

Members of the South Carolina Electric Transportation Network were surveyed with the questions below to share their perspectives with the SC Interagency EV Working Group July 2023.

- Any information or perspectives you'd like to share with the Working Group in regards to the placement of passenger car EV charging equipment along the interstate highway system or recommendations regarding the deployment of EV charging infrastructure in South Carolina?
- Any information or perspectives you'd like to share with the Working Group in regards to loans, grants, or other funding streams pertaining to EV-related resources, technology, and infrastructure available to SC (including funding available to county or municipal governments or private businesses)?
- Are there any relevant resources you'd like to share with the Working Group?
- Anything else you'd like to share?

**Responses from SC Electric Transportation Network Members:**

**Drive Electric Columbia**

**Alan Buck**

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The federal guidelines covering locations close to the interstates and at existing businesses seem to be ideal. Targeting locations halfway between SC's major cities along with HWY 17 on the coast and 378 towards Sumter would cover most major arteries in SC.

Given the recent momentum towards the NACS plug, adding it to deployments will future proof chargers across almost all mainstream EV manufacturers.

**Greenlink**

**James C Keel**

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Our organization focuses on public transportation - not private car owner charging. That said, I think there are a few pieces that are important. 1) making sure the energy provider can support the demand in the area, 2) making sure the charging equipment is fast enough for a user to benefit from it, 3) understanding that the chargers need maintenance just like all other infrastructure.

The majority of our grants from from USDOT, as I am sure you are well aware that there continues to be a lot of money for electrification. Most of those grants require partnership with a private company. I would be curious to see where the Circle Ks, QTs, and Spinxs are on these opportunities and see how to leverage private money.

**Charleston County**

**Arielle Gerstein**

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EV charging equipment along major highways in Charleston like I-26 or 526 should be located in a geographic distance where people driving to or from Charleston feel confident in taking long distance trips in their EVs. In addition, fast chargers are vital for long distance travel. Incentivizing more new construction buildings to be EV ready, particularly multi-family residents is important for EV expansion in the state.

We haven't applied for any large federal grants but the CFI grant through DOT is a great opportunity to deploy larger-scale charging options if the matching requirement can be met.

Charleston County just opened six EV charging stations for public charging, its first stations on County property. The County also recently purchased two EVs for its motor pool.

### **Tesla Columbia Owners Group**

**John Loy**

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We have AMAZING rest areas. We need DCFC, 50kW+ charging, at the rest areas. We need level 2 charging at more urban locations, city parks, sports complexes, malls and apartments.

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.

**Edelman**

**Ashkon (Ash) Eslami**

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There is currently a charging desert on Highway 17 between Charleston and Beaufort/Bluffton, a popular byway used to travel south towards Savannah and to reach i-95. Offering fast charging in Jacksonboro or near the Carolina Cidery would provide necessary charging, especially during storms where evacuations will have people traveling in-land/north and south.

### **Upstate Mobility Alliance**

**GP McLeer**

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The one downside to the rural interstate strategy is that much of rural SC does not have interstate access. Additionally, many of the rural exits along our interstate have no other commercial activity - leaving those charging with nothing else to do. This will be the challenge in achieving real equity in rural placement, but does offer an opportunity for better coordination on the economic development front at the local level. For those rural communities with growing or existing commercial infrastructure within a mile of an interstate exit, coordination with local governments will be critical to ensure compatibility with future land use maps, zoning, and community planning. 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. Additionally, messaging around the cost to utilize EV chargers (user cost) is important to help local communities combat a misnomer that EVs don't pay as much and placement in public places is a benefit

to EV drivers not available to others. If placed in public spaces, funding should also be made available for increased security monitoring as EV charging stations would most likely operate 24/7, as well as guidelines on enforcement of parking laws (e.g. a non-EV parks in spot, or EV sits in spot while not charging).

### **City of Charleston**

**Katie McKain**

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Could we expand Alternative Fuel Corridors (AFCs) in SC, including the consideration of the US-17 Corridor and I-526 around Charleston metro? The entire US-17 Corridor in SC is a major connection from Savannah up the coast to Myrtle Beach ultimately connecting to the NC border (US-17 in NC is already a pending AFC). In addition, could we please consider the population density in the Charleston area would greatly benefit from I-526 being an Alternative Fuel Corridor (AFC) as well?

Would love to see a tandem state led effort that provides funding to private multi-family buildings giving HOAs the fiscal capacity to add EV Ready infrastructure to existing buildings. This will make charging more accessible to residents who have little control of governing boards and HOAs who are not able to pay the high price tag of EV Ready retrofits. Another consideration is statewide mandates in the building code for EV Ready infrastructure in new construction.

Would love to see the signage and pavement markings of the new stations consistent with the SC Energy Office's suggested markings, for consistency across the state.

### **Partnership Grand Strand**

**James Toy**

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The construction of Interstate 73 presents an unparalleled opportunity to revolutionize the electric vehicle (EV) charging infrastructure in South Carolina, particularly in the Myrtle Beach area. With an annual influx of approximately twenty million visitors, the absence of a direct interstate connection has resulted in congestion on U.S. 501 and insufficient capacity on two-lane roads ill-equipped to handle such a significant volume of vehicles. This situation not only hampers traffic flow but also poses a substantial public safety risk, particularly during hurricanes and other adverse weather conditions.

However, 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.

The Myrtle Beach area is experiencing a surging demand for electric vehicle charging infrastructure, driven by the increasing number of residents and visitors embracing this eco-friendly transportation option. Recognizing this trend, numerous hospitality businesses in the region have taken proactive steps by installing charging stations at their properties. Notably, our parent organization, the Myrtle Beach Area Chamber of Commerce, has recently joined the movement by installing a public charger in their parking lot. We are thrilled to witness the state of South Carolina's unwavering commitment to

exploring opportunities in the EV space, with the Grand Strand prominently positioned as a vital participant in this forward-thinking conversation.

### **Colite**

**Adam Regenthal**

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South Carolina is benefitting from EV suppliers and OEMs starting or expanding operations in the state. We should take a leadership role in expanding access to EV chargers along our interstates (Level 3 chargers) and at public places, where folks can plug in and shop or dine (Level 2 chargers).

Green loans or grants should be available to help businesses add charging equipment. ChargePoint does a good job of providing high-level details on available incentives:

<https://www.chargepoint.com/incentives/commercial>.

Let's be as supportive as we can be of this transition to electric vehicles. Earth just had the hottest week in recorded history. We owe it to ourselves and generations to come to act responsibly and quickly.

### **Able SC**

**Natasha V. M. Pauling**

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Some of my concerns include price fluctuations, based on peak time, and failing to place an adequate number of EV chargers in low-income neighborhoods and areas with large concentrations of other underserved populations, especially rural areas. This presents a barrier that will force residents of those areas to 1. Wait longer for charging (which could result in tardiness for work or appointments) or 2. Seek charging in higher income areas, where they may be subject to increased scrutiny and heightened interactions with law enforcement. Having charging stations that are farther away from work/home will also ultimately increase the cost and inconvenience of vehicle ownership for those who can least afford it. In addition, the stations need to leave adequate space between vehicles to allow for people who use wheelchairs and other assistive devices to readily access them, as many do drive their own vehicles.

I would like to see businesses apply for funding, but to have help with understanding and filling out their applications. In particular, the mom and pop gas stations do not need to get left out of the EV revolution. Small businesses are important for building wealth and keeping wealth within local communities.

### **Able SC**

**Mi'Chal Ryan-Green**

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I would like to see more charging equipment. In rural areas of SC. I would like to see more efforts to educate the community about resources that are available to individuals so, they can access funds.

**Able SC****Mandy Halloran**[mhalloran@able-sc.org](mailto:mhalloran@able-sc.org)

They should be accessible to the disability community - at proper heights and with easy to read accessible instructions

**Able SC****Holden Roberts**[hroberts@able-sc.org](mailto:hroberts@able-sc.org)

It is very important that, if public EV charging stations are made available, that they be available to low income communities and on an individual scale they need to be made accessible to people with disabilities like all public infrastructure should be. If both needs are secured, then I support the plan.

Whether the funding comes from a private or public source (or some combination of the two), how the individual stations work should be standardized and functionally interchangeable. The reason for this is so that those stations in high income areas will be equal in quality to those stations in low income areas. And that the tools/methods for using them by people with disabilities will work for all EV stations across the state rather than a select few. If they are privatized, then there should be anti-price-gouging measures in place to prevent similar exploitation to what we saw recently in the gas industry.

I notice in the plan document, the project is said to be ADA-compliant, as well as in line with the Civil Rights act and Section 504. The map also suggests an equitable layout of where the charging ports will be, and the plan document places an emphasis on benefiting low-income communities. I am happy to see this, and I hope that if this plan is put into action that these considerations laid out in the plan are fully integrated into the final project.

**US Green Building Council****Michael Criss**[mcriss@sc.rr.com](mailto:mcriss@sc.rr.com)

The US Green Building Council is responsible for LEED, the world's most widely used green building rating system. LEED (Leadership in Energy and Environmental Design) is a family of voluntary, market-driven scorecards for the sustainability of new construction, interior design, building operation and maintenance, neighborhood projects, and even cities. LEED recognizes the air pollution and energy conservation benefits of transportation alternatives to fossil fueled automobiles, such as walking, cycling, transit, and electric vehicles. For example, credit is given to projects that include preferred parking spaces or rates or charging equipment (Level 2 or greater) for electric vehicles. State agencies can apply LEED's green transportation principles for their fleets, employees, and customers without its formal project certifications. Regarding interstate charging, the SC NEVI Plan should enable use of the South Carolina Welcome Centers by the selected service provider(s). In partnership with the US Postal Service, the SC NEVI Plan should promote electric vehicle charging equity by giving fast charging operators access to rural Post Office sites, serving customers with insufficient home charging options. The SC NEVI Plan should encourage electric utilities to implement time of use rate incentives for overnight charging of electric vehicles, to help lower base load peaks and customer bills.

USGBC offers this \$45 online course on Integrating Electric Vehicle Infrastructure in Building Design: <https://www.usgbc.org/education/sessions/integrating-electric-vehicle-infrastructure-building-design-12855074>

### **Real Motors**

**Trent Dingman**

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Our vehicles in development would benefit from having charging stations in downtown areas and along roads like 276, Wade Hampton, etc. Having charging stations around highway intersections would be beneficial to. EX: 385 to 85 junction.

Lastly charging stations near tourist destinations like Caesar's head would be beneficial.

EV funding seems to be concentrated around charging stations. Unfortunately, we have been given little assistance for electric vehicle development in SC.

### **Neighbor to Neighbor of South Carolina**

**Joe Kunkel**

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The Myrtle Beach corridor lacks strong connectivity due to no highway system officially running through it; however, it is one of the highest concentrated populations in the state. To connect the Grand Strand area to Florence, Charleston, and Wilmington would help folks be better connected through the infrastructure. Additionally, this would help provide charging access for folks needing to evacuate due to hurricanes and flooding who rely on EVs.

### **Alliance for Transportation Electrification**

**Bruce Edelston**

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NEVI program should take care of interstate. Other priorities should include state highways, airports, tourist areas, rural and low income areas, multi-family dwellings.

The IRA (Inflation Reduction Act) provides significant grant opportunities.

### **Municipal Association of SC**

**Erica Wright**

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We have heard from local elected leaders who would like to see federal investment in EV charging infrastructure come further within their municipalities - oftentimes in large shopping areas.

We also have approximately 27 cities and towns with municipal-owned charging stations. We'd like to see that number grow.

This article titled ""Cities Drive Charge for Vehicle Electrification may be insightful:

<https://www.masc.sc/uptown/05-2022/cities-drive-charge-vehicle-electrification>

**SC Auto Dealers Association****Danielle Peeler**[danielle@scada.org](mailto:danielle@scada.org)

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.

SCADA has a new EV tab on our website! We are hoping to grow this tab and integrate additional resources in links. If anyone has anything that could enhance this portion of our website, please email [danielle@scada.org](mailto:danielle@scada.org) | Website: <https://scada.org/electric-vehicles/>

SCADA would like to be as involved as possible in all things EV!

**ETHERO Truck + Energy****Dave Rogers**[dave\\_rogers@ethero.com](mailto:dave_rogers@ethero.com)

I'd like to see CCS-1 (Level 3) EV charging for trucks up to class 8 with a 53' trailer attached. The only other place this is really being considered is in California, who is leading the way in zero-emissions commercial transportation out west. With all the commerce and manufacturing growing and moving into SC, and the trucking traffic associated with that - what a spectacular opportunity to lead the way on the east coast. The state could charge the trucking owner/operator or trucking fleets money for this service via credit card, like other publicly available EV charging, to help the business case to install these stations. Well thought-out locations along the SC interstates and near the ports would be necessary. State-managed trucking rest stops first come to mind, because the space is certainly available.

Working with the federal government, utilizing programs like Diesel Emissions Reduction Act (DERA), to obtain funding for these projects, is recommended. But the 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 will help solve this.

We also do business in California, and these programs have been successful in ""moving the needle"" towards electrification and zero-emissions: <https://californiahvip.org/> ; <https://californiacore.org/> ; <https://valleyair.org/grants/> ; <https://www.airquality.org/businesses/incentive-programs> ;

With commercial diesel trucks representing 23% of the greenhouse gas emissions in the USA, a focus on the commercial sector is crucial to keep SC so beautiful! <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>

**Southeast Energy Efficiency Alliance****Justin Brightharp**[jbrightharp@seealliance.org](mailto:jbrightharp@seealliance.org)

SEEA commends the state on the efforts already taken through the Electric Vehicle Stakeholder Initiative report completed in 2022 and the EV Interagency Working Group. SEEA encourages the state to

continue hosting stakeholder engagement opportunities and agency coordination around the impacts electric vehicles will have on the state. As more electric vehicles are placed on the road, including medium- and heavy-duty vehicles, we recommend investments in make-ready practices for current and future transmission and distribution capacity needs. These investments can reduce subsequent costs in upgrading power needs and managing load at charging sites. Additionally, identify disaster planning needs such as infrastructure for personal vehicles and heavy-duty vehicles used in evacuation along corridors and temporary destinations. Mobile charging is a potential resiliency strategy, and we encourage including the NEVI charging sites in this planning as they can support routes, including electric transit buses and electric school buses, used in the safe evacuations of elderly and differently abled populations. SEEA recommends SCDOT maintain close partnerships with South Carolina's electric utilities and the South Carolina Public Service Commission to identify opportunities for dispatchable battery storage resources as resilient solutions to support grid capacity. 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. Many stakeholders in the southeast are engaged in utilizing infrastructure and resources in resilience planning efforts.

There are several funding opportunities through the U.S. Department of Transportation, U.S. Department of Energy, and U.S. Environmental Protection Agency to support projects that electrify private and public fleets, seaport and airport electrification, medium- and heavy-duty vehicle electrification, off-road vehicle electrification and workforce development. SEEA recommends the state identify ways to amplify existing state grant programs and leverage additional pathways, including private dollars, to support communities and stakeholders in project planning to increase application competitiveness in federal grant programs. Additionally, federal programs require project management and SEEA recommends the state identify investment opportunities in staff or through public private partnerships to effectively implement formula programs related to electric vehicles.

South Carolina Transportation Equity StoryMap:

<https://storymaps.arcgis.com/stories/a379a6adbc734029a4b0b319275c35a6>

### **South Carolina Coastal Conservation League**

**Ben Garris**

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It will be important for future EV deployment to be supported by robust regulatory programs at the utility level. Examples of these policies include EV-specific rate design that encourages off-peak charging, incentives for managed & networked charging across different customer classes to carefully manage load growth, and requirements for evaluation, management, and verification (EM&V) analyses to collect and share data regarding usage of charging infrastructure. These policies, informing well-developed utility programs, must also ensure an equitable rollout of EV infrastructure that includes providing opportunities to low- and moderate-income communities, especially those in multi-family dwellings which face additional barriers to EV adoption. Per Act 46, these issues will be discussed at the ongoing PSC generic docket (Docket No. 2023-121-E), which will receive comments in late July & early August, potentially hold a hearing in October, and ultimately help inform the joint committee's



recommendations. CCL is a joint intervener in that docket alongside SACE and Vote Solar, and we will provide detailed comments to the PSC about designing supportive regulatory policies to enable deployment of EV infrastructure. Link to the PSC docket:

<https://dms.psc.sc.gov/Web/Dockets/Detail/118549>

CCL and SACE jointly intervened in two ongoing dockets regarding EV programs proposed by Duke Energy (Make Ready Credit and Electric Vehicle Supply Program) in Docket Nos. 2022-158/159-E. We provided comments about those programs and EV utility regulatory policies generally here:

<https://dms.psc.sc.gov/Attachments/Matter/25d4fad1-b54c-483c-bd4c-573690c70503>

### **ABB E-mobility**

**Olivia Campbell Andersen**

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Significant need exists now & today for reliable public DC fast charging for South Carolina EV drivers and visitors. We urge the state to move forward with an RFP process and not delay implementation of its NEVI funds and delay installation of much needed public charging infrastructure. 150kW+ chargers are sufficient and most cost-effective to quickly charge EVs on the road today and in the near future, we would 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 and should be separate from EV charging equipment grant/incentive programs.

Best practices for EV Charger Reliability:

<https://search.abb.com/library/Download.aspx?DocumentID=9AKK108467A9253&LanguageCode=en&DocumentPartId=&Action=Launch>

ABB E-mobility manufacturers DC fast chargers in West Columbia, SC. Those chargers are among the first to meet Buy America 55%+ cost of components content, Energy Star certification, and NTEP certification.

### **American Lung Association**

**Danna Thompson**

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The American Lung Association strongly favors a nationwide transition to zero-emission transportation to reduce the health harms of air pollution. In 2022, the Lung Association and 14 other health and medical organizations submitted comments to the Department of Transportation on EV charging, much of which is relevant to state-level planning: <https://www.lung.org/getmedia/db19af60-38b8-4bb3-864b-01f9684dbcba/Health-Orgs-Comments-to-DOT-on-EV-Charging-Plans.pdf>

Key points include: 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.

The Lung Association has issued a series of reports highlighting the health benefits of a transition to zero-emission vehicles and electricity, all available at [www.lung.org/ev](http://www.lung.org/ev) . One of these reports, “Zeroing in on Healthy Air,” highlights that South Carolina could see 1,250 premature deaths avoided, 25,600 asthma attacks prevented and 123,000 lost days of work avoided by 2035 with a transition to zero-emission vehicles and clean, non-combustion electricity. (<https://www.lung.org/getmedia/9e9947ea-d4a6-476c-9c78-cccf7d49ffe2/ala-driving-to-clean-air-report.pdf>)

### **City of Columbia**

**Leigh DeForth, AICP**

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One of your questions seemed a bit more geared towards interstate travel and EV charging, but we realize charging stations will and should be deployed in our downtowns as well. So, as we hope to create more walkable/bikeable/transit-rideable/ADA accessible downtowns, the location of parking (surface lots, on street, and garages) would ideally shift in ways that result in more active uses facing sidewalks (with parking to the rear), fewer curb cuts (access management increases safety for all), and reduced pedestrian crossing distances. We also know impervious surfaces can contribute to our heat island effect, so providing the appropriate space for and actually planting true shade trees as part of the buildout of charging areas would certainly be desirable for both the communities they are located in and those sitting in their cars as they charge.

Specific to Columbia, there’s a great graphic on the expanse of parking in our downtown in the Public Space Public Life Action Plan (page 20 of the pdf or numbered pages 38-39). You can also access the recent heat island study here: <https://cpac.columbiasc.gov/urban-heat-island-mapping-initiative/>

### **Caitlin Rose**

**Southeast Sustainability Directors Network**

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Coordination with neighboring states regarding site selection close to state borders will be helpful with effective corridor buildout / ensuring seamless integration of infrastructure throughout the region.

SSDN recently announced the launch of Local Infrastructure Hub cohorts, which aims to assist local governments across the Southeast with federal grant application development, including access to technical assistance and grant writing partners. Local governments do not need to be SSDN members to apply. Learn more here: <https://www.southeaststdn.org/programs/ssdns-federal-programs/local-infrastructure-hub-cohorts/>

**Additional Resources:**

- The Climate **Portal** tracks investments from the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA). Anyone with a “.gov” email address or who works for a government agency can register for Portal Access for free at <https://climateprogramportal.org/register/>. Email [info@climateprogramportal.org](mailto:info@climateprogramportal.org) for more info or for registration assistance.
- Charging Toward Justice: How States Can Lead on Racial and Economic Equity through the National Electric Vehicle Infrastructure (NEVI) Program, analyzes how states incorporated equity and Justice40 principles in their initial NEVI implementation plans. <https://atlaspolicy.com/charging-toward-justice-how-states-can-lead-on-racial-and-economic-equity-through-the-national-electric-vehicle-infrastructure-nevi-program/>
- South Carolina Transportation Equity Story Map: <https://storymaps.arcgis.com/stories/a379a6adbc734029a4b0b319275c35a6>