

Dory Larsen on Electric Vehicles: A Georgia Climate Digest Interview

Summary

Electric vehicles are growing fast as a climate solution in Georgia, but how do we make sure the benefits reach every Georgian, and what's actually true about some of the common myths surrounding EVs? In this Georgia Climate Digest interview, host Eriqah Vincent talks with Dory Larsen of the Southern Alliance for Clean Energy about Georgia's booming EV manufacturing economy, SACE's e-mobility equity work, and why she's optimistic about the road ahead.

Key Takeaways

- Georgia is the undisputed national leader in EV and battery manufacturing investment and permanent jobs, outpacing every other state, including Michigan, with \$23.2 billion invested in the state through the second quarter of 2024 as a result of the Bipartisan Infrastructure Law and the Inflation Reduction Act.
- SACE's Electric Black Futures project is working in Albany, Atlanta, and Savannah over three years to help Black communities shape their own e-mobility future and connect them directly to Justice40 federal funding benefits.
- An EV emits about 2,446 pounds of carbon dioxide annually, compared to 12,594 pounds for a gas-powered car, roughly 81% fewer emissions, and that gap keeps widening as the electric grid gets cleaner.
- While EV battery production is carbon-intensive up front, the total lifecycle footprint of an EV becomes lower than a gas car after about 15,000 miles, and battery production emissions could drop by 75% over the next five to seven years.
- SACE is also working on affordable EV car-sharing in Charlotte, electric school bus adoption across the Southeast, and a monthly community group called Clean Energy Generation that trains everyday Georgians to advocate for clean energy locally.

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Eriqah Vincent: Hi, everybody, thank you so much for joining us again for this Drawdown interview series. I'm delighted to be joined today by Dory Larsen with SACE. I personally have a long history with SACE, so I'm really glad, Dory, to be talking with you today about your work

there and the electric vehicle program. I'd love for you to tell us more about yourself, and of course the work you do with SACE, as we get started.

Dory Larsen: I'm happy to be here, thank you for having me, Eriqah. My educational background is in public health, I earned a master's degree in public health from the University of South Florida, and I've also been a public educator for over ten years.

While I was teaching, I started doing some grassroots organizing, leading a community fight to stop development on 75 acres in my hometown. That taught me the power of people collectively working together toward a shared vision. It also made me realize that while habitat preservation is something I'm really passionate about, it opened my eyes to the importance of clean energy solutions. I always tell my boys, "You don't know what you don't know until you learn it, and then you do better." So that's what brought me into the fold at the Southern Alliance for Clean Energy, or SACE.

Eriqah: Wonderful. I was an intern at SACE a long time ago, back in 2011, so I'm familiar with the work SACE does, but maybe our audience would like to know, if they're not familiar, what SACE is about as an organization.

Dory: We're a membership organization, and we advocate for responsible and equitable energy production and consumption in the Southeast. We define the Southeast geographically as Tennessee, North and South Carolina, Georgia, and Florida, so we have quite a big footprint in the region.

Eriqah: So what brought you to work in the field of electric transportation specifically, and why are you so passionate about this sector as a climate solution in our region?

Dory: When I started with SACE in 2017, the industry was still in its infancy, so it's been a lot of fun to grow with it. I'm really passionate about electric transportation as a climate solution because it's something I think we can all relate to.

We've all been stuck in traffic behind a truck or a bus spewing tailpipe emissions, and we all have that very visceral response, our eyes watering, our throat getting scratchy. We know how bad fossil fuel-burning vehicles make us feel. But not everybody understands that electric vehicles don't have a tailpipe, so they're not putting those poisonous gases out into our communities.

Part of that, I think, is by design. If we think back to big tobacco 30 years ago, they sold us on the lie that cigarettes weren't dangerous, and part of what the fossil fuel industry is doing today is selling us on the lie that transportation pollution isn't that bad. If you look at car commercials, you've got happy people driving to pristine forests or off on adventures, but you're never going to see an ad depicting a child in a hospital room in crisis from an asthma attack, caused by the unhealthy air she's been breathing on her diesel bus ride to school. And you're certainly never

going to see imagery that helps our communities understand that it's impacting Black communities and under-resourced communities at far higher rates.

So what makes me so passionate about electrifying all of our transportation systems, and I don't just mean passenger vehicles, I mean transit buses, school buses, delivery vans, even leaf blowers and lawn mowers, is twofold. One is the immediate improvement in air quality, especially for those who are most vulnerable. And two, it's a long-term climate solution to draw down the pollution that brings a whole host of other dangers, like the extreme heat we're seeing this summer, and rapidly escalating storms and flooding.

Eriqah: You're absolutely right, and I love when we have these types of conversations, because we're doing the work of making sure the movement itself is intersectional. Clean energy isn't devoid of environmental justice, and the other way around, it all has to be connected if it's going to be as meaningful and impactful as it can be. Thank you for bringing that to light. So let's talk a little about Georgia's outsized influence in the EV transition, given the significant investments being made around manufacturing in the state. Can you talk about that, and how it's impacting the region from an economic and policy perspective?

Dory: Absolutely. Another exciting piece of this story is that, in addition to the health and climate benefits of electric transportation investment, we're also seeing it really spur the economy in Georgia. Over 26,000 new private-sector jobs around electric vehicle and battery manufacturing have been added since November of last year, when the Bipartisan Infrastructure Law was passed and enacted.

SACE has been tracking several electric transportation indicators, and our latest report is actually coming out in the next couple of weeks. Two of the factors we look at are manufacturing investments and jobs, and we can see some real long-term trends. Georgia is the undisputed national leader in the electric motor sector, currently leading the nation in committed investments and permanent jobs in EV and battery manufacturing, outpacing every other state in the country, including Michigan.

This number is crazy: through the second quarter of 2024, \$23.2 billion has been invested in Georgia as a direct result of the Bipartisan Infrastructure Law and the Inflation Reduction Act. Those bills were designed to transition American manufacturing away from polluting fossil fuel vehicles toward cleaner, more efficient electric vehicles. We've seen private capital investment from manufacturers like Hyundai, Blue Bird, and Kia, and battery companies like Freyr, a real testament to prioritizing electric transportation manufacturing at both the federal level, under the Biden administration, and here in Georgia under Governor Kemp.

One example is the Hyundai Metaplant I just mentioned, a \$7.6 billion assembly plant in Ellabell, projected to create over 2,000 construction jobs and 8,500 permanent jobs, building over 300,000 vehicles annually. They've also entered an MOU with Savannah Technical College to provide training related to shop operations, electrical principles, and servicing electric vehicles.

There are similar programs at Columbus and Augusta Technical Colleges, and the intent is for these newly trained workers to support the growing manufacturing sites, creating a whole economic cycle and boom for the state.

Eriqah: That is very surprising, thank you so much for adding that context around those numbers. I think something we've been saying a lot in this series is that there's a misconception that there isn't much happening around clean energy and environmental justice in this region. As someone who moved to the South but isn't from here, I'm often in conversations with people from other regions, especially where I'm from up North, who don't realize how much creativity is happening here, both working within real limits and creating opportunities to shatter those limits and stereotypes. So it's always good for us to hear that these kinds of numbers exist in a place like Georgia, thank you for that.

How is SACE taking action to support e-mobility equity in the Southeast? I'm thinking mostly of the Electric Black Futures project, but if there are other examples, we'd love to hear them.

Dory: I'm excited to share about that program, and a few others we've got cooking as well. We have Electric Black Futures, our Electrify the South Collaborative, our AMP Charlotte program, and our electric school bus work.

Let me start with Electric Black Futures. The program will work in Albany, Atlanta, and Savannah over the next three years, and we're partnering with EV Noir, Clean Cities Georgia, and a host of other local partners to engage Black communities in those three Georgia cities, creating opportunities for communities to shape their own e-mobility future. It's also designed to inform and support deployment of the Bipartisan Infrastructure Law and Inflation Reduction Act funds I mentioned earlier, making sure that deployment lines up with Justice40 guidelines. For listeners who aren't familiar, Justice40 is, for the first time in our nation's history, a federal goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities that have been marginalized by under-investment and overburdened by pollution. It's a real paradigm shift to see that funding going to the communities that are impacted most and need the most support.

We're working closely with communities in Albany, Savannah, and Atlanta to build coalitions focused on bridging e-mobility workforce and leadership opportunities. The objective is to strategize and document equitable, innovative transportation systems in those three areas, connecting Justice40 benefits to community leaders eager to lead technological development locally. That's Electric Black Futures, and it's currently underway.

We also have the Electrify the South Collaborative, a partnership between SACE and the Southeast Sustainability Directors Network. We're working with local governments to support them in accessing and implementing federal electric transportation funding specifically, convening in-person and virtual meetings that build capacity through peer-to-peer learning,

resource sharing, and connections to technical assistance. Part of that work is helping local governments build the capacity to integrate those Justice40 guidelines into their projects.

We also have a program called the Affordable Mobility Platform, or AMP, in Charlotte, North Carolina, in partnership with Forth, a nationwide organization. This is our only local project in the Southeast, and it will provide affordable housing residents access to electric vehicle car sharing and charging. Residents will be able to access a shared car through an app, and part of the project involves installing charging infrastructure so residents have access to residential charging, which will also double as public charging to support the wider community. We'll be doing ride-and-drive events to teach people about electric vehicles and charging as the program rolls out this September and October, to help make sure people are comfortable with the technology and that the program is a success.

And then there's our electric school bus work, something I spend a lot of time on. As a former public educator who spent time on the bus ramp during bus duty, I have that personal experience of breathing in those fumes. We've been collaborating with stakeholders from the Environmental Protection Agency, the World Resources Institute, the Alliance for Electric School Buses, Mothers & Others for Clean Air, our own Clean Energy Generation, and many other partners to accelerate school bus electrification across the Southeast.

The EPA has two relevant programs: the Clean School Bus Program, part of the Bipartisan Infrastructure Law, and the Clean Medium, Heavy-Duty Program, meant to provide funds for school districts to purchase electric buses. This is really the first time we've had funding to make these kinds of programs work in a meaningful way. But there's still so much work to do to educate superintendents and school board members about the benefits of electric school buses, and about the funding available, while also making sure we're prioritizing bus routes to overburdened neighborhoods, so that the students in those communities who are most impacted get the direct benefits of the program.

And the last thing I'll mention, which is broader than just electric transportation equity, is our Clean Energy Generation, a bit of a double meaning, generating clean energy, but also working generationally, across generations, to build a movement of people advocating for clean energy solutions and energy justice. They're learning together about opportunities and taking action, and it's also about storytelling. Clean Energy Generation highlights stories like Olivia from Cleveland, Georgia, who has her own solar installation business and workforce center, training workers from diverse backgrounds, or Larry, who used tax credits to make energy efficiency upgrades to his home. It's all about making sure we're working collectively to tell those important stories. The group meets virtually on the second Friday of every month, sends out a newsletter, and runs monthly advocacy opportunities. This month, for example, they're calling used car dealerships to make sure they're aware of federal tax credits, and feeding that information back into a national database to help inform consumers about those credits.

Eriqah: So much really great equity work happening in the EV space, I think that's really exciting. I know there have been many conversations about making sure underserved communities are part of the electric vehicle and clean transportation conversation, and in my opinion, there hasn't always been enough work to make sure it doesn't stay a more elite or upper-class conversation. Plenty of people took advantage of the tax credits available when EVs first became popular in Georgia, but plenty of others couldn't participate, for reasons including income. So I'm really glad to hear there's intentional work happening, from SACE and others, to make sure those communities aren't left out.

Switching gears a bit, you co-authored Drawdown Georgia's EV toolkit. Tell us a little more about it, and why Georgians should take a look.

Dory: It was a lot of fun to put together, so everybody should stop what they're doing and check it out. Transportation is the leading cause of greenhouse gases being added to the atmosphere. Some people think, "Well, I'm not in a position to buy an electric vehicle right now, so this doesn't apply to me," but it does apply to you, we're all breathing air shaped by our current fossil fuel-based system, even though some of us are more exposed than others. If you live near a highway, you're more at risk. So it's on all of us to understand the benefits of electric transportation as a solution, and to support policies that can rapidly transition us toward it. Even if you're not in the market for an EV right now, you can use the toolkit to become better educated about the benefits of electric mobility.

You can then advocate and let your elected officials know you support transitioning transit buses, school buses, and light-duty fleets to electric, and educate them on the importance of community charging and the tax credits available to support that work. You can also vote for elected officials who support clean energy solutions like transportation electrification.

The toolkit is also useful if you're looking to educate yourself because you're ready to purchase a new vehicle. It explains all of the baseline things you'd need to know before buying an electric vehicle, the cost of charging, where to find charging stations using apps, and how charging actually works, since it's not all the same. There's level one charging you can do with a regular outlet, there's level two charging, community charging, and fast charging, and the toolkit walks through all of those. There are also links to resources like Plug In America, a great consumer organization with tons of information to help you find the best vehicle for you, you can plug in your zip code and it'll tell you about incentives available locally. Everybody should check it out.

Eriqah: And that's on the Drawdown Georgia website, everyone, make sure you check out that toolkit along with the many others there. Thank you, Dory, not just for explaining what it's about, but for creating and co-authoring it. So, we hear a lot about electric vehicles, and probably some misinformation about them too. What are the misconceptions about electric vehicles?

Dory: It's a great opportunity to address this, because, to my earlier point, these common misconceptions are actively being pushed by the fossil fuel industry, and they're everywhere.

You see them all over social media, memes so absurd they make my head want to explode. So it's important that we have the facts to push back and say, let's make sure we're all speaking accurately.

The one that really gets me is the claim that EVs are just as bad for emissions as a gas car. What annoys me most is that it's designed to make people feel apathetic, like it's not really a better solution. Now, obviously there are going to be some emissions from driving an EV, because you have to generate electricity to power the car, but there are far fewer emissions than a gas car, because an electric motor is a lot more efficient, using much less energy to go from point A to point B.

The Department of Energy publishes emissions data and updates it every year based on how electricity is being generated. Right now, an EV emits about 2,446 pounds of carbon dioxide annually, compared to 12,594 pounds annually for an internal combustion engine, that's 81% fewer emissions. What's also interesting is that when we published the Drawdown Georgia toolkit and looked at Georgia-specific data, that number was only 70%. So in the time since we published it, because energy generation keeps getting cleaner as we move away from fossil fuels, our transportation systems are getting cleaner too, and that trend is going to continue as we add more renewable energy to the power grid.

EVs also have much lower lifecycle emissions. The biggest part of an electric vehicle's carbon footprint is making the battery, that's the most carbon-intensive part if you look at the whole lifecycle. Because of that, EVs are actually more carbon-intensive than gas cars until around 15,000 miles, though that varies depending on where and how the battery was made, and how the electricity used to power the car is generated. But on average, in the United States, it's about 15,000 miles, after that, the total carbon footprint becomes far less than an internal combustion car. And we have the ability to reduce that battery production footprint by 75% over the next five to seven years, so EVs are clearly a winning solution for reducing climate pollution.

Eriqah: Wonderful, thank you. So, I'm going to assume you drive an electric vehicle yourself, what's your favorite thing about driving one?

Dory: There are a lot of reasons why I love driving electric. I say it's like going from a flip phone to a smartphone. There's the instant torque, when you hit the accelerator, the car just takes off and goes. There's also never having to go to a gas station, as a woman, it's just so much more convenient to be able to drive home, plug in, and charge overnight while I'm sleeping. And then there's the cost savings, it's about a third of the cost of gas, so it's a far cheaper way to fuel your vehicle.

Eriqah: I've also heard there's not as much maintenance, is that true? I drive a gas-powered car myself, I have to get an oil change every couple of months, get the brakes done, all these things that just come with maintaining a gas car. Do you find the maintenance costs are less, or fewer and further between, with an electric vehicle?

Dory: Yes. Electric vehicles have fewer moving parts, so there are fewer things to go wrong, no timing belts, no oil, that surprises some people. They're like, "Wait, I don't have to get oil changes?" So the maintenance and fuel savings are part of why, when you look at the total cost of ownership, even if the purchase price is a bit higher than a gas car, the total cost of owning an electric car is frequently lower, because you're not paying for that routine maintenance.

Eriqah: Routine maintenance, right. This has been really eye-opening for me, this isn't exactly my wheelhouse, but I do love talking about electric cars, I'm fascinated not just by how they work, but by the ways we're including everyone in these conversations, even folks who don't own electric cars themselves. We always like to end these conversations on an upside, we ask this question to all of our guests: what's giving you hope around climate solutions, especially here in Georgia?

Dory: To me, what gives me hope is that the solutions are here today, it's not like someday in the future we'll be able to do this, we just need to continue aligning policy and make it happen. Globally, sales of internal combustion engines peaked around 2017, and electric vehicle sales accounted for 10% of new car purchases in the U.S. last year. It's going to take some time, as people continue driving gas cars, but we're starting to see that inflection point. EVs could make up almost a third of new car sales by 2027, according to Bloomberg New Energy Finance's latest electric vehicle outlook, assuming current policies stay in place. Raising consciousness about the benefits, and more people switching than ever, are two things I'm really hopeful about.

Eriqah: That's wonderful. I just paid off my gas-powered car, so I'll have it for a while, but we really are looking into the options, not just electric but hybrid too, I know there are all kinds of conversations happening around hybrid vehicles as well. This has been really helpful for me, and I hope helpful, I know helpful, for our viewers. Thank you so much to Dory and the Southern Alliance for Clean Energy, not only for being with us today, but for the work you're doing when it comes to electric transportation. And thank you all for joining the Georgia Drawdown interview series once again, we hope to see you next time.

Dory: Thank you.