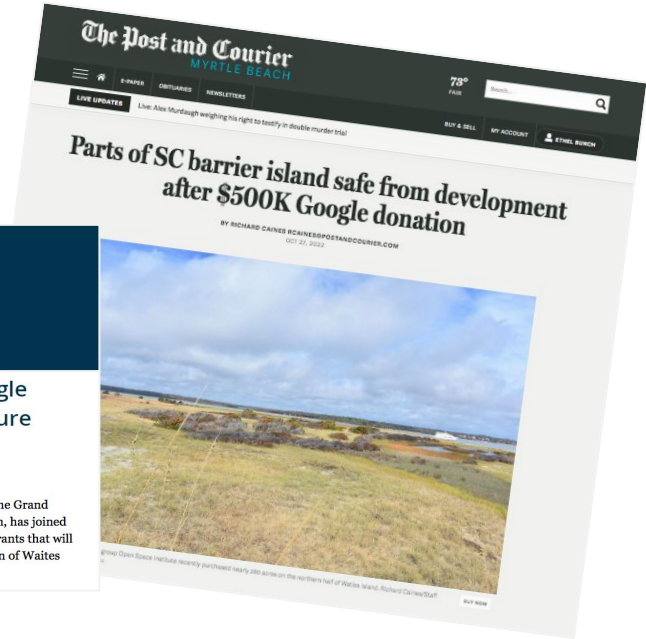
midlandsbiz
WHO'S ON THE MOVE IN COLUMBIA, SC

Waccamaw Community Foundation, Google provide matching \$500,000 grants to ensure protection for Waites Island

November 3, 2022

 **Waccamaw**
Community Foundation

The Waccamaw Community Foundation, the Grand Strand's leading philanthropic organization, has joined Google in providing matching \$500,000 grants that will go toward permanently protecting a portion of Waites Island from development.



SDG Pilot Study



+

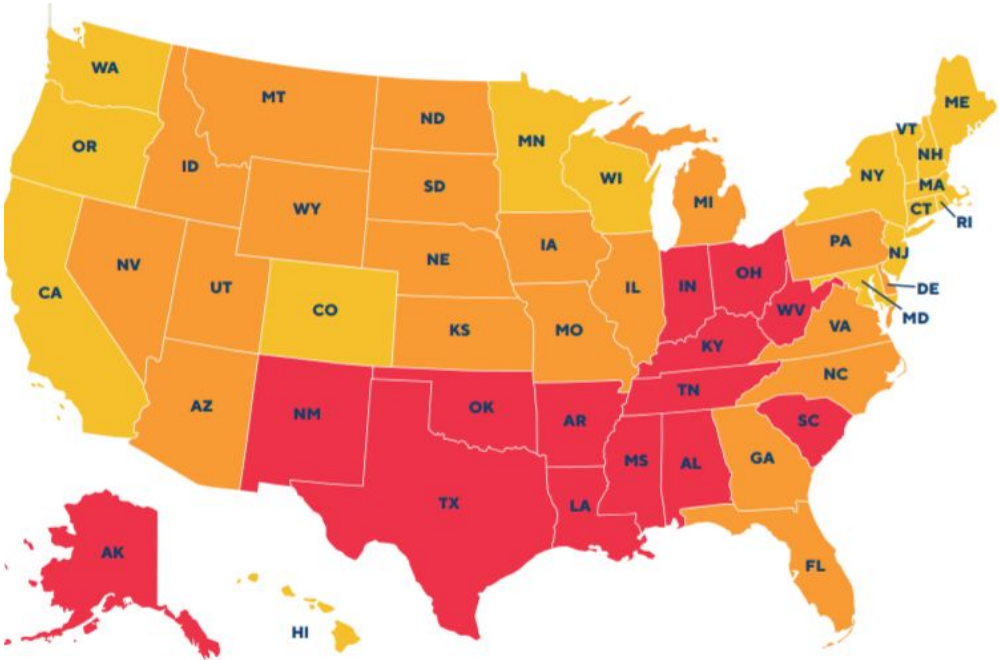
SUSTAIN  SC

The logo icon for SUSTAIN features a green arrow pointing right, with a green house-like shape above it.

commerce + conservation

South Carolina's SDG Ranking

37th



Source: SDSN analysis, 2021

Why it matters...

Corporate Sustainability strategies are increasingly built around SDG priorities, even in South Carolina.



Total	76%	24%	29%	55%	34%	39%	39%	55%	37%	55%	37%	55%	68%	76%	24%	29%	29%	37%
Atlantic Packaging																		
BMW																		
Boeing																		
BP																		
Duke Energy																		
Ingevity																		
Milliken																		
Sage Automotive																		
Seaside Grown																		
Siemens																		
Trane Technologies																		
ZF Transmissions																		
Amazon																		
Norfolk Southern																		
Mercedes-Benz Group																		
Walmart																		
Avison Young																		
Weyerhaeuser																		

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Volvo																		
Michelin																		
Schaeffler																		
Dominion energy																		
Coca Cola																		
Sonoco																		
Bank of America																		
FujiFilm																		
Teijin																		
EY																		
Blue Cross Blue Shield																		

Commerce + Conservation



1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

17 PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

44 Representatives from 8 Sectors/Industries

These companies acted as SDG ambassadors or active participants through the course of the SDG pilot study, representing 8 sectors and industries.

Advanced Manufacturing and Mobility	Consumer Products and Retail	Energy and Resources	Real Estate, Hospitality, and Construction	Government & Infrastructure	Engineering, Consulting, & Applied Research	Non-Profits	Tech, Media, & Communications
							



Executive Summary

SDG Pilot by the Numbers

44

SDG ambassadors and active participants

21

SDG ambassador virtual meetings
and working sessions

9

Initiatives
created

3

In-person
workshops

5

SDG ambassador
groups

88

Localized indicators identified
and developed

33

Corporate sustainability reports
analyzed and compared

11

External subject matter expert
interviews conducted

61

1-on-1 SDG ambassador interviews
and connections



The

Roadmap to Sustain South Carolina



The Roadmap to Sustain SC



Partnerships for Economic Prosperity and Quality of Life



A Resilient State: Sustain SC Land and Water Action Fund



The New STEM: Future Skills Workforce Accelerator



Capitalizing on the Sustainable Revolution



The Circular Economy: South Carolina's New Economic Opportunity



The Three-Legged Stool: Affordable, Reliable & Sustainable Energy



Global to Local: Meeting Goals at the Local Level



Capitalizing on the Sustainable Revolution

Priorities Identified (Based on EY Strategic Planning)

- Define economic innovation opportunities in SC
- Identify the cost of not developing sustainable economic pathways for industry, resilience, and youth development

Strategic Actions (What We're Actively Doing)

- Economic Innovation Market Analysis
- Partnering with SC Commerce and economic development groups to match industry innovation demands with new companies investing in solutions
- Legislative Education Series



RENEWABLE ENERGY

Geothermal Energy
Hydrogen Energy
Nuclear Energy
Renewable Natural Gas (RNG)
Solar Energy
Wind Energy



Battery Storage Innovations
Digital Infrastructure for Sustainability and
use of Artificial Intelligence (AI)
Electric Vehicle (EV) Infrastructure
Green Steel/Aluminum
Green Cement
Landfill and/or Organic Waste Innovations
Recycled Content Innovations
Sustainable Agricultural Practices and
Technology
Sustainable Chemical Innovations
Sustainable Development Goals Reporting
Technological Innovations in Materials
Used in Production
Technological Innovations in Transport
Water Use Reduction Innovations



Please estimate the extent to which your current projected annual revenue growth over the next decade across all of your South Carolina facilities would change in the absence of access to the sustainable energy, innovations, and technologies you selected.



- Increase by 3% or more
- Increase by 1%-3%
- No change
- Decrease by 1%-3%
- Decrease by 3% or more

What is the likelihood that work at your existing South Carolina facilities will shift outside of South Carolina if you do not have access to sustainable energy, innovations, and technologies?

- Very likely
- Somewhat likely
- Uncertain/unknown
- Somewhat unlikely
- Not likely





Shifting from the Industrial to the Sustainable Revolution

Walmart Plans 'Coast-to-Coast' EV Charging Network

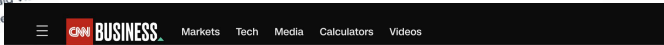
All those new EVs on the road are going to need places to charge, and Walmart betting that its stores will be a prime place to do it, not least because drivers can't do their shopping done or stop in for a bite to eat while their cars "juice up."

By 2030, the company said that it intends to have fast-charging EV stations at **thousands** of Walmart and Sam's Club locations, in addition to the almost **1,300** fast-charging EV stations already in place at more than **280** U.S. facilities today. True to form the company also committed to **keeping the price of charging low** "to help ease transportation costs, still the **second** highest household cost for much of the country," according to the **U.S. Bureau of Transportation**.

"With a store or club located within **10** miles of approximately **90%** of Americans, we are uniquely positioned to deliver a convenient charging option that will help make EV ownership possible whether people live in rural, suburban or urban areas," said Vishal Kapadia, SVP of Energy Transformation at Walmart in a **blog** announcing the

KEY POINTS

- There are over two million electric vehicles in the U.S., and roughly 55,000 EV charging stations.
- The U.S. may need to increase the supply of EV charging by as much as 20 times, to over 1 million public and 28 million private chargers.
- Ford already has the largest charging infrastructure, GM is planning to leverage its dealerships as local EV charging partners, and Tesla is opening its network to all cars.



(CNN) — Seven major automakers are coming together to create a joint venture that will build out a large electric vehicle fast-charging network in the North America, in an attempt to make electric vehicles more attractive to consumers. The companies — General Motors, BMW Group, Honda, Hyundai, Kia, Mercedes-Benz and Stellantis — plan to install at least 30,000 chargers in the United States and Canada.

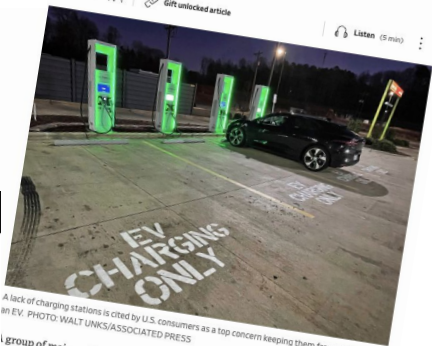
The first of the new charging stations will open next summer, the companies announced, first in the US and, later, in Canada.



Big Automakers Plan Thousands of EV Chargers in \$1 Billion U.S. Push

GM, Honda and Stellantis are among the companies investing in charging joint venture

By Mike Colias [Follow](#), River Davis [Follow](#) and Ryan Felton [Follow](#)
Updated July 26, 2023 2:33 pm ET
Unlocked article



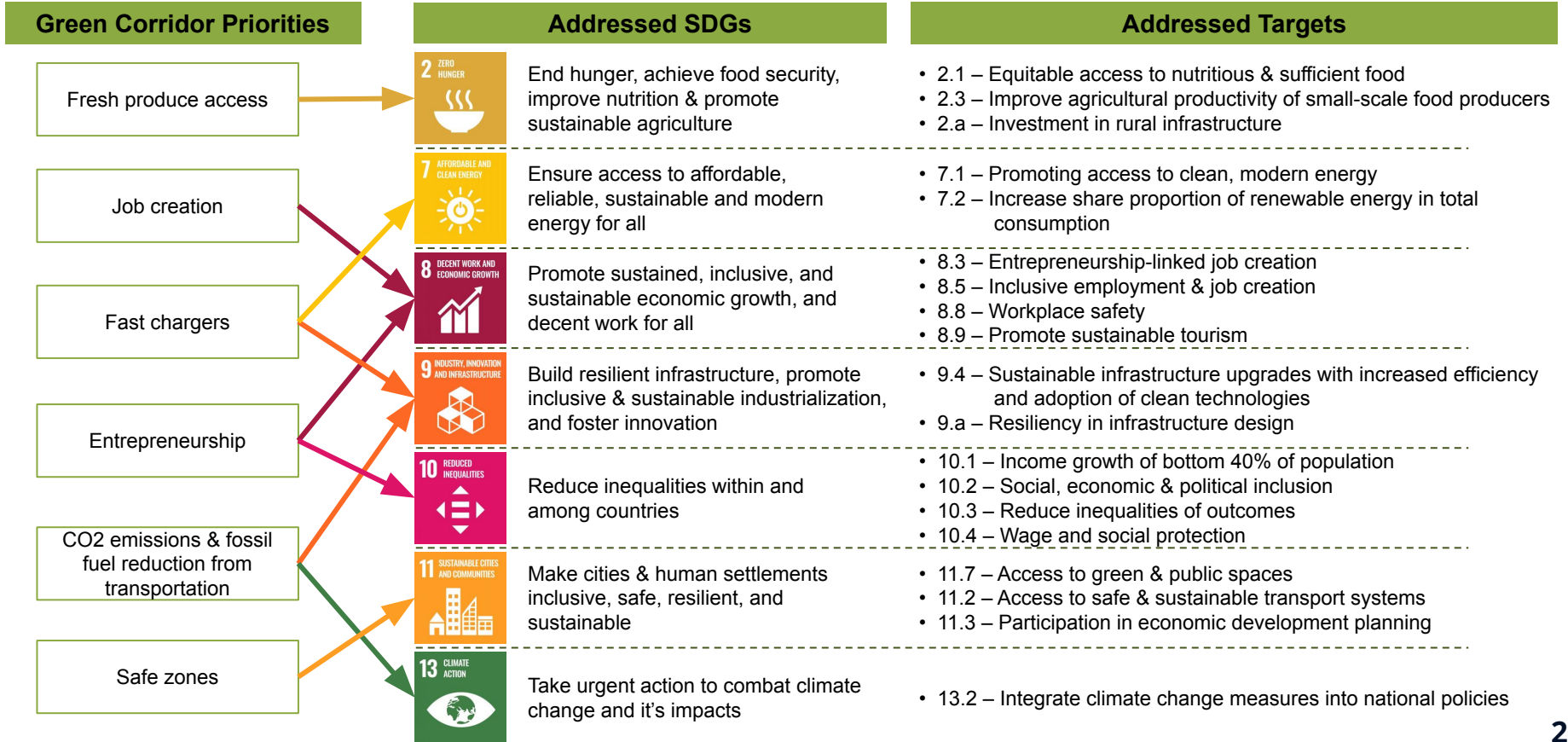
A lack of charging stations is cited by U.S. consumers as a top concern keeping them from switching to an EV. PHOTO: WALT UNKS/ASSOCIATED PRESS

A group of major automakers is planning a joint investment to build thousands of electric-vehicle chargers in the U.S., in a bid to ease a **shortage of charging sites** that deters many consumers from choosing EVs.

The companies — **BMW** [BMW 2.61%](#) ▲, General Motors, **Honda Motor** [HMC -0.13%](#) ▼, Hyundai Motor, **Kia** [KIA 0.00270 0.61%](#) ▲, Mercedes-Benz and Jeep maker **Stellantis** [STLA 3.34%](#) ▲ — plan to collectively invest at least \$1 billion in a joint-venture company that will build out charging stations, people familiar with the plan said. The group is targeting the addition of around 30,000 **fast chargers** in urban and highway areas over several years, the companies confirmed Wednesday after The Wall Street Journal reported details of the

Initiative 3: Green Corridor

SDG Alignment





The STEM2030 Workforce Accelerator

Priorities Identified (Based on EY Strategic Planning)

- Leverage workforce pipeline opportunities
- Identify future green skills requirements
- Link skills training with employers

Strategic Actions (What We're Actively Doing)

- *Green Skill Demand* Market Analysis
- Engaging young people in future skills across career areas
- Uniting multiple statewide stakeholders for green skill workforce development
- Partnering with universities and companies to define future skill demand and develop supporting curriculum

Actuary
Agriculture
Climate Change Reporting and Analysis
Conservation
Corporate Social Responsibility
Data Analytics and Logistics
Ecosystem Management
Ecotourism
Electric Vehicle Charging
Electric Vehicle Manufacturing
Electrical Engineering
Engineering and Sustainability
Environmental Auditing
Environmental Policy
Environmental Remediation
Fashion Design (Sustainable)
Forestry and Forest Sustainability
Government Relations and Sustainability
Insurance Analyst
Insurance Underwriter

Manufacturing and Sustainability
Occupational Health and Safety
Pollution Prevention
Renewable Energy Generation
Solar Energy Finance and Business
Solar Energy Technology
Supply Chain and Sustainable Sourcing
Sustainability Education
Sustainability Marketing and
Communications
Sustainability Reporting: ISO 14001, GRI,
SASB, ScBTi, CDP
Sustainable/Green Construction
Sustainable Design
Sustainable Development
Sustainable Finance
Water Pollution Assessment
Wind Turbine Technology





The Three-Legged Stool: Affordable, Reliable & Sustainable Energy

Priorities Identified (Based on EY Strategic Planning)

- Identify company demand for meeting emissions goals
- Foster solutions for affordable, reliable & clean energy
- Create a resilient energy matrix

Strategic Actions (What We're Actively Doing)

- Hosting a series of Cross-Sector Energy Forums: Roundtables with energy stakeholders, industry, agribusiness, legislators, and conservation NGOs
- Assessing alternative energy demand as it relates to retaining and attracting industry
- Legislative Education Series

commerce + conservation

together.

SUSTAIN  SC