Electric Vehicles & Charging Infrastructure

January 18, 2023

Ann Vail, Executive Director

CLEAN CITIES COALITION NETWORK



NEVI
program requirements for funding

- Chargers must be manufactured in the United States.
- Charger location must be publicly accessible.
- Chargers must be capable of delivering at least 150 kW from each dispenser independently.
- Chargers must be located within one mile of a designated EV corridor.
  - Additionally, to meet the federal highway administration requirement to achieve status of a built-out EV corridor, and have the highway signage installed, there must be a at least four chargers that meets the above criteria located within fifty miles of the next qualifying charger location along the designated EV corridor.
- Designated corridors MUST be fully built out to the FWHA guidelines before non-corridor locations are eligible for funding.

First Round Of Funding Announced For Charging And Fueling Infrastructure Discretionary Grant Program

The funding that many of us have been awaiting is now open! More details can be found in the notice of funding opportunity:

- **Funding Opportunity Number:** 693JJ323NF00004
- **Application deadline:** May 30, 2023
- **Estimated total funding:** $700 million
- **Minimum anticipated award:** $500,000

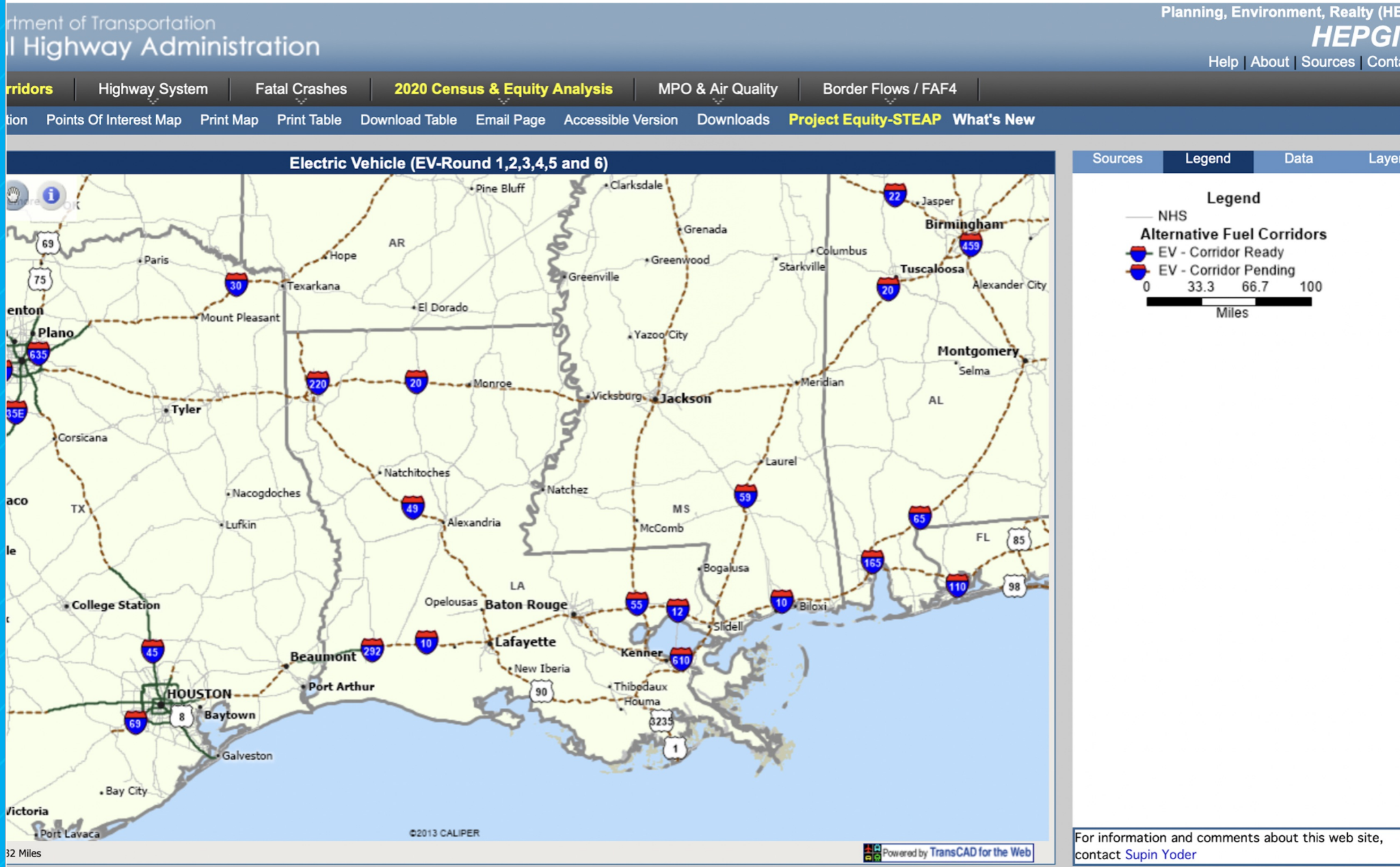
More information can be found at: https://www.fhwa.dot.gov/environment/cfi/

Eligible Applicants:

- Special district governments
- County governments
- Native American tribal governments (Federally recognized)
- Others (see text field entitled "Additional Information on Eligibility" for clarification)
- City or township governments
- Public and State controlled institutions of higher education
- Public housing authorities/Indian housing authorities
- State governments

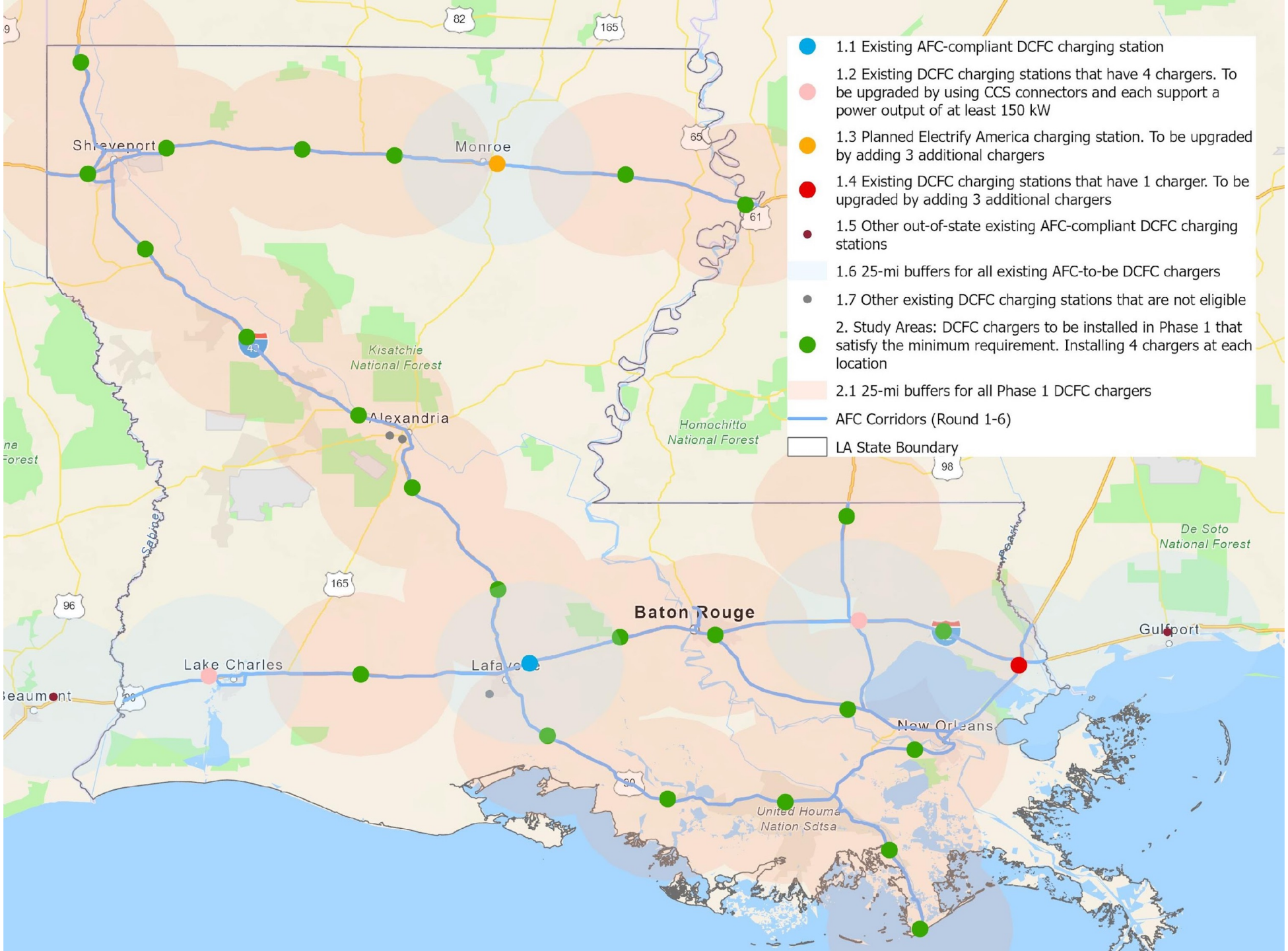
Alternative Fuel Corridors

EV “Pending” Corridors



Modeling by the Center for Sustainable Energy

Preliminary
Phase 1

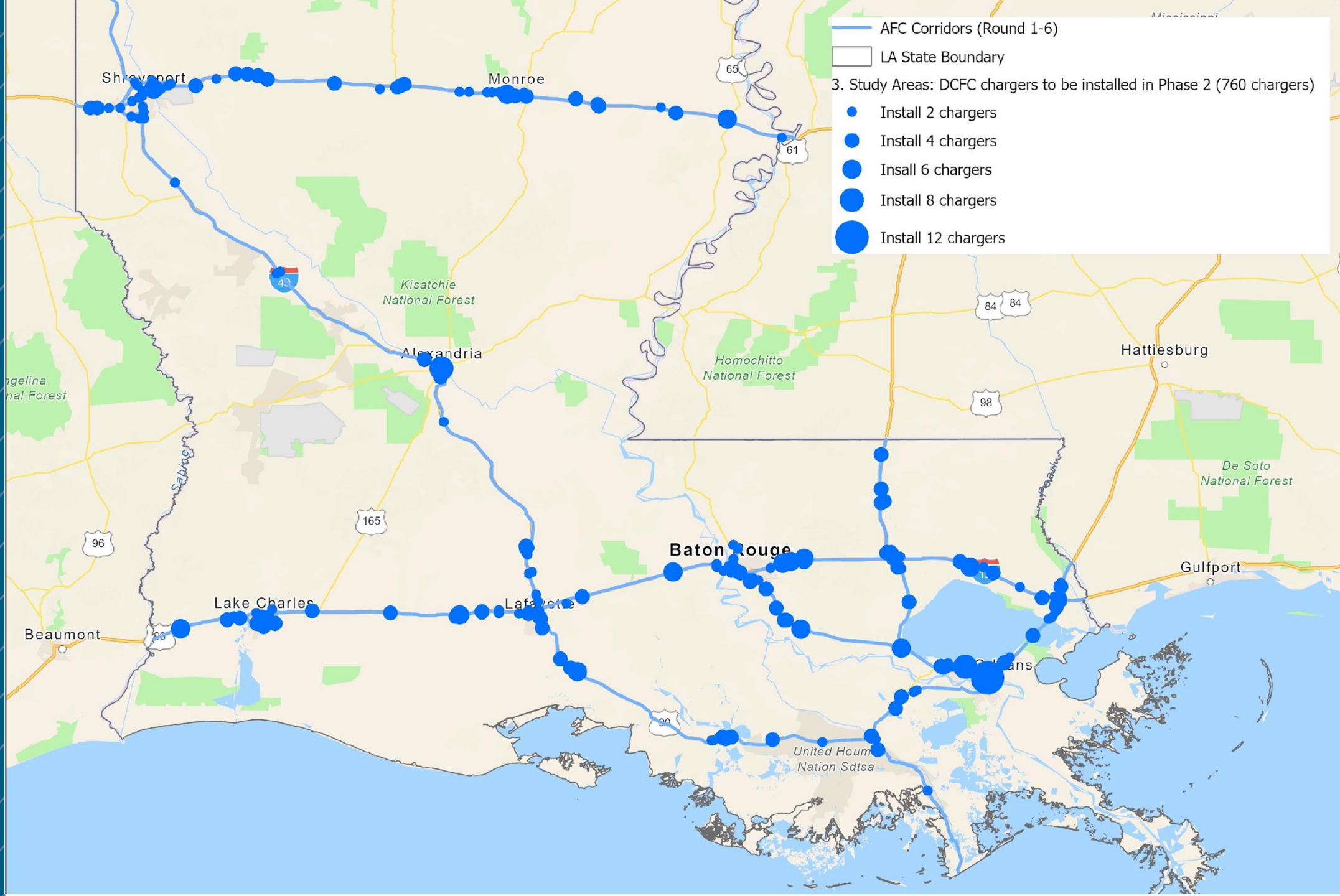


Modeling by the Center for Sustainable Energy

Preliminary Phase 2

Lower cost scenario

~760 Chargers

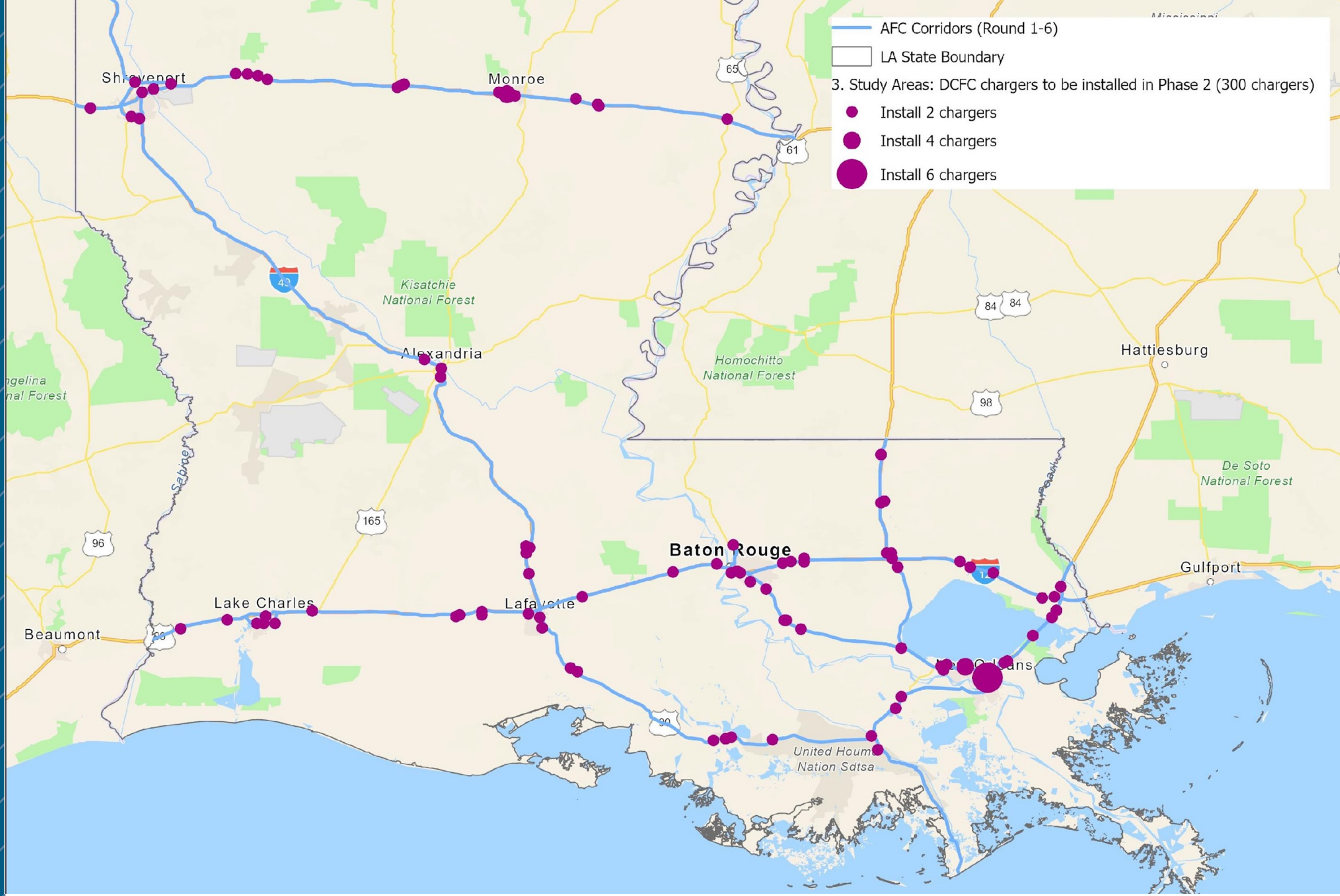


Modeling by the Center for Sustainable Energy

Preliminary Phase 2

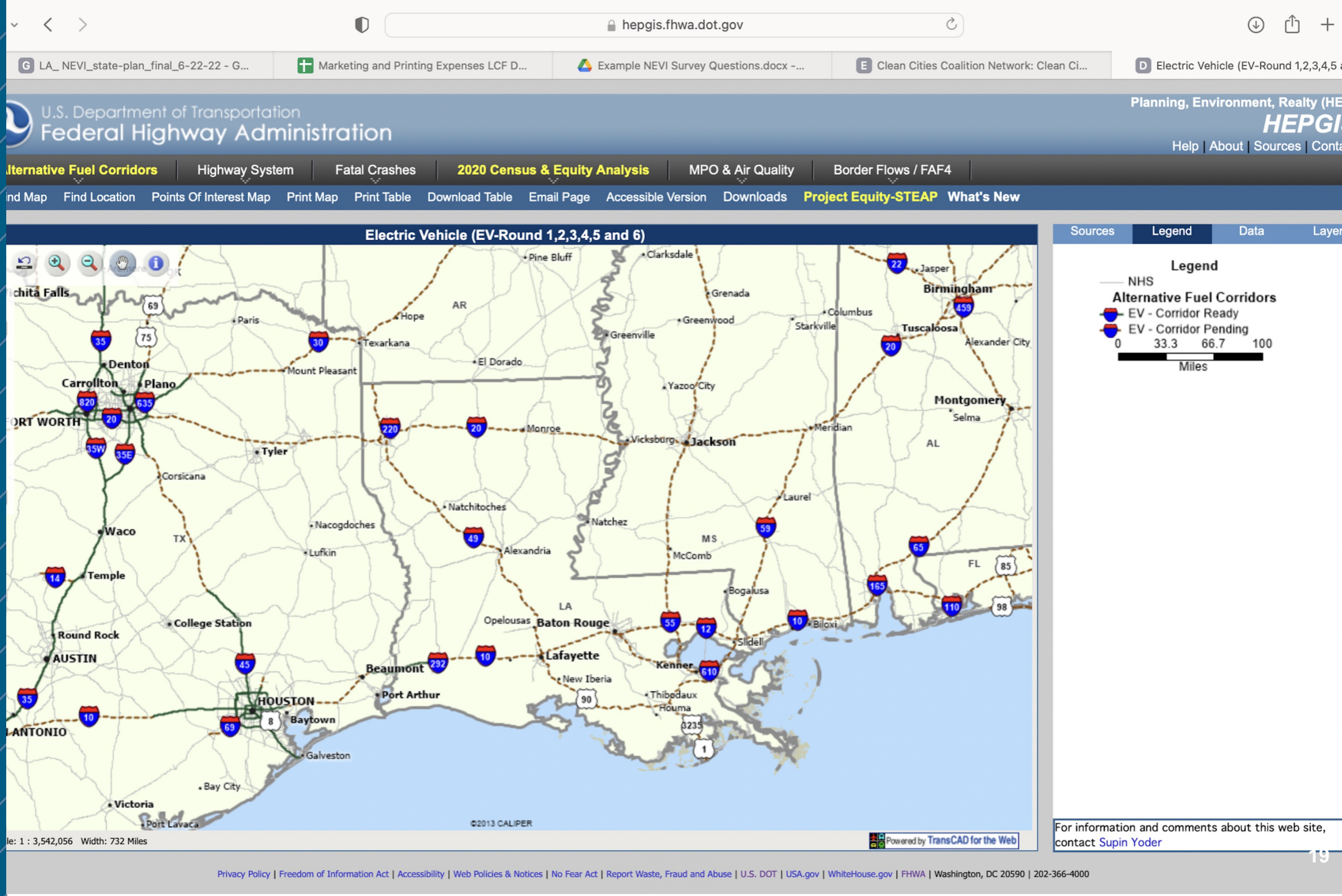
Higher cost scenario

~300 Chargers



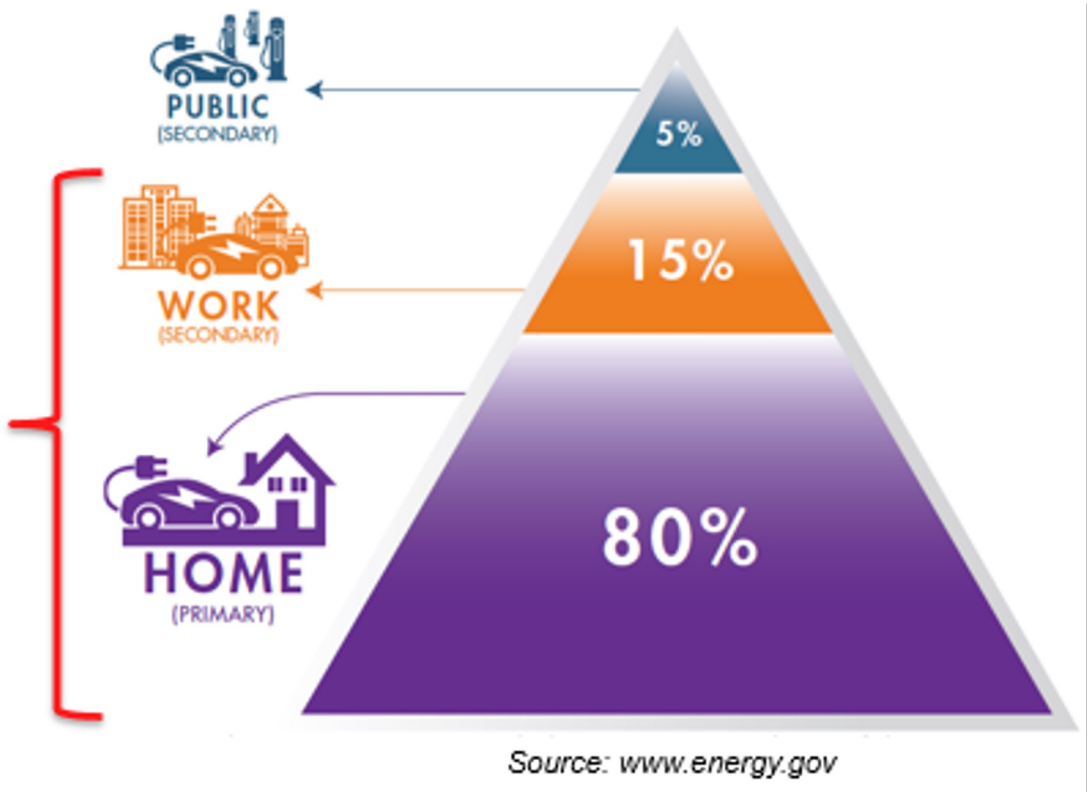
Alternative Fuel Corridors

EV “Pending” Corridors



Where does most charging occur?

EV owners primarily charge their cars at home, where it's **convenient** and **inexpensive**.



Source: www.energy.gov

Infrastructure: Electric Vehicle Charging Infrastructure

Type of Charger	Current Type	Input Voltage (V)	Typical Charging Time	Primary Use
Level 1	Alternating Current (AC)	120 V	Approximately 5 miles of range per hour of charging	Residential
Level 2	AC	208 V or 240 V	Approximately 25 miles of range per hour of charging	Residential Commercial
DC Fast	Direct Current (DC)	208 V or 480 V	100–200+ miles of range per 30 minutes of charging	Commercial
Wireless	AC	Varies	10–20 miles of range per hour of charging	Commercial



Infrastructure: Connectors and Plugs

Type of Charger	Charging Standard
Level 1	SAE J1772 NEMA 5-15 NEMA 5-20
Level 2	SAE J1772
DC Fast	CHAdeMO CCS (SAE J1772 Combo) Tesla Supercharger
Wireless Charging	SAE J2954



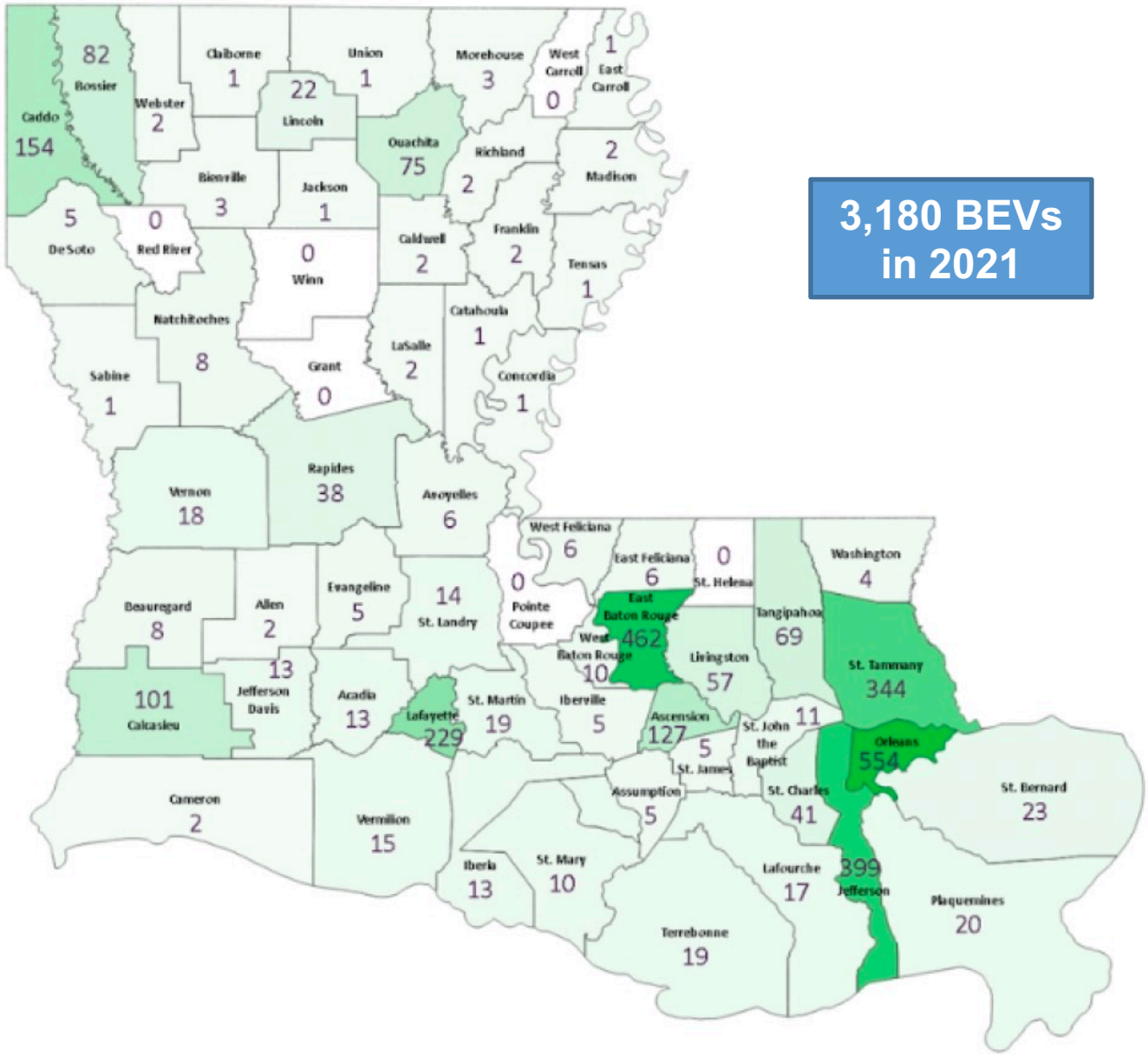
Infrastructure: Extreme Fast Charging

- Power outputs of up to 350 kW and higher
- New EV models will be able to charge at higher rates
- May provide up to 200 miles of charge in less than 10 minutes

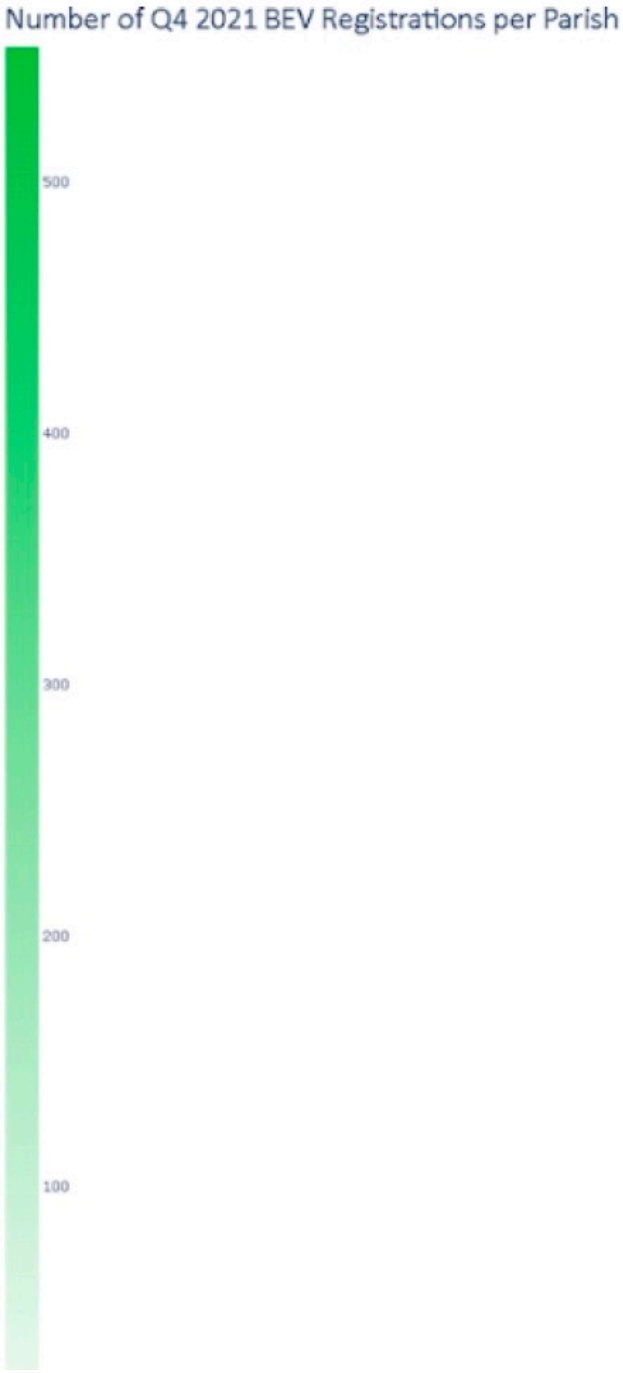


EV Adoption in Louisiana

By Parish
Q4 2021



3,180 BEVs in 2021



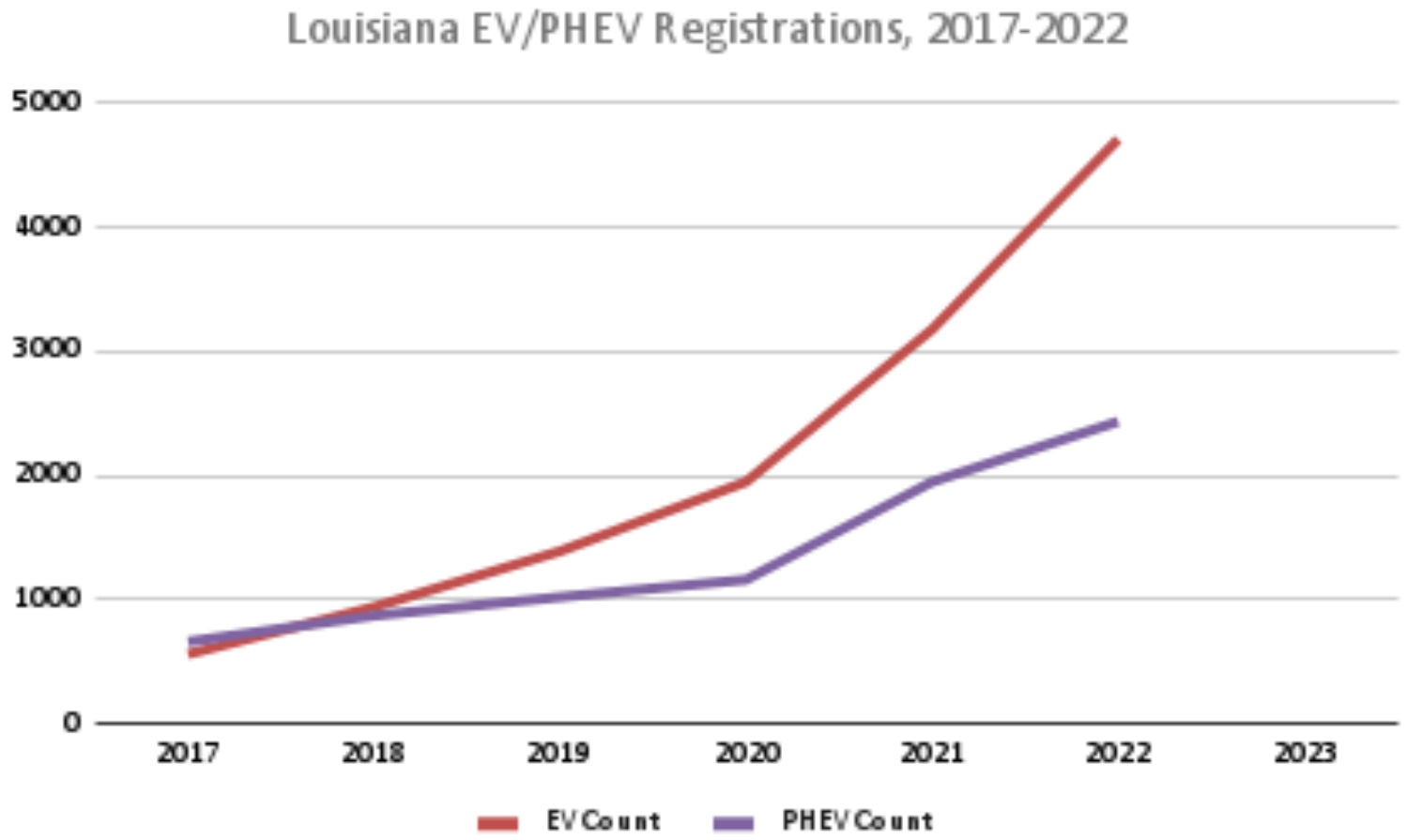
Louisiana EV/PHEV Registrations

Louisiana EV/PHEV Registration, 2017-2022					
Year	BEV Count	% Change from Previous Year	PHEV Count	% Change from Previous Year	Total EVS
2017	560	-	660	-	1,220
2018	940	68%	870	32%	1,810
2019	1,390	48%	1,020	17%	2,410
2020	1,950	40%	1,160	14%	3,110
2021	3,180	63%	1,950	68%	5,130
2022	**4,714**	**48%**	**2,436**	**25%**	**7,150**

53%

Average BEV growth rate per year since 2017

Louisiana EV/PHEV Registrations



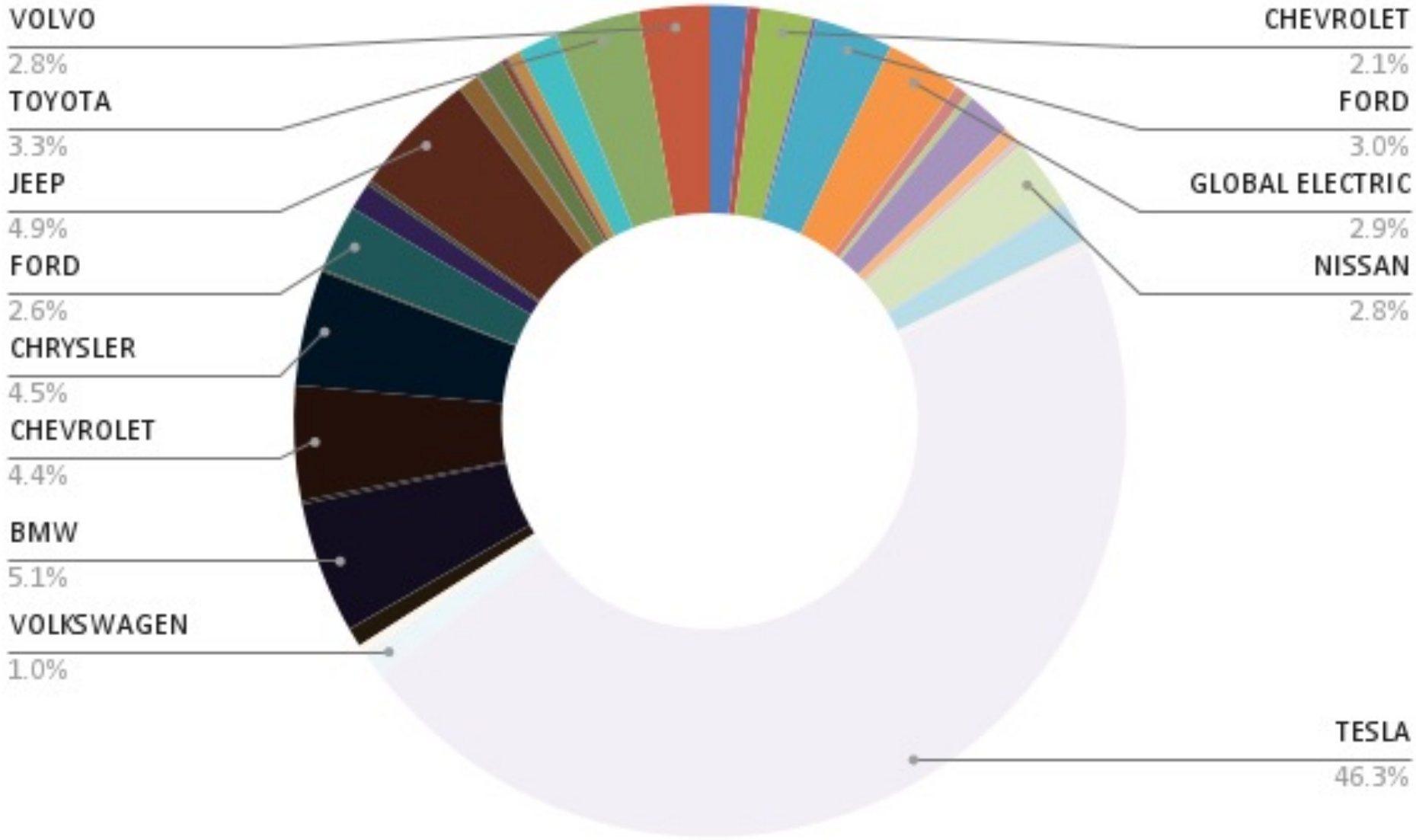
486.07%

Total increase in Plug-in vehicle adoption in Louisiana since 2017

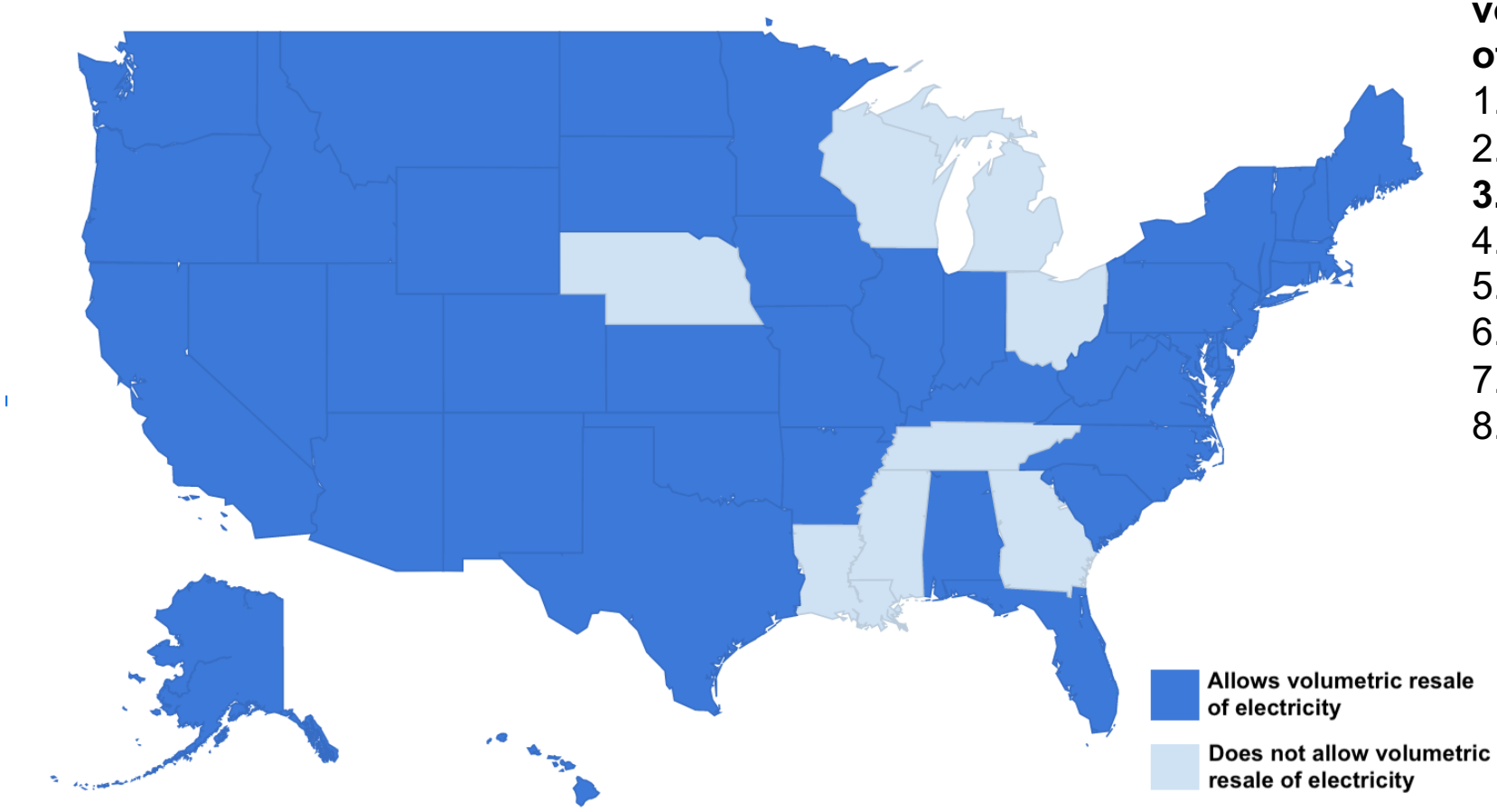
2022 Vehicle Registrations by Make

2022

PHEVs and BEVs



States that allow volumetric resale of electricity



All but the following allow volumetric resale of electricity:

1. Ohio
2. Georgia
3. **Louisiana**
4. Michigan
5. Tennessee
6. Wisconsin
7. Nebraska
8. Mississippi