

Electric Transportation

State of the market and preparing for the future

Dan Bowermaster
Sr. Program Manager, Electric Transportation
dbowermaster@epri.com
+1 (650) 701-5099

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2021 EV Market Highlights

EV sales increase exceeded overall automotive market

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EV market now 3.2%

2

Electric pickups here

3

Electrifying fleets

4

Customer charging experience

5

Charging station O&M and lifespan

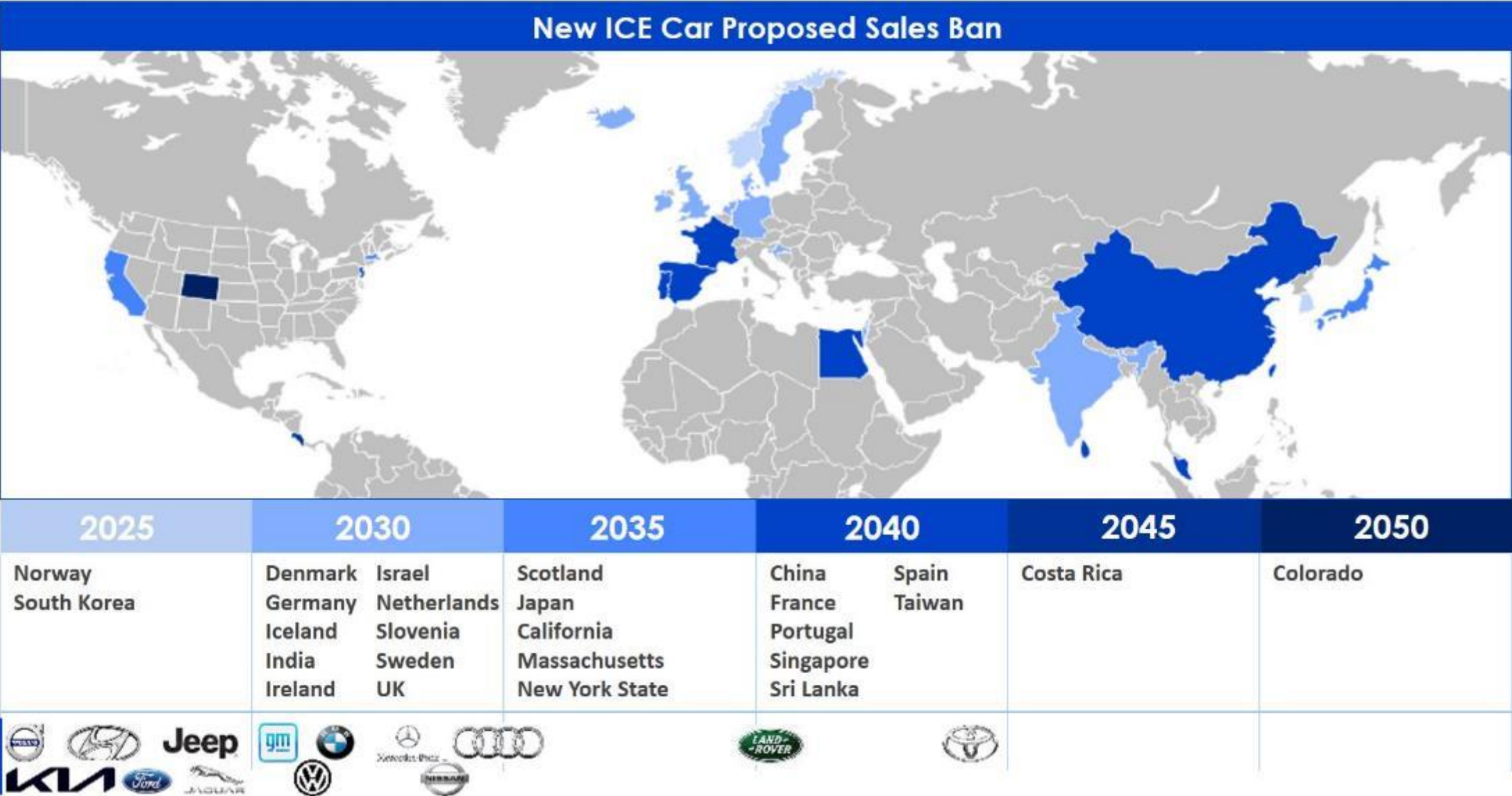
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Increasing role of broader transportation ecosystem



Global trends today

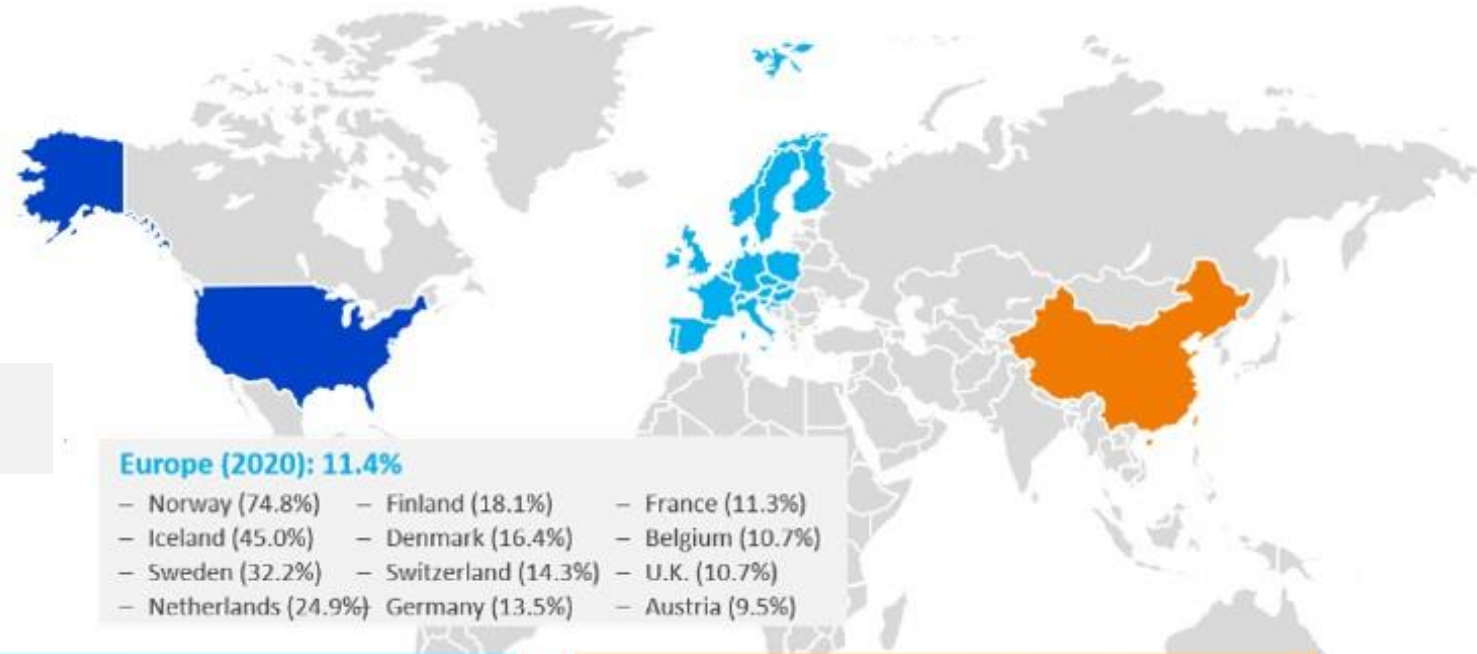
Government policy and corporate EV business plans increasingly support EVs



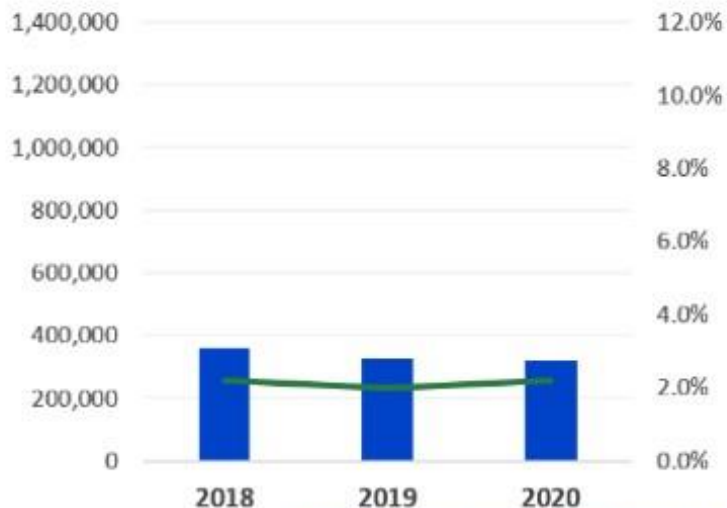
Source: EPRI research; <https://www.caranddriver.com/news/g35562831/ev-plans-automakers-timeline/>

Electric transportation is a global market

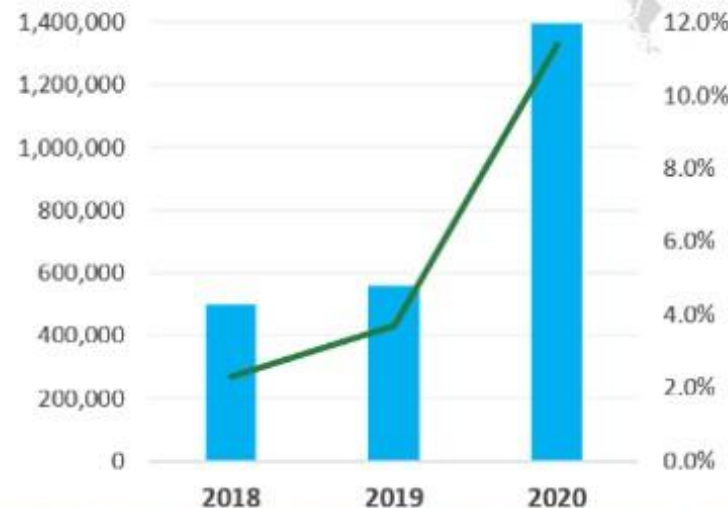
Despite global pandemic, EV sales grew especially where supported by strong policy and EV supply



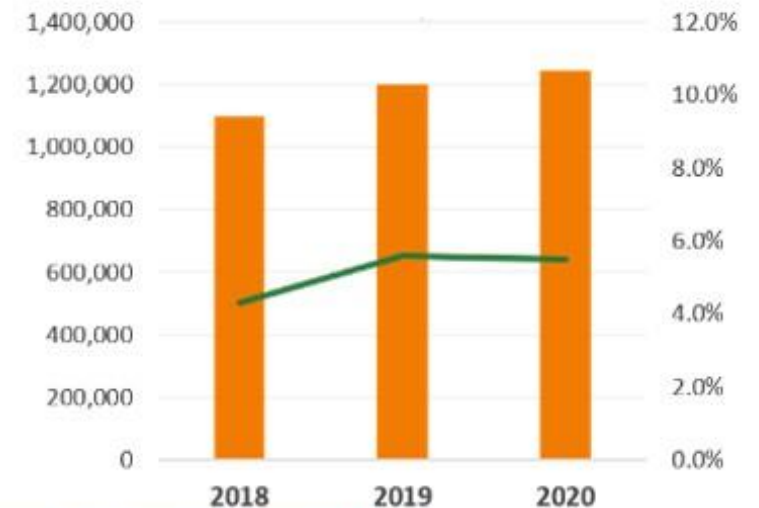
US EV Sales 2018–2020



Europe EV Sales 2018–2020



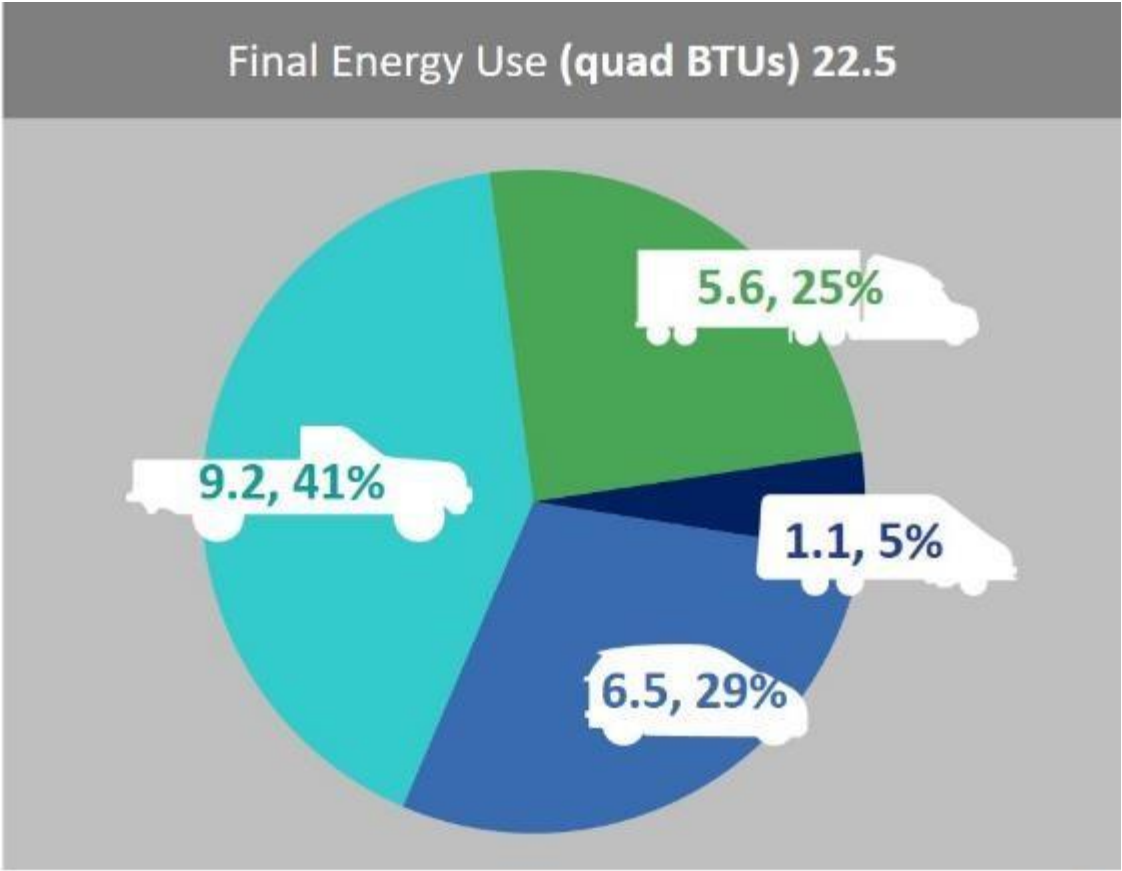
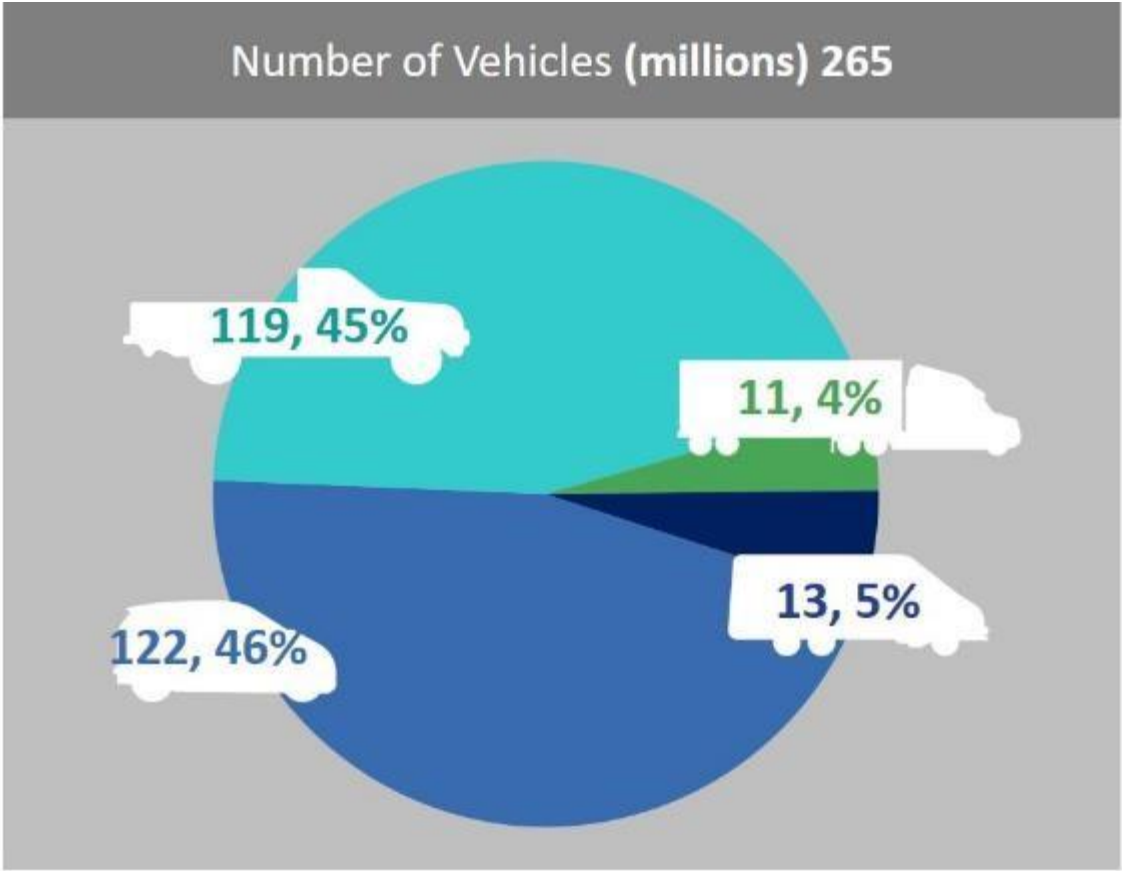
China EV Sales 2018–2020



Source: EPRI analysis, February 2021; <https://cleantechnica.com/2021/02/08/global-plugin-vehicle-sales-up-43-in-2020-european-sales-up-137/>; <https://insideevs.com/news/489169/european-countries-plugin-market-share-q1q4-2020/>; <https://www.spglobal.com/platts/en/market-insights/latest-news/metals/121720-chinas-ev-sales-to-reach-more-than-13-mil-units-in-2020-caam>; <http://www.ev-volumes.com/>

EVs are a huge opportunity in the U.S.

What segment of transportation uses the most energy and pollutes the most?

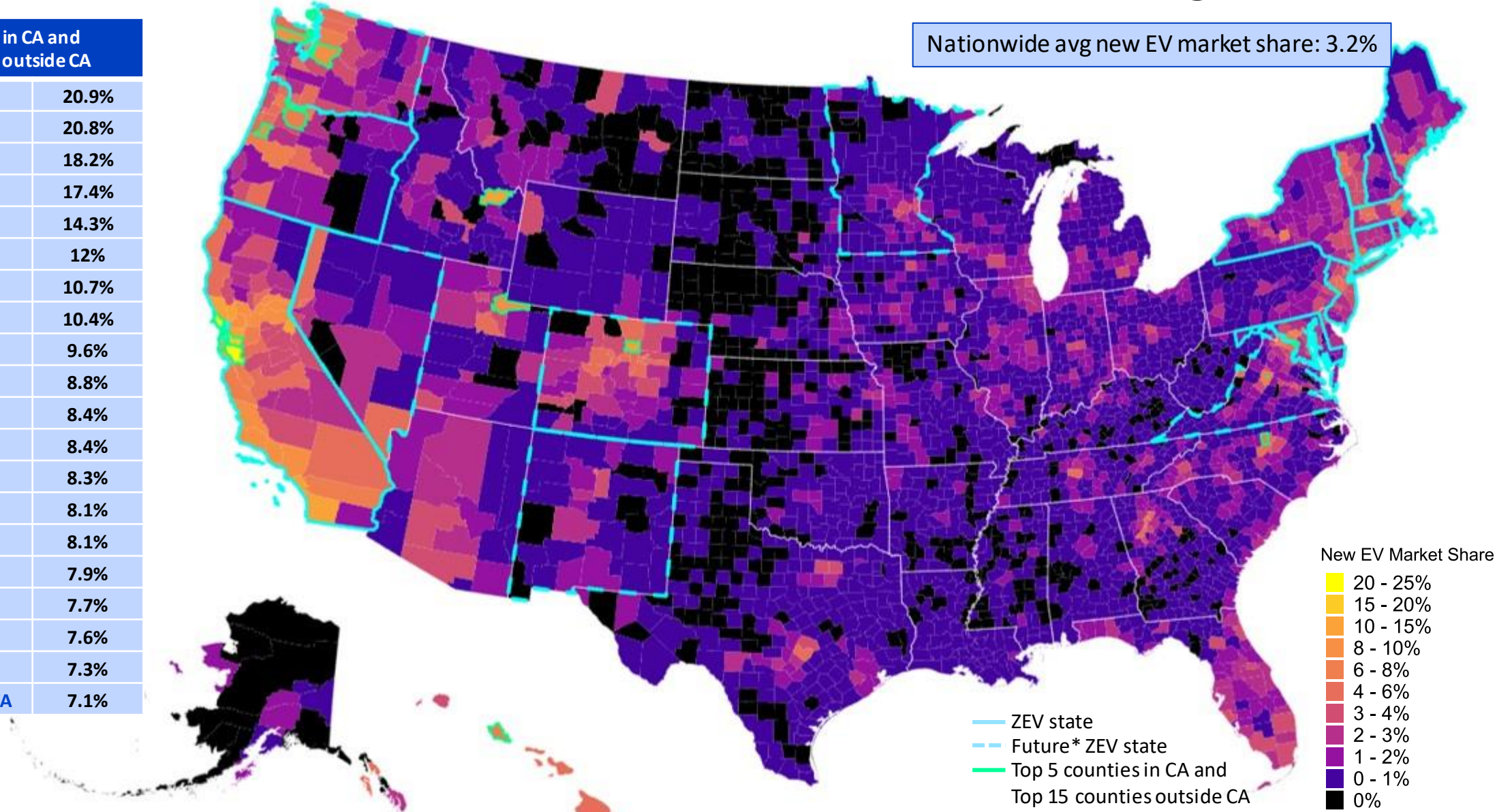


Source: 2015 US highway transportation data

- SUV and Pickup Trucks
- Passenger Cars
- Heavy and Medium Freight
- Others (light commercial/school/transit)

US Nationwide New EV Market Share Sept. 2020 – Aug. 2021

Top 5 counties in CA and Top 15 counties outside CA	
Santa Clara, CA	20.9%
Marin, CA	20.8%
San Francisco, CA	18.2%
Alameda, CA	17.4%
San Mateo, CA	14.3%
Boulder, CO	12%
Clark, ID	10.7%
San Juan, WA	10.4%
King, WA	9.6%
Jefferson, WA	8.8%
Washington, DC	8.4%
Summit, UT	8.4%
Multnomah, OR	8.3%
Benton, OR	8.1%
Falls Church City, VA	8.1%
Orange, NC	7.9%
Arlington, VA	7.7%
Honolulu, HI	7.6%
Clackamas, OR	7.3%
Charlottesville City, VA	7.1%



*CO will become a ZEV state in 2022. WA and MN will become ZEV states in 2024. NM, NV, and VA have announced that they intend to become ZEV states in the future.

North American utilities proposing ~\$3.4B in EV infrastructure

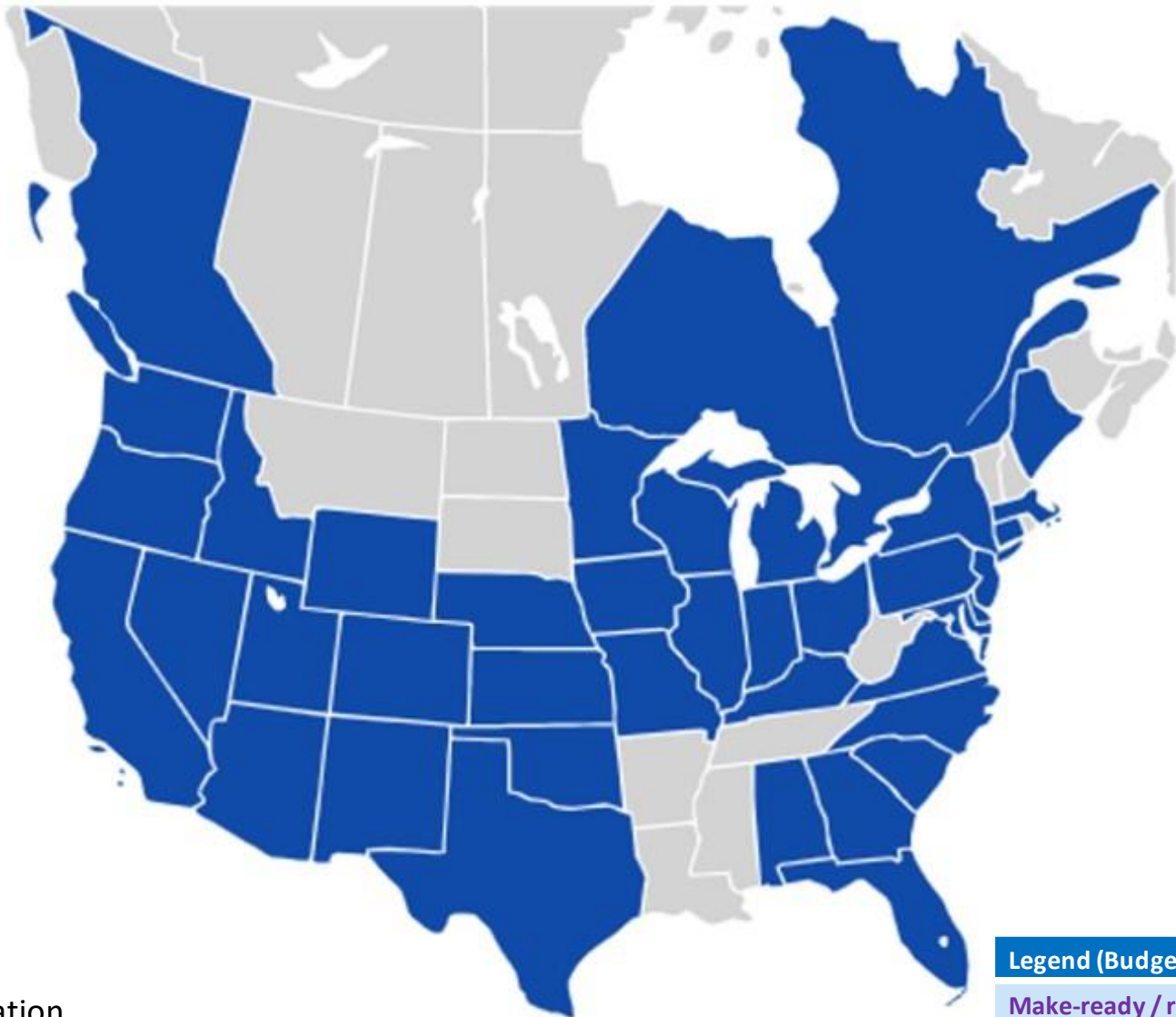


Key stats

- \$3.429B
- 38 states
- 45 programs
- 37 utilities

Key Challenges

- EV awareness
- Customer education
- Easy and reliable public charging infrastructure (to find, access, use, and pay)



Legend (Budget \$)	
Make-ready / rebate	\$0.4M
Utility-owned	\$8M
Hybrid	\$72M

Updated: 9/13/2021, Source: [North American Utility Electric Transportation Charging Infrastructure: Program Overview, EPRI, March 2021](#); individual utility interviews

What are utilities doing to prepare for EVs big and small?



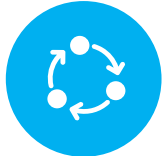
EVALUATE ROLE

in supporting or providing charging infrastructure (ETIPS)



STAFF UP

your ET teams



REVIEW PROCESSES

your service planning processes for fleet customers



REVIEW RATES

your rate options for large ET customers



ENSURE FORECASTED LOAD PLACEMENT

from light-duty ET is in short- and long-term procurement, grid planning, etc.



REVIEW COST ALLOCATION

for grid upgrades for ET residential customers as well as fleets



CONNECT WITH STATE AGENCIES

to coordinate EV incentives and public education programs



OPEN DIALOGUE

with neighboring utilities to explore or coordinate regional EV charging networks for passenger EVs (highway)

