

DRIVE (Developing Replicable, Innovative Variants for Engagement) for Electric Vehicles in the USA

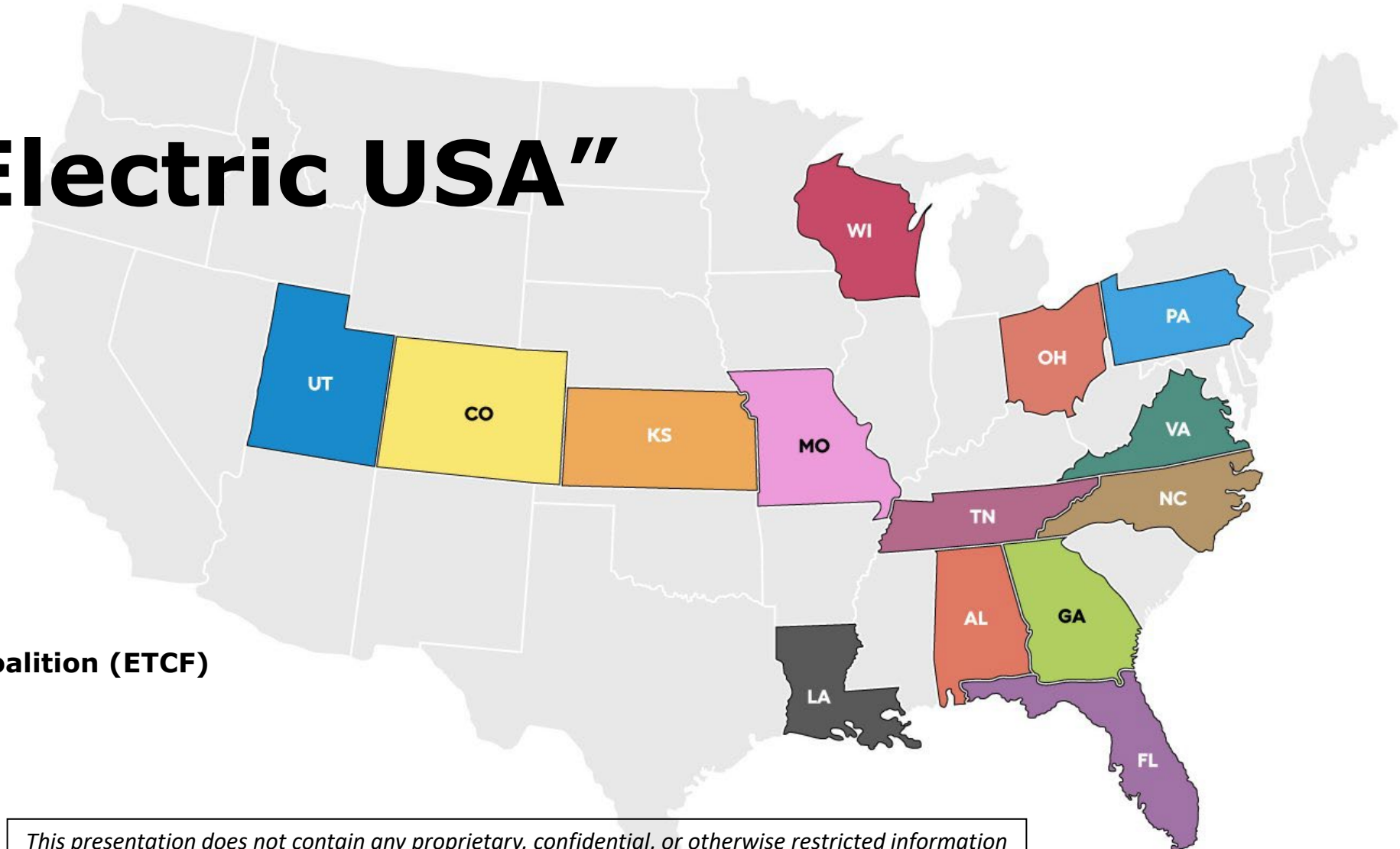
“DRIVE Electric USA”

Project ID #ti131

June 21, 2022

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East Tennessee Clean Fuels Coalition (ETCF)



Overview

Timeline

Start = October 1, 2020
End = December 31, 2023

26% complete

Budget

	DOE	ETCF (Cost Share)
Project Total	= \$1,801,697	\$1,810,112
Budget Period 1	= \$710,350	\$695,213
Budget Period 2	= \$575,969	\$683,256

Key Barrier & Target

We asked the fundamental question, *"Can we get a collection of largely 'flyover states' to work together to build effective statewide Drive Electric programs to address the most significant EV market barriers in a coordinated way?"*

"Priority Areas" (PAs) of Work to Address Barriers

1. Statewide, branded program
2. Consumer Education
3. Utility & Regulator Engagement
4. EV Charging Infrastructure and Planning
5. Education of State and Local Government Officials
6. Dealer Engagement
7. Fleet Engagement and EV Adoption



Partners – Clean Cities Coalitions

1. AL = Alabama Clean Fuels Coalition
2. CO = Drive Clean Colorado
3. FL = Central Florida Clean Cities (*Florida Solar Energy Center*)
4. GA = Clean Cities-Georgia
5. KS = Kansas City Regional Clean Cities (KCRCC)
6. LA = Louisiana Clean Fuels
7. MO = St. Louis Clean Cities & KCRCC
8. NC = Triangle Clean Cities, Centralina Clean Fuels & Land-of-Sky Clean Vehicles
9. OH = Clean Fuels Ohio
10. PA = Eastern PA Alliance for Clean Transportation & Pittsburgh Region Clean Cities
11. TN = **East TN Clean Fuels Coalition** <<< **Project Lead**
12. UT = Utah Clean Cities
13. VA = Virginia Clean Cities
14. WI = Wisconsin Clean Cities

Project Advisory Committee (PAC)

Our PAC consists of 53 people from 34 different organizations like RMI, Plug In America, NASEO, National Rural Elec. Coop. Association, EPRI, FORTH, Black & Veatch & CALSTART

Objectives – Seven Priority Areas of Work with Deliverables

PA 1: Build a Statewide, Branded EV Program

PA 2: Consumer Education & Chapter Development

Directly educate at least 14,000 consumers through Ride & Drives and similar; develop at least two local/regional chapters/state

PA 3: Utility & Regulator Engagement

Educate and bond with municipal, coop and IOU-type utilities & regulators via meetings, seminars and forums

PA 4: EV Infrastructure Planning

Conduct major corridor gas analysis and develop multiple community charging plans in each state

PA 5: State & Local Government Official Education

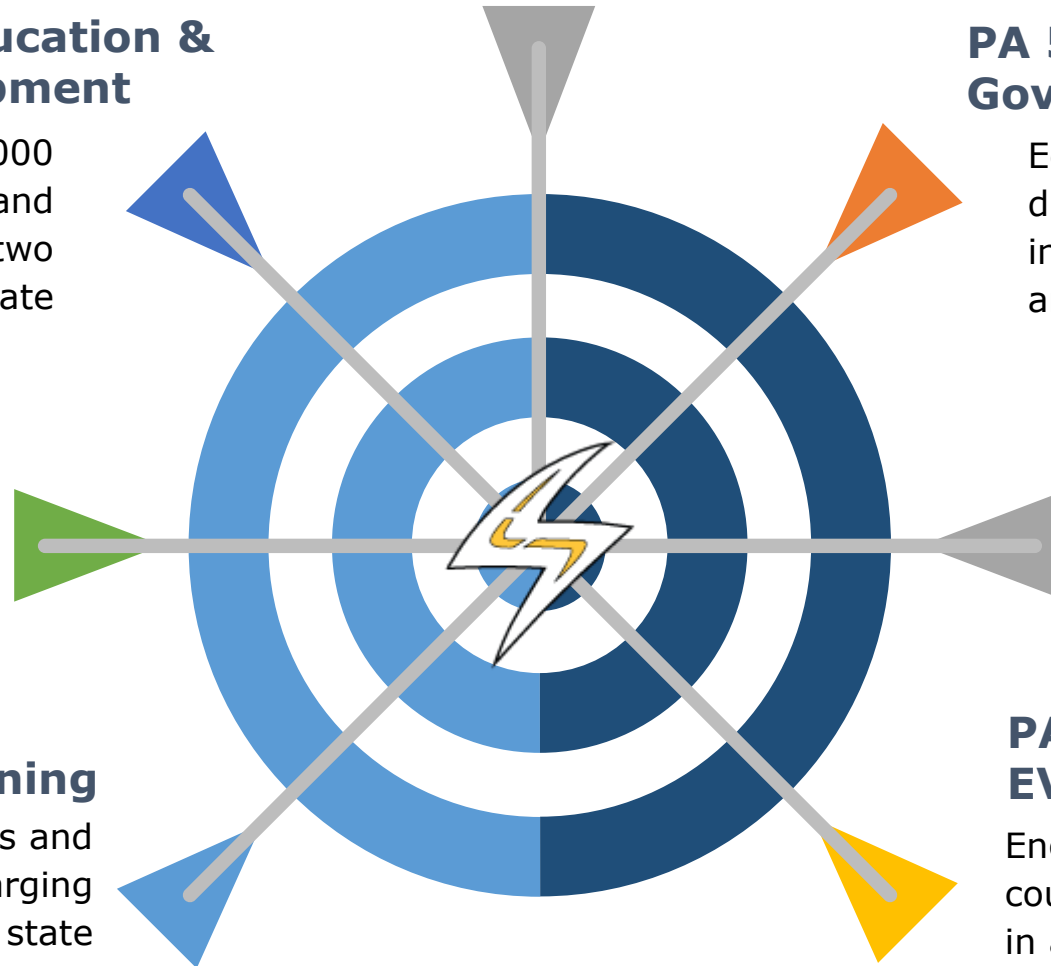
Educate government officials; discuss/include best practices for incentives, signage, building codes, and gov't fleet electrification

PA 6: Dealer Engagement

Develop "certified" EV dealer programs, websites in each state

PA 7: Fleets & EV Adoption

Engage 560 fleets across country then drive EV adoption in at least 10 fleets per state



DRIVE ELECTRIC
— **USA** —

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Objectives, Takeaways & Deliverables

Proposed Objectives:

- ✓ Build and strengthen branded, statewide “Drive Electric” programs in 14 states
- ✓ *Build capacity* into those programs through funded time
- ✓ Develop activities in six more Priority Areas that directly focus efforts towards reducing known, current barriers – consumer, utility, infrastructure, government, dealership and fleet engagement

Project Impact/Takeaway:

- ✓ Created 14 replicable “Drive Electric” programs *that can be used as models for other states to adopt* that attack *regional* barriers and addresses weaknesses in EV adoption
- ✓ Cross-country awareness developed due to impact of diverse partners generating interest in collaborative problem-solving towards EV adoption and infrastructure development

Key Deliverables/Accomplishments:

- ✓ 14 replicable, statewide programs built that are thriving in creating partnerships in each state to greatly accelerate EV adoption across LD, MD and HD vehicle types
 - 1) *Statewide initiatives developed and web & communications presences are in use*
 - 2) *Utilities create EV/EVSE incentive programs*
 - 3) *Corridor gap and community infrastructure plans developed*
 - 4) *Government officials educated*
 - 5) *Dealerships become “certified” EV dealers in each state*
 - 6) *Surveys are collected from fleet and fleets acquire EVs*



Objectives – VTO Integration Goals & Potential Impact

Improve Fuel Diversity

In all our states, EVs are one of the least of the alternative fuels we have in practical use (not projects or testing). Developing statewide partnerships will hasten EV education and get the most fleets and citizens to drive EV adoption across many different types of vehicles.

IMPACT > Significantly increase EV adoption and use

Increase Local Resiliency

With gasoline and diesel the major fuels used by fleets across the USA, diversifying to include EVs provides another fuel into the mix so that some vehicles can operate when traditional fuel supply systems go down.

IMPACT > Fleets and consumers have another fuel choice and more fueling options

Reduce GHG Emissions

The use of coal in electricity production in the U.S. continues to decline. Some large IOUs (or TVA) are taking more significant steps to reduce/eliminate coal from the mix. State GHG reductions based on the [AFDC state emissions from PEVs](#) page:

✓ AL = 69%	✓ NC = 72%
✓ CO = 54%	✓ OH = 50%
✓ FL = 64%	✓ PA = 69%
✓ GA = 68%	✓ TN = 74%
✓ KS = 68%	✓ UT = 37%
✓ LA = 64%	✓ VA = 74%
✓ MO = 32%	✓ WI = 50%

IMPACT > Average of over a 60% reduction in GHGs across all our participating states. Encouraging Driving Electric in the U.S. will help us realize significant, needed transportation sector GHG reductions!



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— USA —**

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Approach

Budget Period 1:

Begin project & Ramp-up of Priority Area Efforts

- ✓ Engage PAC – start regular PAC meetings
- ✓ Begin pulling together statewide partners
- ✓ Develop statewide effort website
- ✓ Develop state's "Roadmap" or "Guide" that includes goals
- ✓ Develop and refine templates for outreach

BP 1

BP 2

Budget Period 2:

Continuation of Priority Area Efforts

- ✓ Conduct utility, government, dealer and fleet engagements
- ✓ Begin gap and community charging analysis and planning
- ✓ Continue statewide initiative development

BP 3

Budget Period 3:

Final Completion of Efforts & Project Wrap-up

- ✓ Complete work across all Priority Areas
- ✓ Develop the **Replication Playbook**



Approach – Milestones

All milestones are "Technical" except for those in darker gray at bottom of BPs 1 and 2 that are "Go/No Go".

BUDGET PERIOD 1

(Oct. '20 – Dec. '21)

Subrecipients coalition
contracts executed



Training Manual for local
chapters finished



Framework for EV gap
analysis & plans completed



Community EV charging
template finished



Replication Framework
completed



Go/No Go

BUDGET PERIOD 2

(Jan. '22 – Dec. '22)

State gap analysis and plans
for EV charging finished

Regional EV charging plan
per state completed

Local & State policy plans
completed

Web-based platform for EV
dealers up and running

Secure preferred EV dealers

Go/No Go

BUDGET PERIOD 3

(Jan. '23 – Dec. '23)

1,000 citizens per state
educated

100,000 media impressions &
500 direct engagements/state

State-based EV fleet fact
sheets completed

Replication Playbook
completed



Approach – Unique Aspects

In This for the Long Haul – Turn Project into a PROGRAM

- ✓ Part of our plan is for this effort to exist beyond end of Budget Period 3; we are *seeking funding to continue this work!*
- ✓ Built-in expansion plans to other states (see "expansion" slide)

14 States Helping One Another

- ✓ We hold monthly Zooms to ensure everyone understands current work needs, templates that have been created, and share experiences
- ✓ Ability to share outreach and implementation ideas or documents

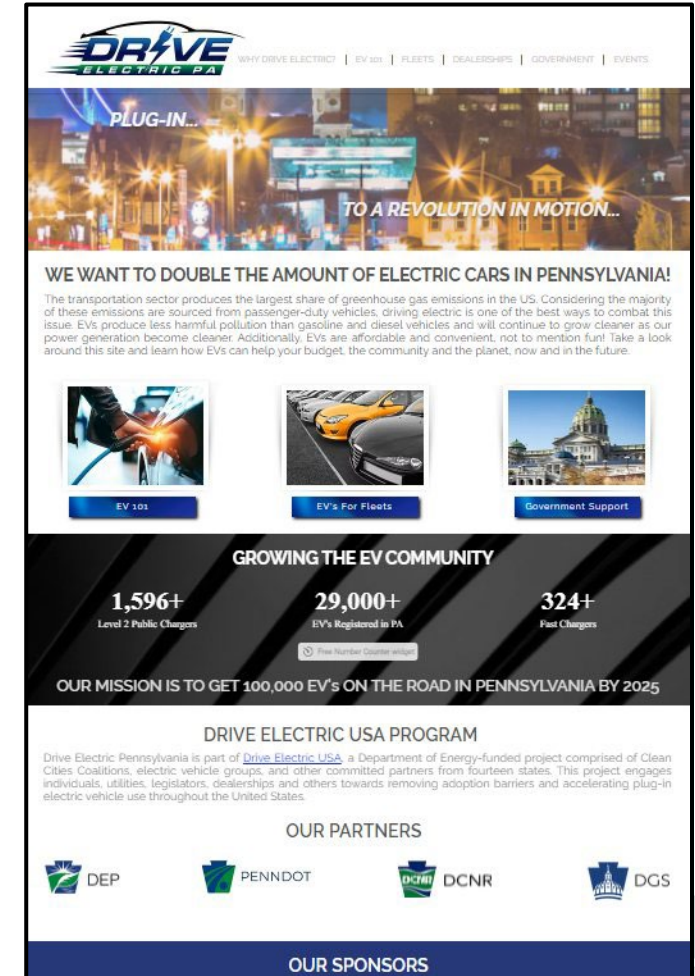
Everyone Can See Everyone Else's Files, Documents

- ✓ Serves as a 'reference library' across states

Driving the Need for Comprehensive Web Information

- ✓ Let the leaders share how their website education and outreach materials show how partners within the state are working together
- ✓ Clearly show initiative elements and partners so that those who know nothing about the initiative can learn what is going on in their state

DEUSA Website – Learn about Project and Partners to Get All of the States engaging more Community Members, Industry Partners



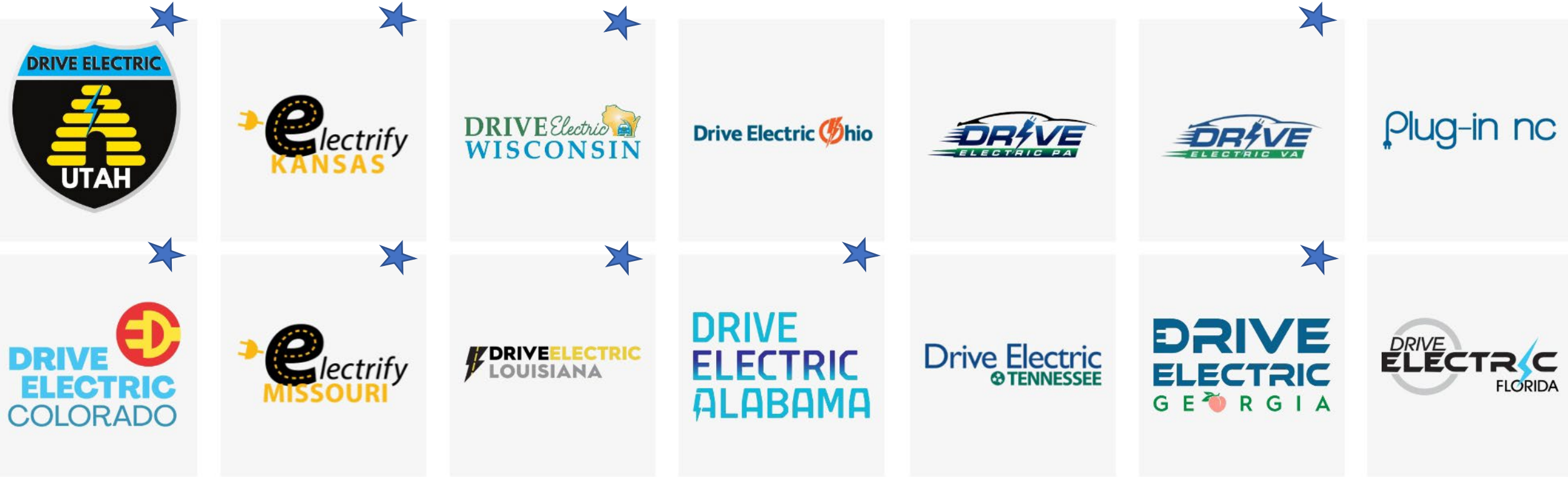
Accomplishments & Progress - Overview

Coalition		Alabama CF	Drive Clean CO	Univ. of Central FL	CC Georgia	Metro Energy (KC)	Louisiana CF	St. Louis CC	Triangle CC	Clean Fuels Ohio	Eastern PA - ACT	East Tennessee CF	Utah CC	Virginia CC	Wisconsin CC
State		AL	CO	FL	GA	KS+MO	LA	MO	NC	OH	PA	TN	UT	VA	WI
Subtasks - Year 1															
0.1 - A	Execute Sub Partner Contract.	x	x	x	x	x	x	x	x	x	x	x	x	x	x
1.1 - A	Create a statewide DRIVE Electric Initiative plan.	x	x	x	x	x	x	x		x	x	x	x	x	
1.1 - B	Create a branded web platform for the statewide DRIVE ELECTRIC initiative.	x	x	x	x	%	x	%	x	x	x	x	x	x	x
1.1 - C	Host at least one stakeholder feedback convening.	x	x	x	x	x	x	x	x	x	x	x	x	x	x
1.2 - A	Identify and create at least two (2) consumer grassroots DRIVE ELECTRIC initiative chapters in your state.	x	x		x	x	x	x	x	x	x	x	x	x	x
1.2 - B	Identify Consumer Chapter Leaders and Co-Chairs and host at least one formal convening of each chapter.	x	x		x		x	x	x	x	x	x	x	%	x
1.2 - C	Document direct engagements with at least 200 consumers.	x	x		x	x		x		x	x	x	x	x	x
1.2 - D	Complete a written report (template provided) on overall chapter activities and outcomes for the year.	x	x		x	x		x		x	x	x	x	x	x
1.3 - A	Identify the main utility service providers and regulators in your state, with contacts.	x	x	x	x	x	x	x	x	x	x	x	x	x	x
1.3 - B	Hold at least two convenings with utilities and regulators and document engagements.	x	x	x	x		x	x	x	x	x	x	x	x	x
1.5 - A	Create a state and local policy plan.	%	x	x		x	%		x	x	x		x	%	
1.5 - B	Create state-specific EV and EVSE best practices education materials to use with government officials.	x	x		x		x	x	x	x	x		x	x	
1.6 - A	Create state specific EV Dealer Engagement Action Plan.	x	x	x	x	x	x			x	x	x	x	x	x
1.6 - B	Develop list of target dealers and dealer contacts for the state.	x	x	x	x	%	x			x	x	x	x	x	x
1.7 - A	Gather and refine existing outreach and education materials to support Fleet EV education activities		x	x	x		x		x	x	x	x	x	x	x
1.7 - B	Develop list of at least 50 target fleets in the state for outreach and educational engagement.		x	x	x	x	x			x	x	x	x	x	x
1.7 - C	Directly engage at least 3 fleets in EV and EVSE deployment education.		x	x	x		x		x	x	x	x	x	x	x

10 of 14 states have 75-100% of their BP1 subtasks completed... and this is during Year 2 of the COVID pandemic.

www.DriveElectricUSA.org

Accomplishments & Progress – Initiatives Built



14 statewide, branded initiatives have been started or furthered!

★ - identifies initiatives that did not exist before this project started



Accomplishments & Progress - Specifics

Most importantly... the Model & Process for developing Statewide Partnerships has begun!

- ✓ Many states *needed this kind of partnership development coupled with assistance and "encouragement."* More partnerships are needed if we collectively want to see the U.S. trans. system become more diverse and resilient while significantly reducing GHG emissions.

Website Developed

- ✓ www.DriveElectricUSA.org
- ✓ Simple state initiative links there as well as contact information for every coalition

Social Media Engagements, Media Impressions, & Direct Engagements

We significantly overachieved on these goals.



Goals & 2021 Results	GOALS	RESULTS (all states)		
	for each State	Totals	Averages	Medians
Digital SM <i>engagements</i>	100	73,752	5,268	915
Digital media <i>impressions</i>	20,000	15,472,711	1,105,194	51,108
<i>Direct engagements (in-person)</i>	200	15,992	1,142	557

DRIVE ELECTRIC
USA

Accelerating the Adoption of
Electric Vehicles

DRIVE Electric USA will fully develop state-based "Drive Electric" programs that will
engage individuals, utilities, legislators, policymakers and others towards removing
adoption barriers and participating in a clean, electric future for our nation.

Project Overview

Participating States

The Project & Team

Priority Areas

1) Statewide Branded EV Programs

2) Consumer Education & Local Chapter Development

3) Utility and Regulator Engagement

4) EV Charging Infrastructure Planning

5) State and Local Government Officials Education

6) Dealer Engagement - Developing Preferred Dealer Programs

7) Fleet Engagement & EV Adoption

State EV Progress by the Numbers

NEW EV RESOURCE LIBRARY

ACCELERATING EV ADOPTION IN THE USA

Accomplishments & Progress – Examples: Alabama

PROGRAM DEVELOPMENT

- ✓ The Alabama team officially launched their “Drive Electric Alabama” initiative on November 29 at Univ. of Alabama at Birmingham.
- ✓ **Governor Kay Ivey** and **ADECA** (Alabama Dept. of Economic & Community Affairs) **Director Kenneth Boswell** are key partners in the initiative.
- ✓ Alabama Clean Fuels Coalition is currently under contract with the State of Alabama to help develop and manage the state’s electric vehicle infrastructure planning initiatives.



"As automakers make significant investments in electric vehicles, we know more and more motorists will consider purchasing one," Ivey told attendees. "In addition, automobile manufacturing is one of Alabama's key industries, and we want to make sure that this economic engine remains vibrant for Alabama's workers."

Accomplishments & Progress – Examples: Louisiana

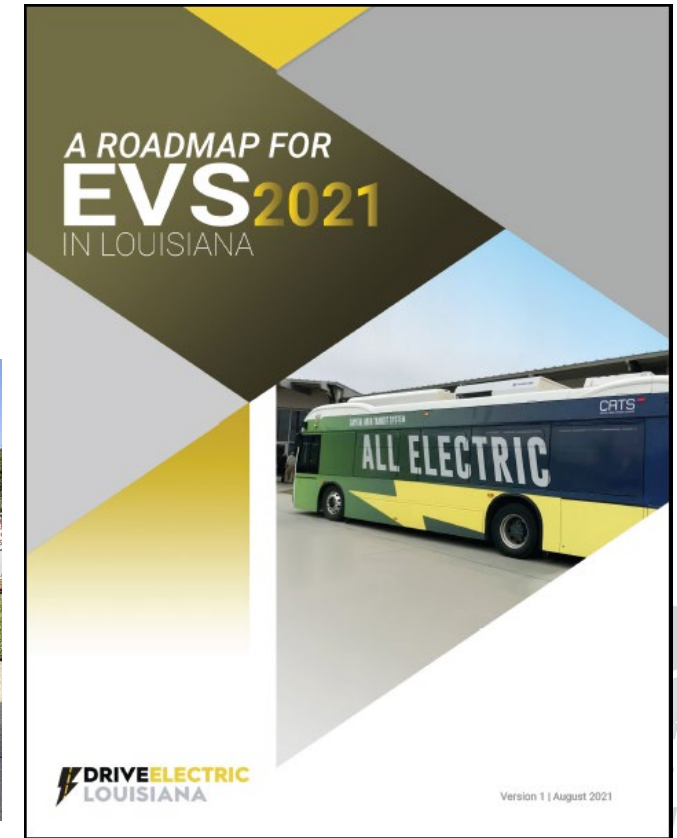
PROGRAM DEVELOPMENT

Louisiana Clean Fuels has developed an exceptional **Advisory Board for Drive Electric LA** that has diverse state government, major utility and other vested-entity involvement. They also developed a great “Roadmap for EVs in Louisiana” that addresses all of the categories of barriers that the project is working to address.

1. Joy Johnson, LA Dept. of Transportation & Dev. (DOTD)
2. Dawn Sholmire, DOTD
3. Kevin Reed, DOTD
4. Scott Barrios, Entergy
5. Bliss Higgins, LA Dept. of Environmental Quality (DEQ)
6. Maggie Broussard, CLECO
7. Hugo Capedeville, CLECO
8. Ed O’Brien, LA Dept. of Natural Resources (DNR)
9. Dave Schaller, NA Council for Freight Efficiency
10. Dave Aasheim, Freewire
11. Marin Stephens, New Orleans RPC
12. Terrence Chambers Univ. of Louisiana, Lafayette
13. Carlos McCloud, FHWA
14. Jeff Cantin, Solar Alternatives
15. Jeff Thigpen, SWEPCO
16. Sooraz Patro, CRPC



*Drive Electric Louisiana leadership
with Governor John Bel Edwards.*



Accomplishments & Progress – Examples: Ohio

GOVERNMENT EDUCATION

Ohio is tackling state government EV policy through meetings with members and committees to champion policies that will benefit Ohioans and jobs in the future.

Ohio State Policy Work in 2021

POLICY FOCUS

1. Reducing EV registration fees
2. Incentivizing commercial and consumer EVs
3. Incentivizing the install of EVSE
4. Installing EVSE at government facilities
5. Workforce development...

"... and other initiatives that will position Ohio's automotive industry to transition to EV manufacturing"

LEGISLATIVE COMMITTEES ENGAGED

1. Senate – Energy & Public Utilities; Transportation
2. House – Energy & Natural Resources, Public Utilities, Transportation and Infrastructure



Accomplishments & Progress – Examples: Tennessee

ENGAGING CONSUMERS

The East Tennessee Clean Fuels Coalition, working with the Knoxville EV Association (*which is the education arm of the Knoxville Drive Electric TN Chapter*), held a **“Drive Electric Festival”** on 9/25/21 that ended up being the largest collection of EVs in one place in Tennessee... ever.



- ✓ # of PEVs onsite: 107
- ✓ # of rides + drives: 270
- ✓ Attendees: 414



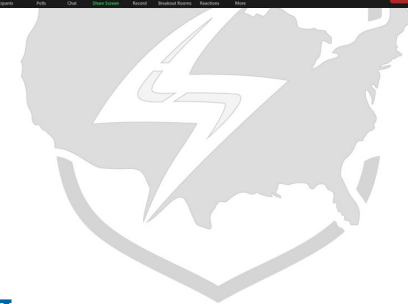
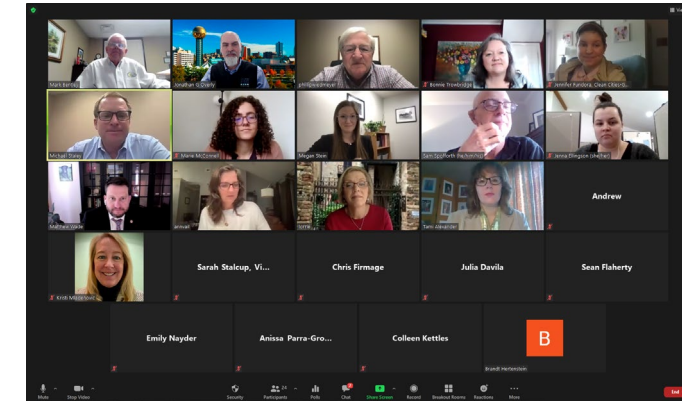
Collaboration & Coordination Among Team

- ✓ **Getting the PAC's/SME's Assistance** – In 2021, we held an average of five meetings across all PAC Working Groups (one for each of the seven Priority Area) and garnered their insights into the best ways to tackle those barriers. Summaries of what was gleaned from them were created.
- ✓ **Monthly Zoom meetings** – Used presentations during BP1 to let leadership provide instructional advice on completing some deliverables and taking questions
- ✓ **Direct assistance** by ETCF or CFO to coalitions that have questions
- ✓ **Creating Social Media Accounts** – Social media specialists from **Colorado** and **Tennessee** developed a SM strategy for all states to place graphics and info so that they could more effectively manage project-wide SM channels
- ✓ **Three-state Electrify America grant** – **Alabama** took the lead in securing EA funding for the regional promotion of the **AL, GA and TN** 'Drive Electric' programs. We ran TV, radio and online ads via those states' Associations of Broadcasters and their *PEP (Public Education Program) system* wherein we *quintupled* the EA investment!

PAC Member Organizations



1. Argonne National Laboratory | ANL
2. Association for Energy Services Professionals
3. Atlas Public Policy
4. Black & Veatch
5. CALSTART
6. Center for Sustainable Energy
7. ChargeEV
8. ChargePoint
9. CleanTechnica
10. Clipper Creek
11. Edison Electric Institute
12. Electric Power Research Institute | EPRI
13. EVNoire
14. Fermata Energy
15. FORTH Mobility
16. Generation 180
17. Greenlots
18. Green Energy Consumers
19. Lipschultz Energy and Communications Consulting LLC
20. National Association of State Energy Officials | NASEO
21. National Automobile Dealers Association
22. National Conference of State Legislatures
23. National Rural Electric Cooperative Association
24. North American Council for Freight Efficiency | NACFE
25. Orange EV
26. Plug In America
27. Rocky Mountain Institute
28. San Diego Clean Cities Coalition
29. Shift2Electric
30. Sierra Club
31. Slipstream
32. Southern Company
33. Southeast Energy Efficiency Alliance | SEEA
34. Xcel Energy



**DRIVE ELECTRIC
USA**

Common EV Myths

Myth: EVs have high maintenance and repair costs

Fact: EVs cost less to maintain since they do not require regular tune ups nor do they have as many moving parts, that can fail, as their gasoline or diesel counterparts.

Myth Busted

DRIVE ELECTRIC USA

ACCELERATING THE ADOPTION OF ELECTRIC VEHICLES

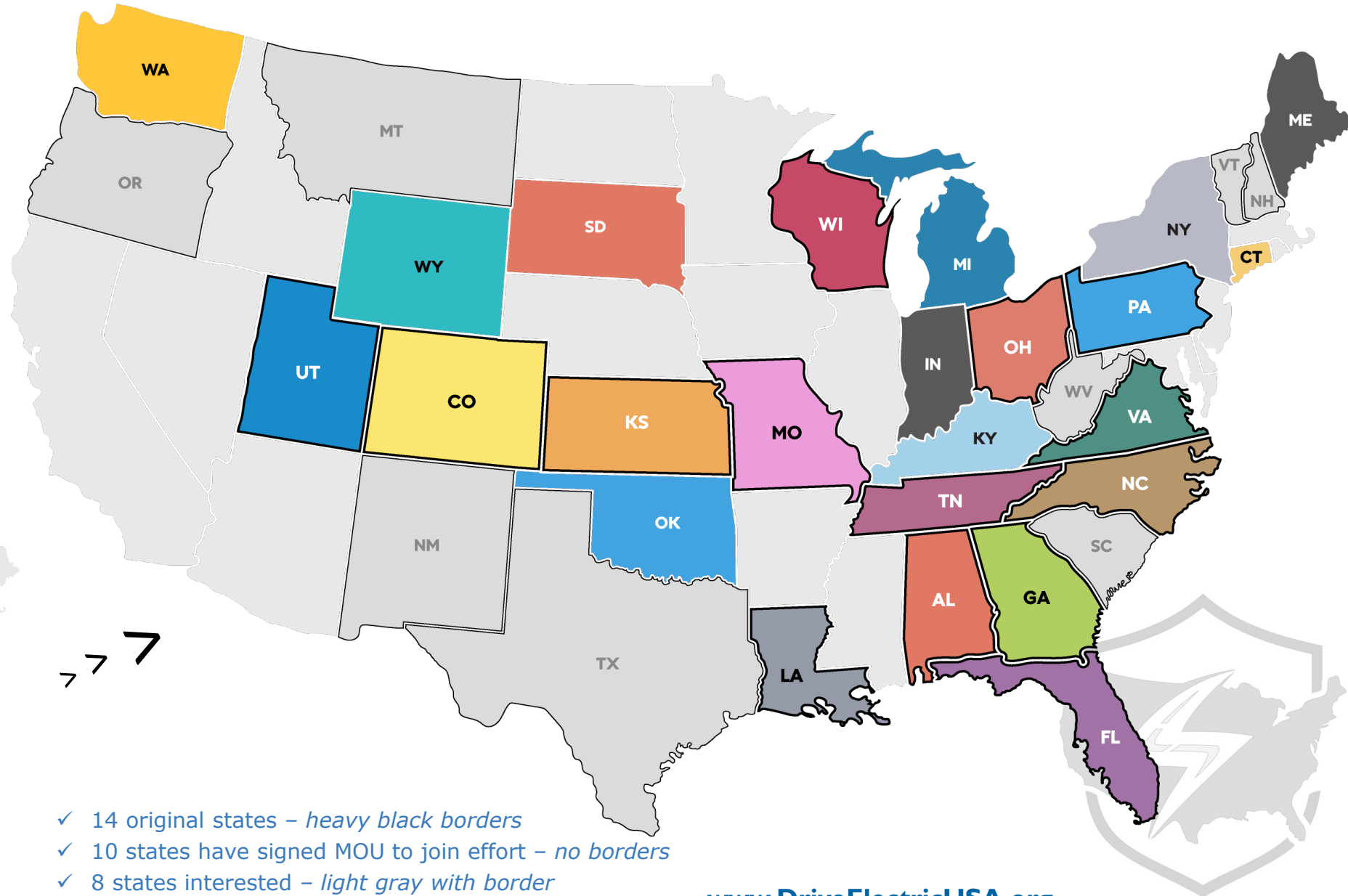
DRIVEELECTRICUSA.ORG

www.DriveElectricUSA.org

Market Impact & Sustainability

Expansion plan was built into the project! So far, 12 additional states have signed MOU showing interest to participate if more funding is developed.

Multiple new sources of funding have been investigated. We are in discussions with one funding partner that could almost double the number of states in DEUSA!



- ✓ 14 original states – heavy black borders
- ✓ 10 states have signed MOU to join effort – no borders
- ✓ 8 states interested – light gray with border



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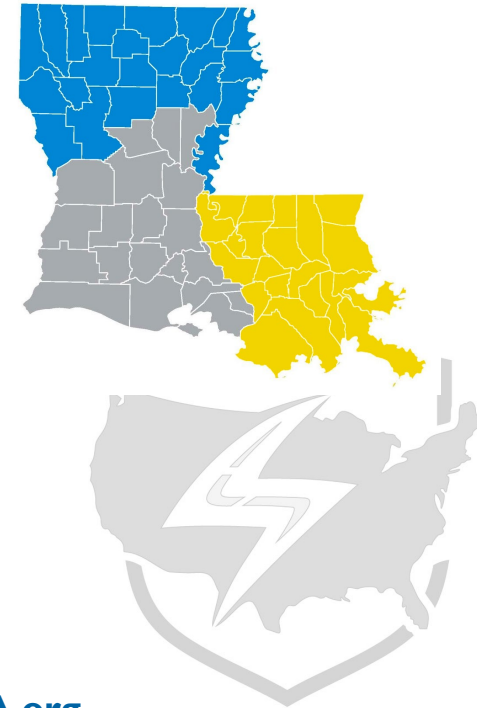
Contribution to Energy Equity & Environmental Justice

This project started in 2020 before energy and environmental justice (EEJ) concerns and foci were being included in new DOE proposals and received projects. However, this project included the idea that all citizens in each state need to have the chance to participate in transportation electrification learning, EVSE planning, grant applications, partnerships development and EV adoption.

- ✓ **Rural Outreach** – Due to the nature of the need for each state to create an *inclusive, statewide partnership*, rural communities are the most obvious inclusion in our project as part of underserved communities in each state.
- ✓ **Chapter Development** – Almost all states are taking a chapter development approach that *includes not just urban areas and their bedroom counties but all of the counties in a region of the state*. States now need to ensure they consider how to invite underserved community members and be as inclusive as possible in activities that take place in chapters, including working to showcase lower-cost EVs in their events.
- ✓ **Limited-income, BIPOC, LGBTQIA+ Inclusion** – While these types of EEJ were not singled out for foci in the project, all of the Clean Cities coalitions are ramping up efforts to ensure our *entire operations* are more inclusive to all community members in our states, including our efforts in this project.



"Drive Electric Tidewater" in VA (above), and the three large chapters that Louisiana is building (below) are examples of chapters that rural inclusive.



Summary

1. **The project is off on good footing.** All states have begun (or are continuing their) expansion work in their states to more fully develop their statewide, branded partnerships.
2. **Chapter development has begun.** We know that more chapters enables greater EV education across families, communities, and states. This is a critically important element of the project, and all states are ramping up the development of chapters in their states.
3. **Efforts are ramping up across the rest of the Priority Areas.**
 - ✓ Utility, Auto Dealer and State & Local Government Official engagements are up across all states.
 - ✓ Fleet discussions about EVs are almost exponentially growing.
 - ✓ *Charging Infrastructure & Planning will start in earnest in Year 2.*

Directly engaging consumers and fleets is a top prime driver for expediting EV adoption. Add utilities, legislators and other government officials into the mix and you have a recipe for REALLY accelerating cleaner, more efficient and resilient transportation in the USA.

