



ITS AMERICA

The Intelligent Transportation Society of America

www.itsa.org

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ITS AMERICA

ITS HEARTLAND MEETING | 2022

TRANSPORTATION ELECTRIFICATION

A photograph of a city skyline at dusk. In the foreground, a multi-lane highway with concrete railings runs across the frame. The background is filled with various skyscrapers, some of which are illuminated with warm yellow lights from their windows. The sky is a mix of blue and orange, suggesting the time is either sunset or sunrise. A dark grey rectangular box is superimposed over the center of the image, containing the text "Safer. Greener. Smarter." in white and green font.

Safer. Greener. Smarter.



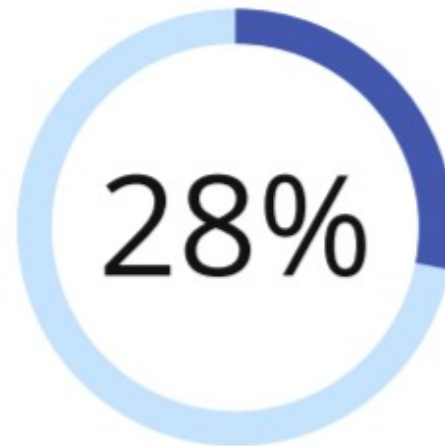
“Intelligent mobility driven by the deployment of transportation technologies has the potential to significantly reduce deaths on U.S. roadways, decrease congestion and emissions, and provide equal access to mobility for all U.S. residents while growing the economy, providing better health outcomes, and increasing access to education and economic opportunity.”

ITS America 2021 Technology Blueprint

Transportation
Accounts for
28% of all U.S.
Greenhouse
Gas Emissions

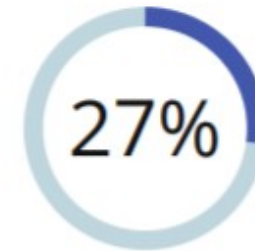
Safer. Greener. Smarter.

Total U.S. Greenhouse Gas Emissions by Sector (2018)

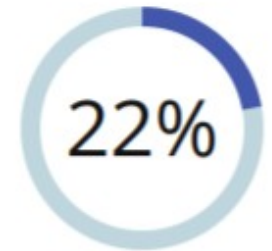


Transportation

The transportation sector generates the largest share of greenhouse gas emissions.



Electricity



Industry



Commercial & Residential



Agriculture

What are electric vehicles?

Battery Electric Vehicles



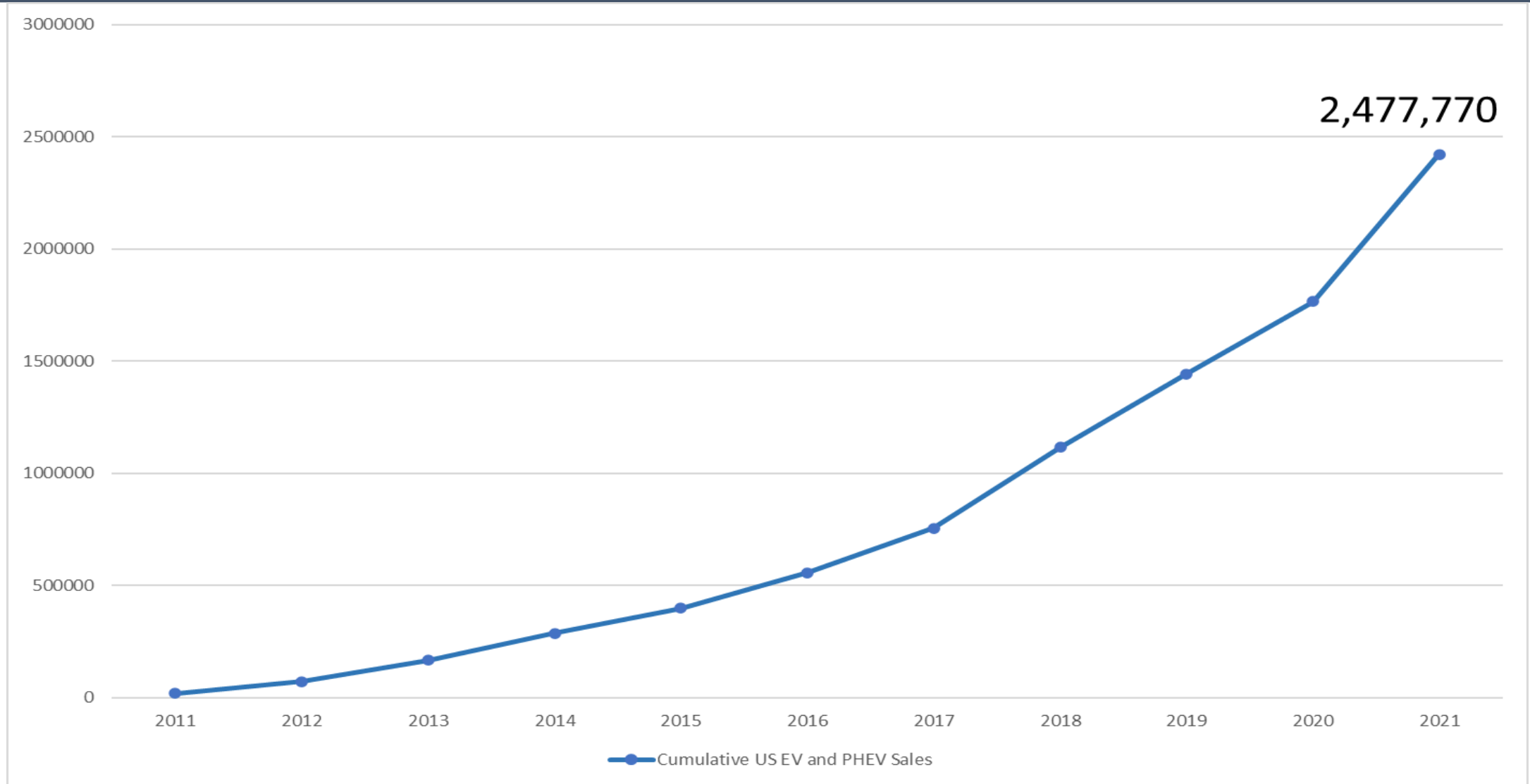
Plug in Hybrid Electric Vehicles



Hybrid Electric Vehicles



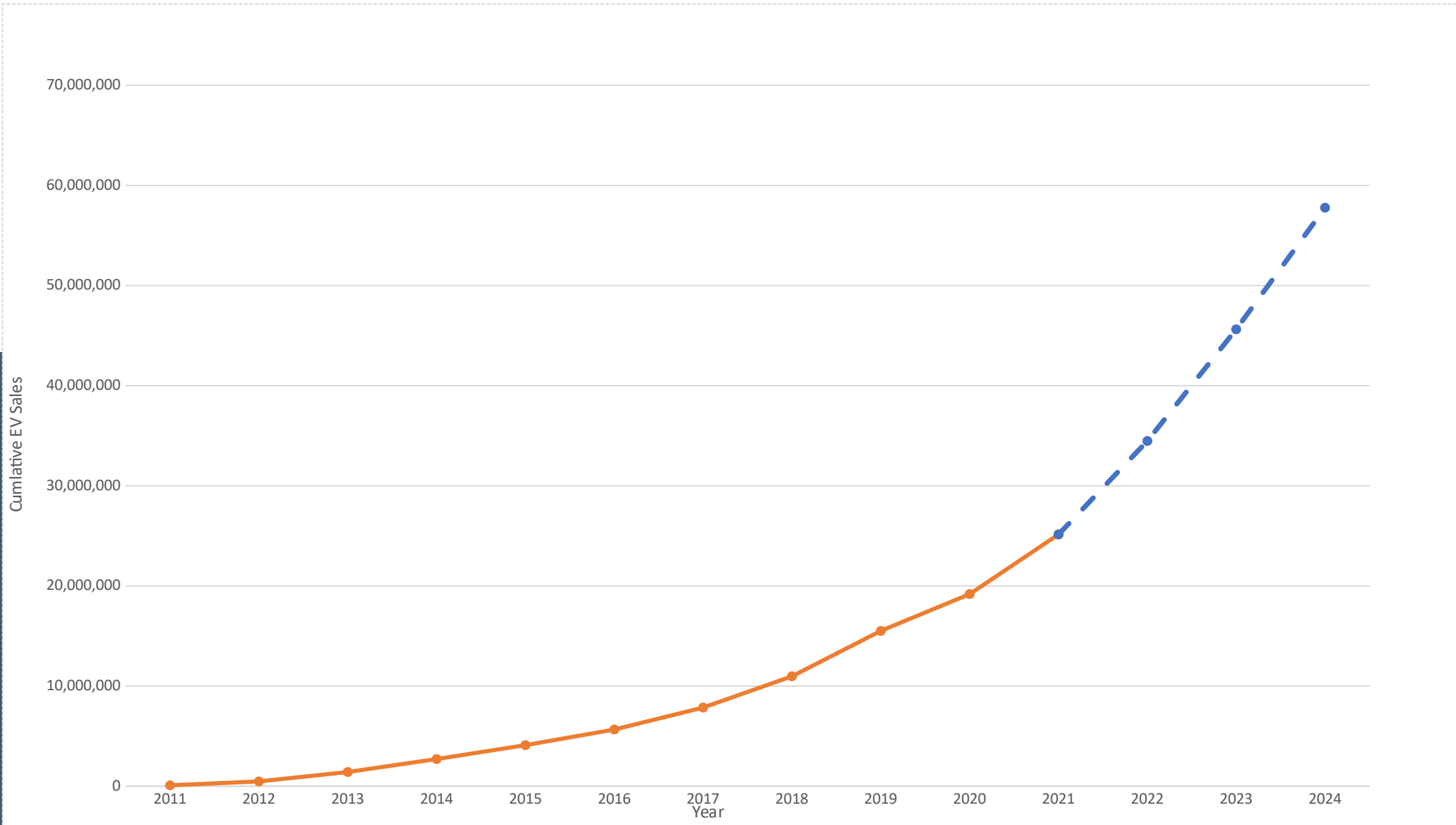
Cumulative EV and PHEV sales in the United States 2011-2021



What's going on in the ITS Heartland States?

State	EV Share of Total Market	BEV Models Available	PHEV Models Available
Iowa	0.7%	11	10
Kansas	1.4%	12	10
Missouri	0.8%	17	18
Nebraska	0.7%	12	11
Oklahoma	0.7%	16	16

US EV sales projections



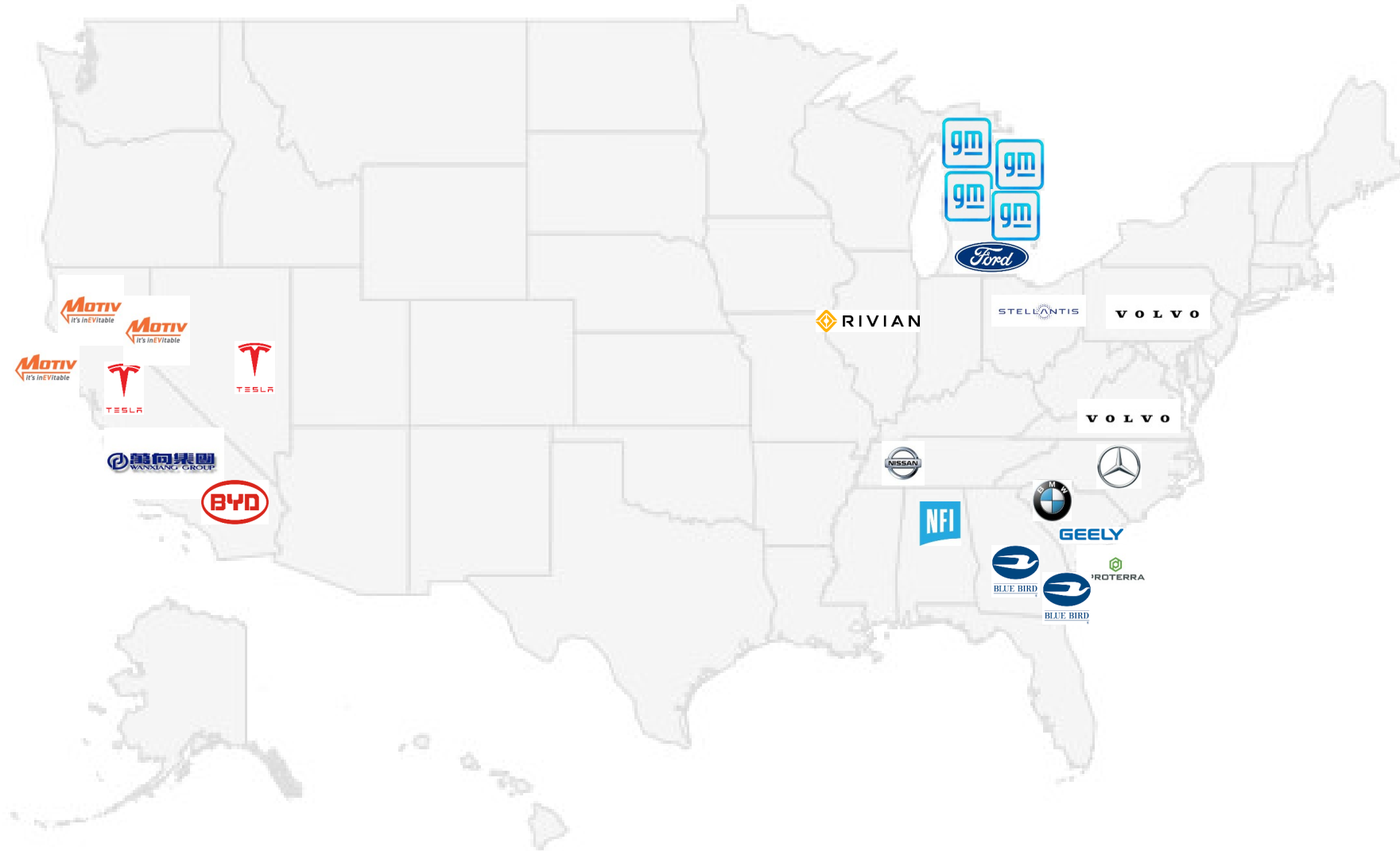
Investments

- +74,000 EV only employees
- Over \$55 Billion in EV only investments
- Over \$67 Billion in facility investments
- 22 states
- 22 vehicle models
- Growing OEM commitments
 - Light, Medium and Heavy Duty

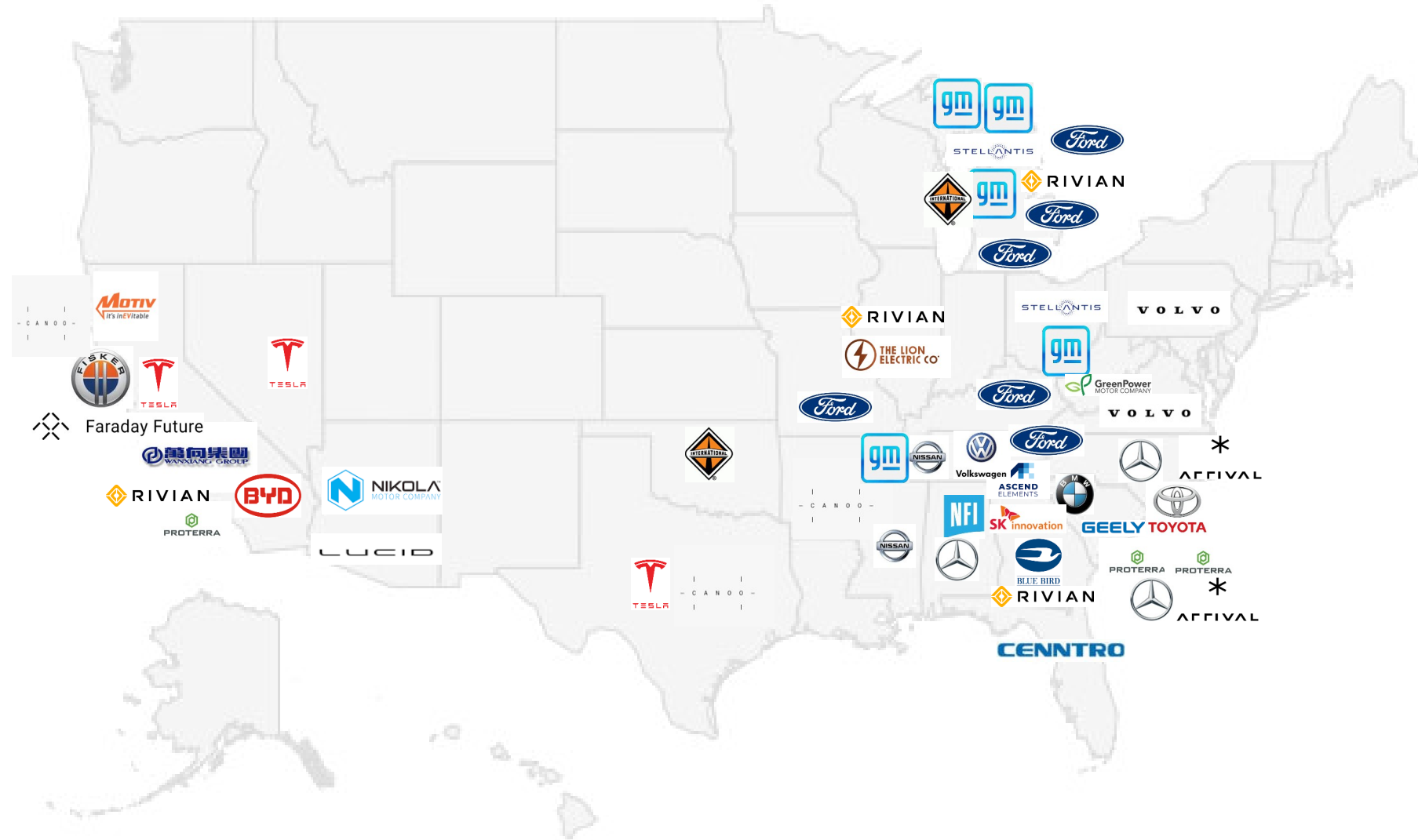
Top 10 Automaker Investments

Parent Company	Total EV-only Investment
General Motors Company	\$15,527,000,000
Ford Motor Company	\$13,635,000,000
Tesla Motors, Inc.	\$9,700,000,000
Rivian	\$6,000,000,000
SK Innovation Co., Ltd	\$2,610,000,000
Nissan Motor Company Ltd	\$2,200,000,000
Toyota Motor Corporation	\$1,290,000,000
Daimler AG	\$1,058,585,000
Volkswagen AG	\$800,000,000
Nikola Motor Company	\$600,000,000

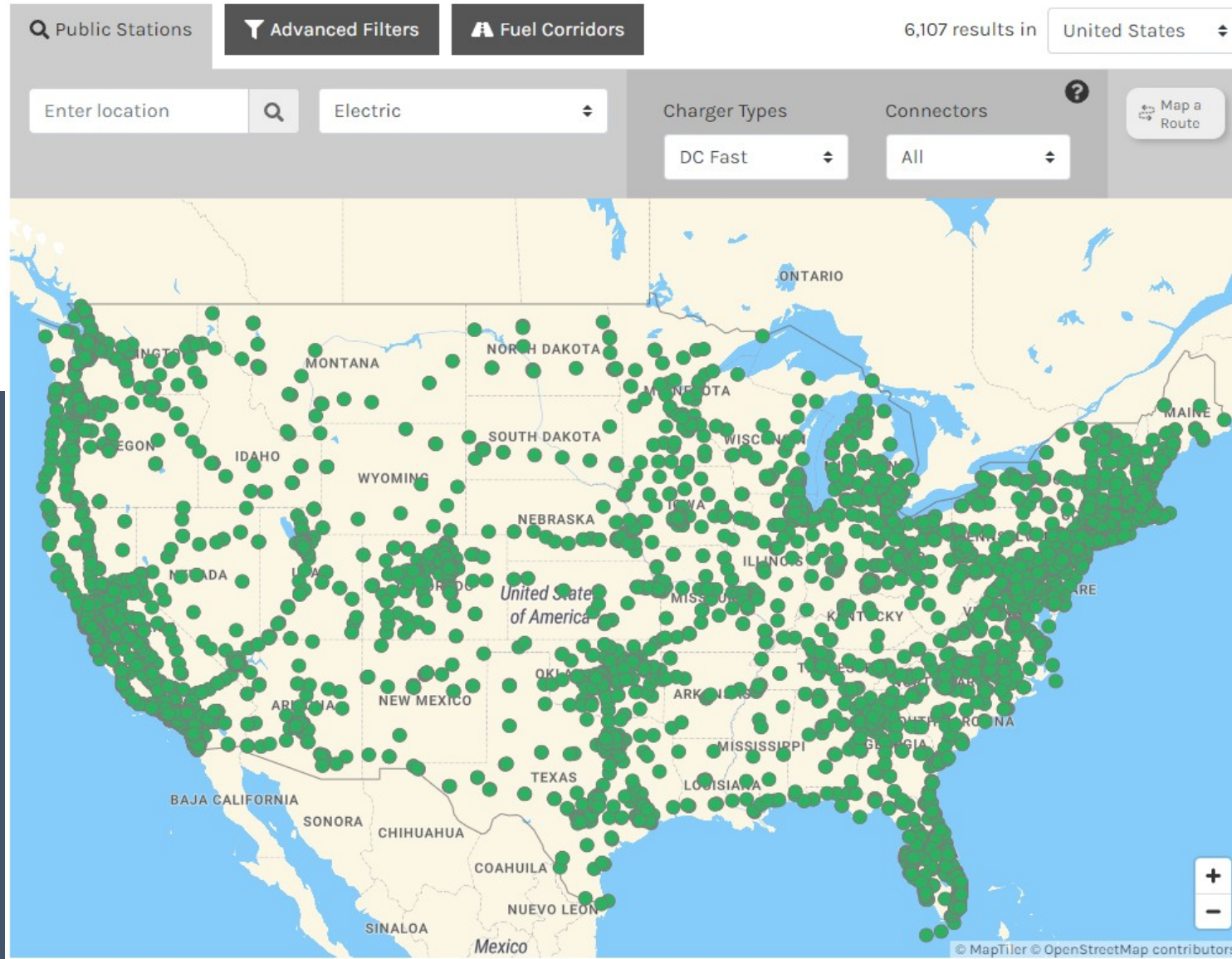
Current US EV/Battery Production Facilities



Future US EV/Battery Production Facilities



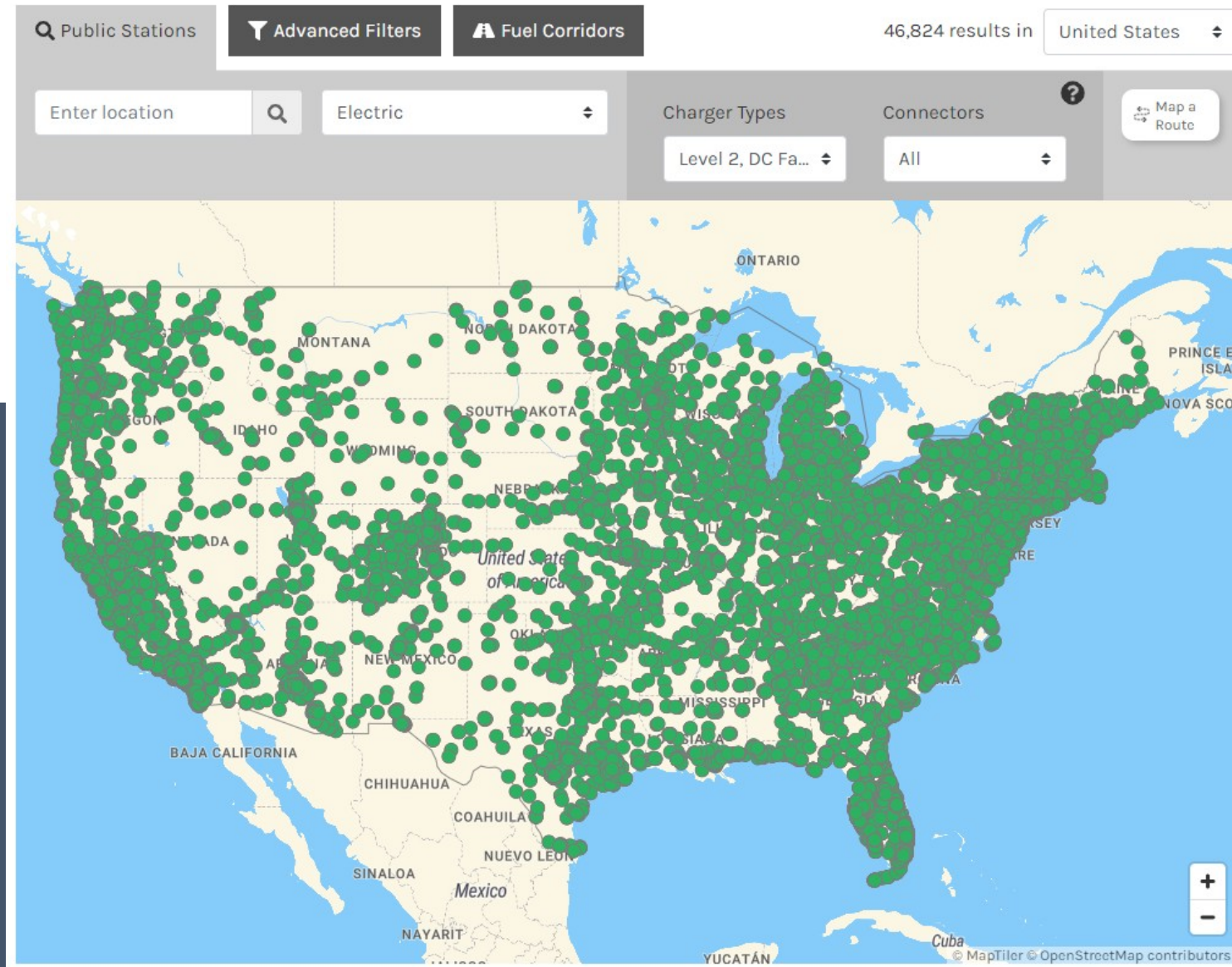
Where do I charge?



DC Fast Charge Ports

+22,000

Where do I charge?



Leve 2 Charge Ports
+104,000

Let's Take a Road Trip

Alternative Fueling Station Locator

Find alternative fueling stations in the United States and Canada. For U.S. stations, see [data by state](#). For Canadian stations in French, see [Natural Resources Canada](#).

Iowa to Oklahoma!

Public Stations | Advanced Filters | Fuel Corridors | U.S. and Canada

Clinton, Iowa | Electric | Charger Types: Level 2, DC Fa... | Connectors: All | Find Stations

Show stations within 5 miles of the route

- Hy-Vee - Tesla Supercharger
4064 E 53rd St
Davenport, IA 52807
DC Fast
3.3 mi from route
- Candlewood Suites Davenport
3800 Market Square Cir
Davenport, IA 52807
Level 2
3.4 mi from route
- Candlewood Suites Davenport - Tesla Destination
3800 Market Square Cir
Davenport, IA 52807
Level 2
3.2 mi from route
- Davenport IA
4215 Elmore Ave
Davenport, IA 52807
DC Fast

Options to chose between Level 1- DC Fast Chargers and multiple connector types

All the stations along the route with the option to download station information

Intersections with IIJA

- The National Electric Vehicle Infrastructure (NEVI) Formula Program
 - www.driveelectric.gov (Joint DOE/DOT Office)
 - State Plans due August 1, 2022
- The Charging and Refueling Infrastructure Grant Program
 - Investments along Alternative Fuel Corridors
- Clean School Bus Program
- Electric or Low-Emitting Ferry Program



28th ITS World Congress

September 18 – 22, 2022
Los Angeles, California

Learn More At - www.itsamericaevents.com

TRANSFORMATION BY TRANSPORTATION | #ITSWC2022

In Partnership With:



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In the business of
building businesses



Breakout Group Questions

- What's needed in your state to accelerate transportation electrification?
- What does success look like in 2 years? 5 years? 10 years?
- What are the opportunities?
- What are the challenges?
- How can ITS Heartland and ITS America Help?




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CLIMATE RESILIENCY

A photograph of a city skyline at dusk. In the foreground, a multi-lane highway with concrete railings runs across the frame. The background is filled with various skyscrapers, some with glowing windows and others with illuminated tops. The sky is a mix of blue and orange from the setting sun. A dark grey rectangular box is centered over the image, containing the text "Safer. Greener. Smarter." in white and green font.

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What is resilience?

The ability to prepare for changing conditions and withstand, respond to and recover from disruptions.

- US Department of Transportation, Federal Highway Administration

What is extreme weather?



Oklahoma City, 2018 Source: ABC News.



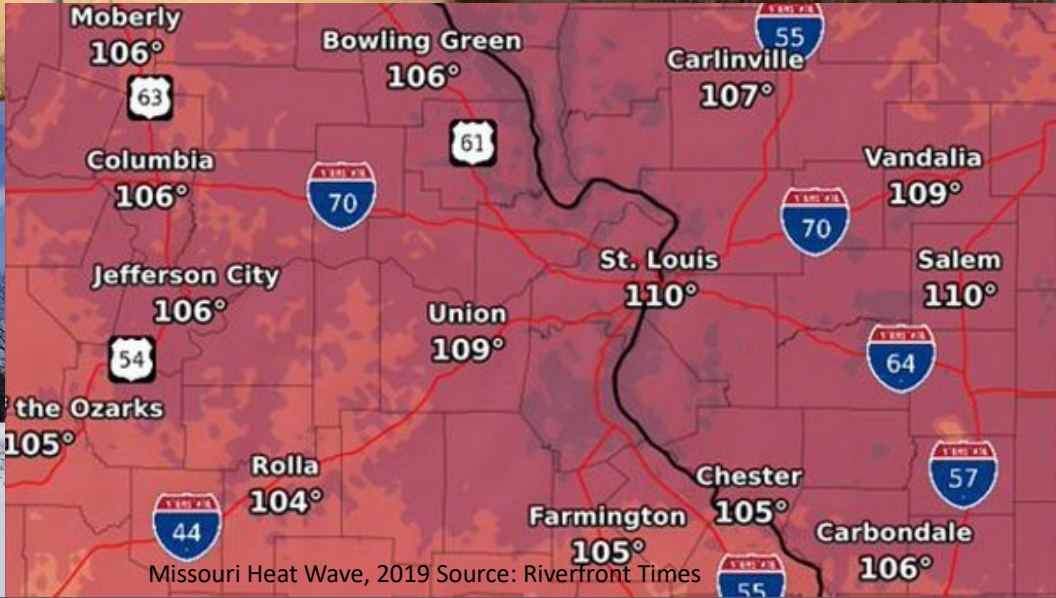
Des Moines, 2022 Source: ABC News.



Nebraska, 2022. Source: NY Times



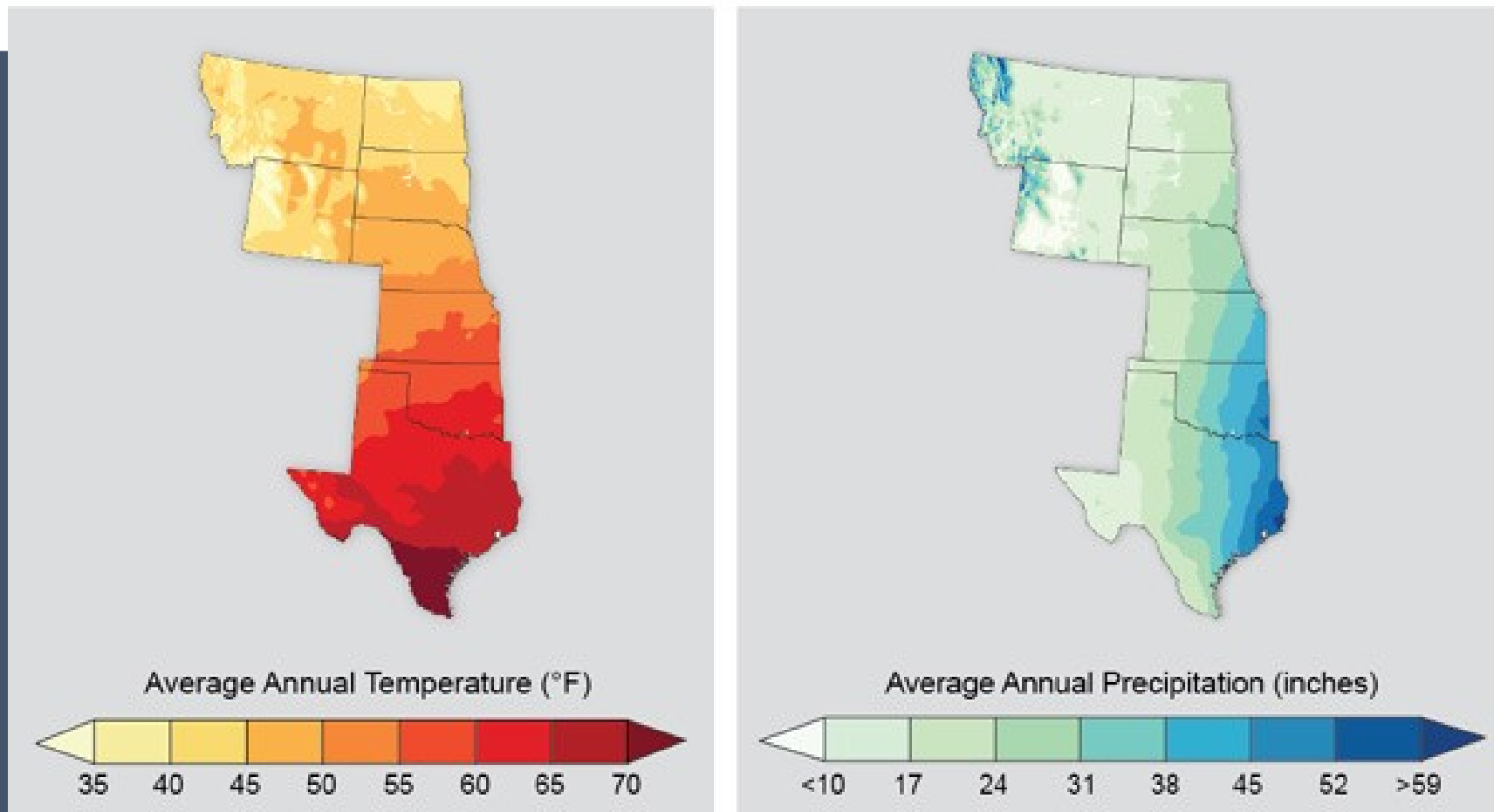
Big Springs, KS, 2021 Source: AP News.



Missouri Heat Wave, 2019 Source: Riverfront Times

What to expect in the Great Plains?

Temperature and Precipitation Distribution in the Great Plains



What is at stake in the transportation sector?



Source: Wikipedia



Source: Tulsa Port of Catoosa



Resilience and Transportation

- Inclement weather causes congestion and crashes and delays.
 - Expansion of ITS devices would support weather responsive traffic management
- Regional coordination for traveler information and awareness
 - Alerts, high wind restrictions, road closures, etc.
- Design and implementation of new infrastructure
 - Infrastructure designed for the future climate scenarios



Intersections with IIJA

- \$50 billion is designated for climate resilience to help communities protect against droughts, heat, and floods
- The Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program
 - Establishes a formula and a competitive grant program to improve the resiliency of transportation infrastructure
 - Variety of eligibility resiliency activities such as planning, construction, technical capacity building



Breakout Group Questions

- What does short-term resilience look like for you and your organization?
- What does long-term resilience look like for you and you organization?
- What's needed to help you, your company and your state achieve resilience?
- How can ITS Heartland and ITS America help?



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Thank you!
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 [ITS_America](https://www.instagram.com/ITS_America)