Charging into the Future: Why Automakers are Transitioning to Electric Vehicles and How States Can Help

Craig Orlan, Director of State and Local Government Affairs,
American Honda Motor Company

CHARGING AHEAD:

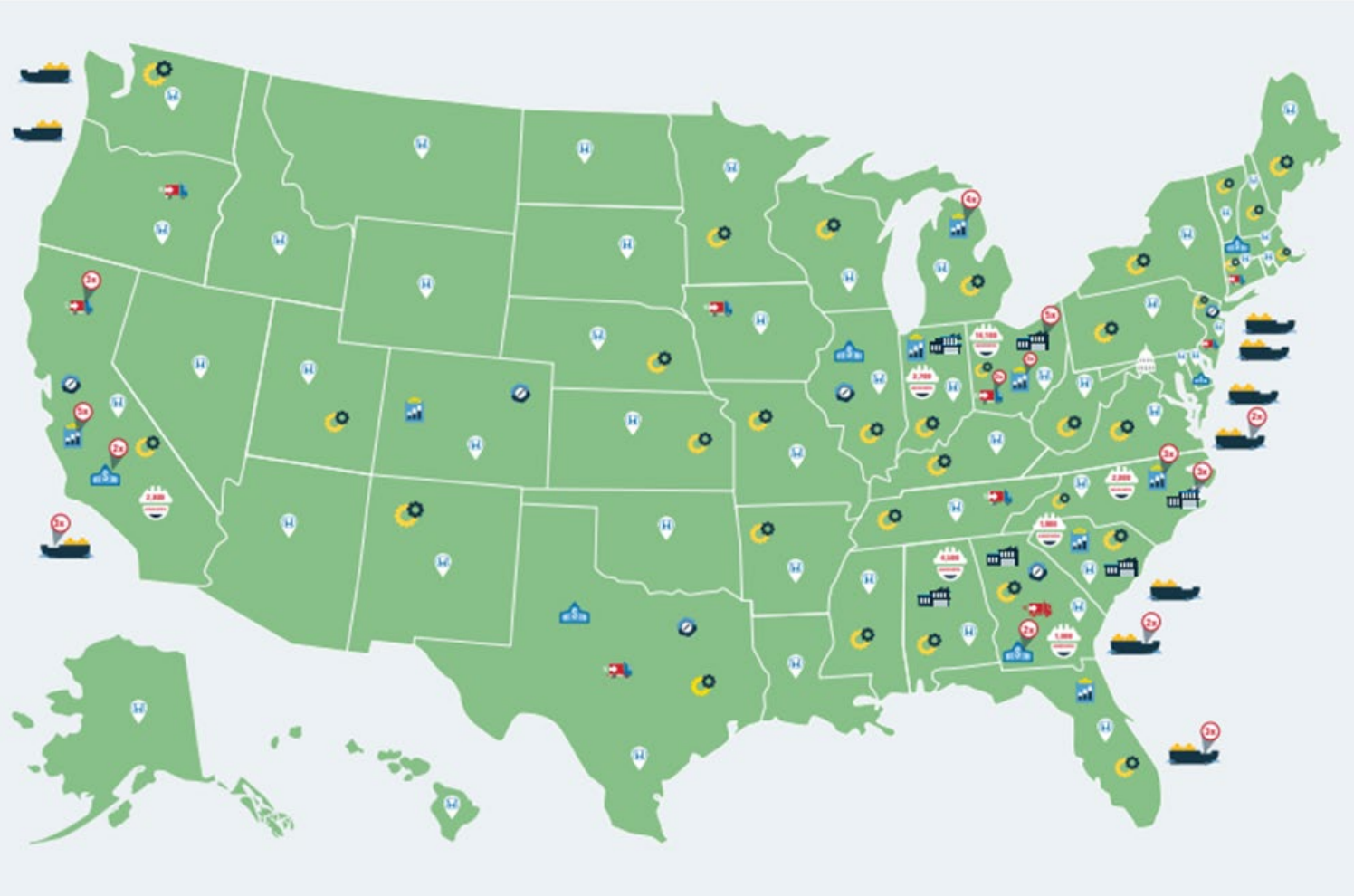
WHY AUTOMAKERS ARE ELECTRIFYING & HOW STATES CAN ENSURE THIS TRANSITION IS A SUCCESS

Craig Orlan
Director of State & Local Government Affairs
American Honda Motor Company, Inc.
Craig_Orlan@na.honda.com

American Honda's History

HONDA
The Power of Dreams

Honda in America 2024



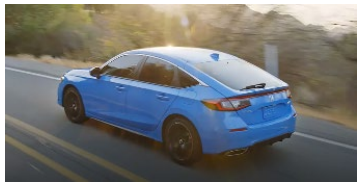
- Honda has 74 U.S. facilities
  - 12 Manufacturing plants
  - 23 R&D facilities
  - $23.7 Billion Capital Investment in the U.S.
- Honda has over 12,000 authorized dealerships across the country
  - Nearly 151,000 dealer employment.

Honda directly employs over 30,000 U.S. associates who develop, build and sell a diverse array of products in the United States w/ an annual payroll of over $2.5 Billion

Products in North America

HONDA
The Power of Dreams

Automobiles










Powersports



Power Equipment



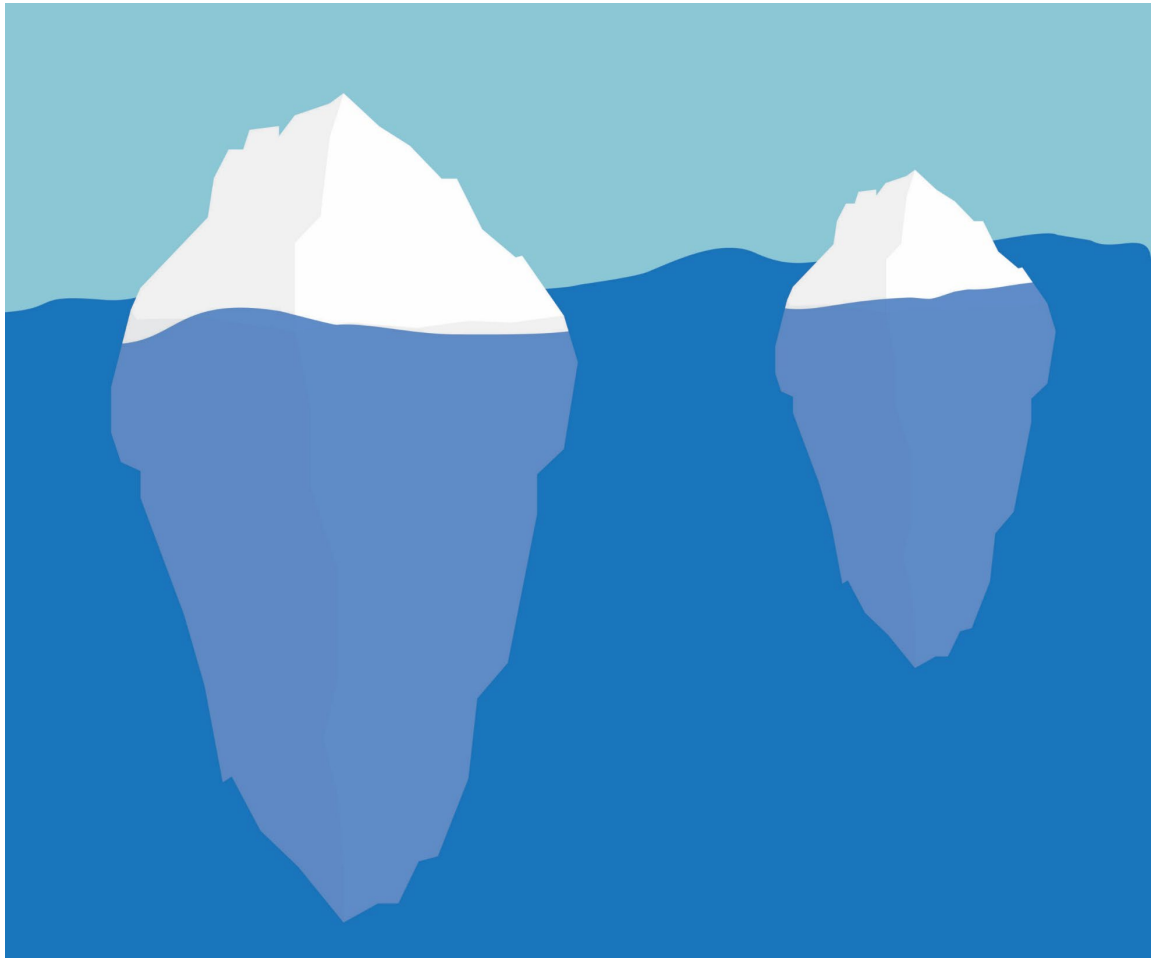
Marine

HondaJet


HONDA

Financial Services

The Tip of the Iceberg



This is an incredibly complicated topic, and we won't cover everything in one session

Our goal is to start a larger conversation

PLEASE feel free to reach out at anytime with questions

Craig Orlan
craig_orlan@na.honda.com

This is a big deal!

John Bozzella
President & CEO of the Alliance for Automotive Innovation

> The industry is undergoing a tectonic transformation, which will impact workers, consumers, the economy and society

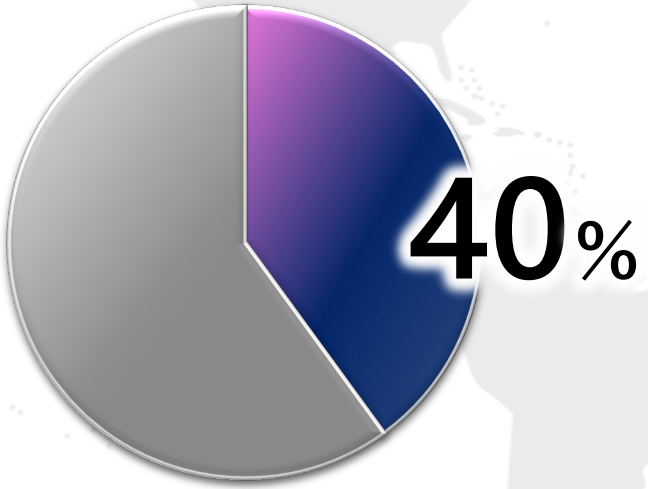
Electric Vehicles – Targeting 100% EV Sales by 2040

Electrification of Automobiles

All major markets combined

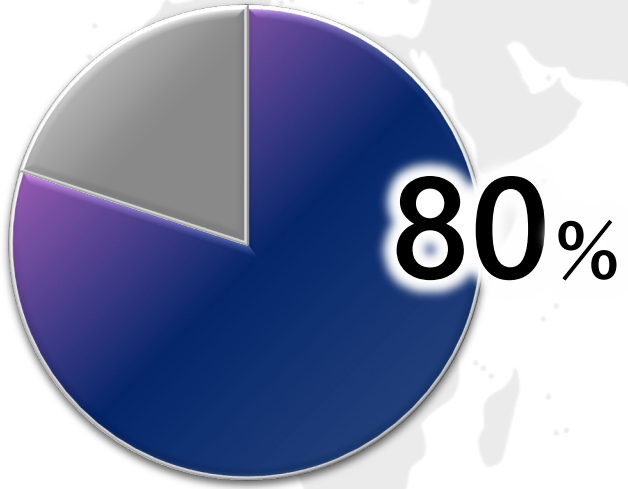
Global

2030



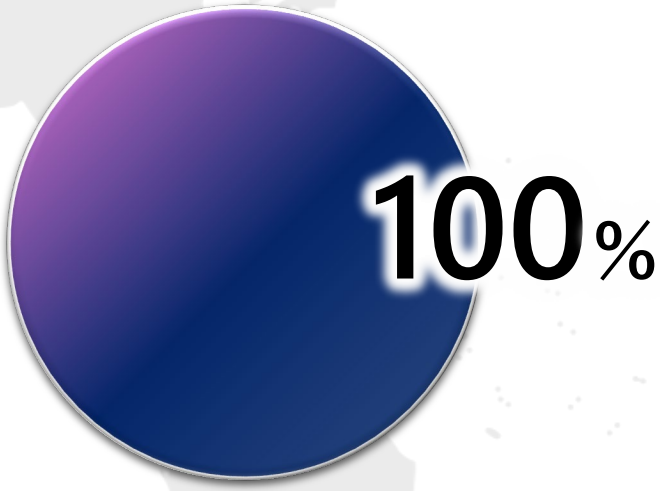
40%

2035



80%

2040



100%

Automaker Announcements, Goals, and Aspirations

Source: Compilation of public announcements, media articles, etc. Does not include all announcements.

2020 to 2024

- Multiple new 100% EV brands
- Audi no new ICE designs
- Volkswagen no new ICE designs
- BMW 90% of market categories BEV available

2025 to 2029

- Ford $29 billion investment by 2025
- Mini all new models EV
- GM $27 billion investment by 2025
- GM 40% of models EV; 20 EVs in N.A.
- Cadillac 100% EV available
- Jaguar 100% EV
- Bentley 100% plug-in
- Jeep 100% plug-in available
- Toyota 60 new hybrid/electric/fuel cell vehicles
- Volvo 50% of global sales EVs

2030 to 2034

- Ford 100% BEV (Europe)
- Cadillac potential 100% BEV
- JLR electric available on all
- Daimler 100% EV production
- Mazda some level of electric on all models
- Bentley 100% BEV
- Volvo 100% BEV
- Kia EVs 40% of production
- Subaru hybrid/electric available across models
- Polestar climate neutral

2035 to 2039

- GM 100% BEV

2040 to 2044

- Volvo carbon neutral
- Daimler carbon neutral
- GM carbon neutral

2045 to 2050

Carbon neutral / near- or net-zero: Ford, Nissan, VW, Honda, Mazda, Toyota, Mitsubishi

All signs point towards industry-wide electrification

ALLIANCE FOR AUTOMOTIVE INNOVATION


2024 Acura ZDX
2024 Honda Prologue
2014
Clarity
Fit EV
FCX Clarity
FCX
Insight
EV Plus
1995
If this transition isn't successful, it won't be a technological issue!

Honda's 2nd Generation of Electric Vehicles

Why is the auto industry transitioning to EVs?

Improved Performance / Customer Experience

Electric vehicles address many of the problems automotive engineers have been working to address for decades:

- Instant torque & acceleration
- Smooth and quiet operation
- Lower center of gravity – improves handling, responsiveness and safety
- Less Maintenance
- More Energy Efficient

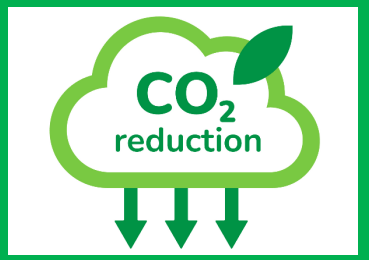
As the technology continues to evolve we can expectt even better performance from future EVs!

Reduced Emissions

EVs produce **zero tailpipe emissions**, leading to improved air quality and a decrease in **carbon dioxide (CO2)** emissions.

By transitioning to EVs automakers can significantly mitigate the harmful effects of transportation on climate change and public health

As the energy grid continues to shift toward cleaner more renewable energy (such as solar or wind) the environmental impact if EVs will decrease.



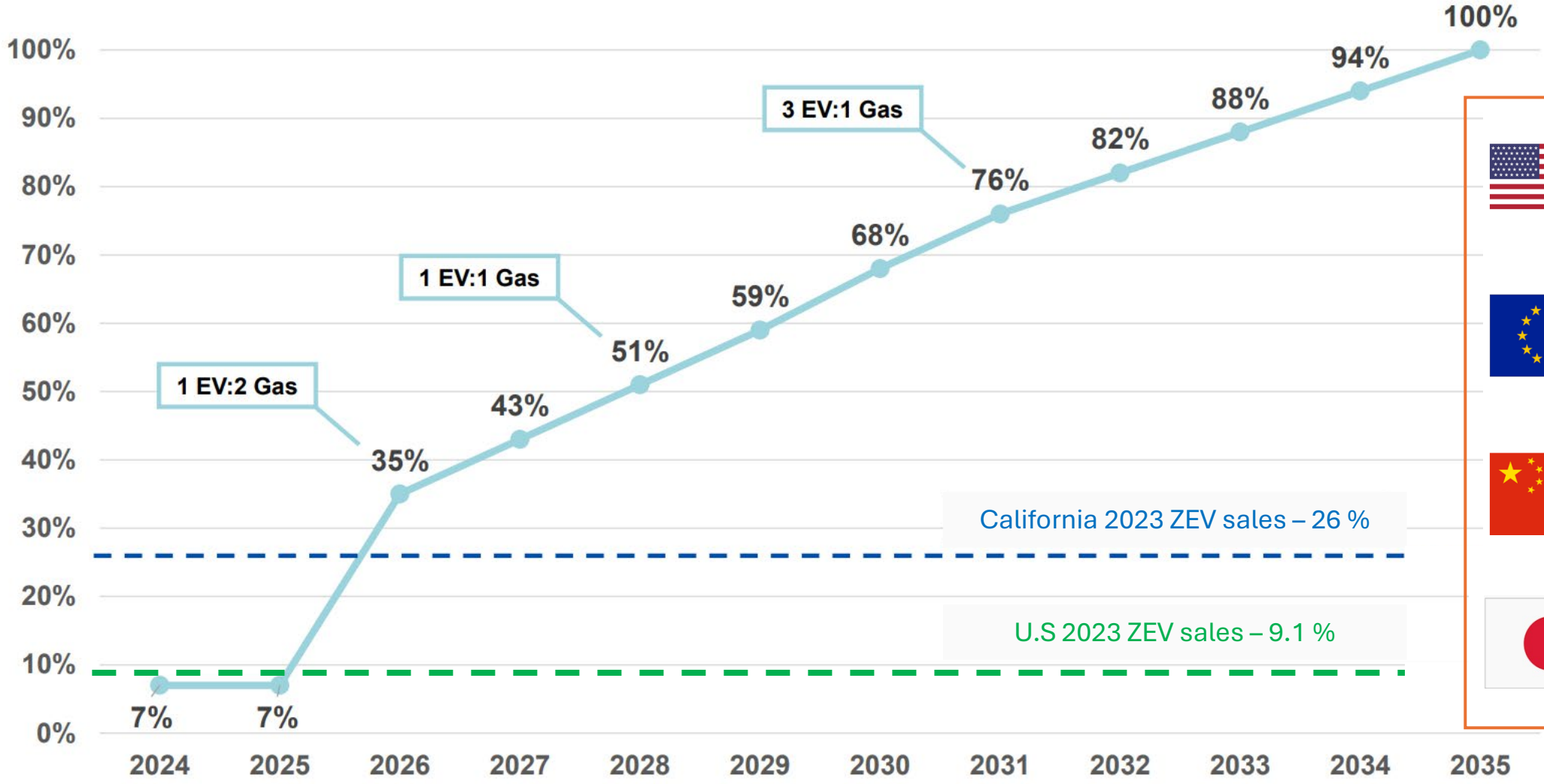
Government Mandates

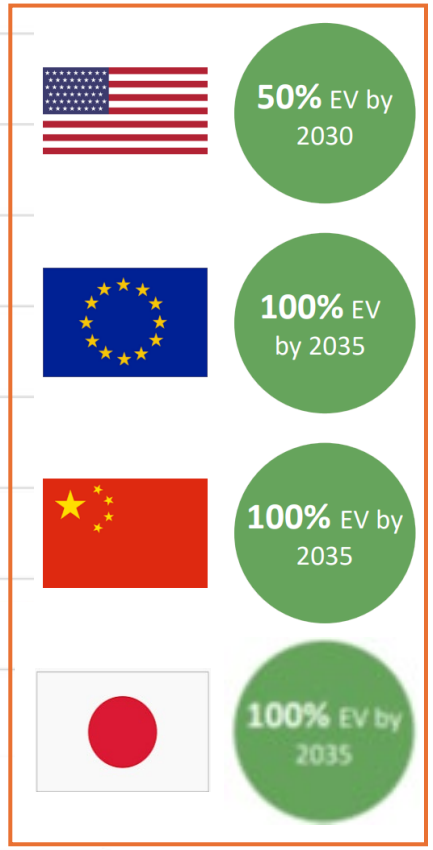
The federal government and 17 states are requiring automakers sell electric vehicles

Governments in many key international markets are also setting aggressive EV sales mandates

With extremely long lead times, automakers need predictability and stability in government mandates

California Advanced Clean Cars II (ACCII)





As of now, 17 states have adopted all or part of California's Clean Cars Standards – which is roughly 40% of the U.S. light duty vehicle market

Jobs / Economy

Auto manufacturing drives $1.1 trillion into the economy each year

Each auto job in the U.S. creates nearly 11 other positions in industries across the economy (9% of private-sector employment)

$272 billion is contributed annually in federal, state and local tax revenues

Every State is an Auto State
https://www.autosinnovate.org/resources/insights

Personal Mobility

Light duty passenger vehicles are the #1 mode of transportation for most Americans

Access to a car unlocks economic opportunities, access to medical care, access to education, and provides people more time to spend with family and friends

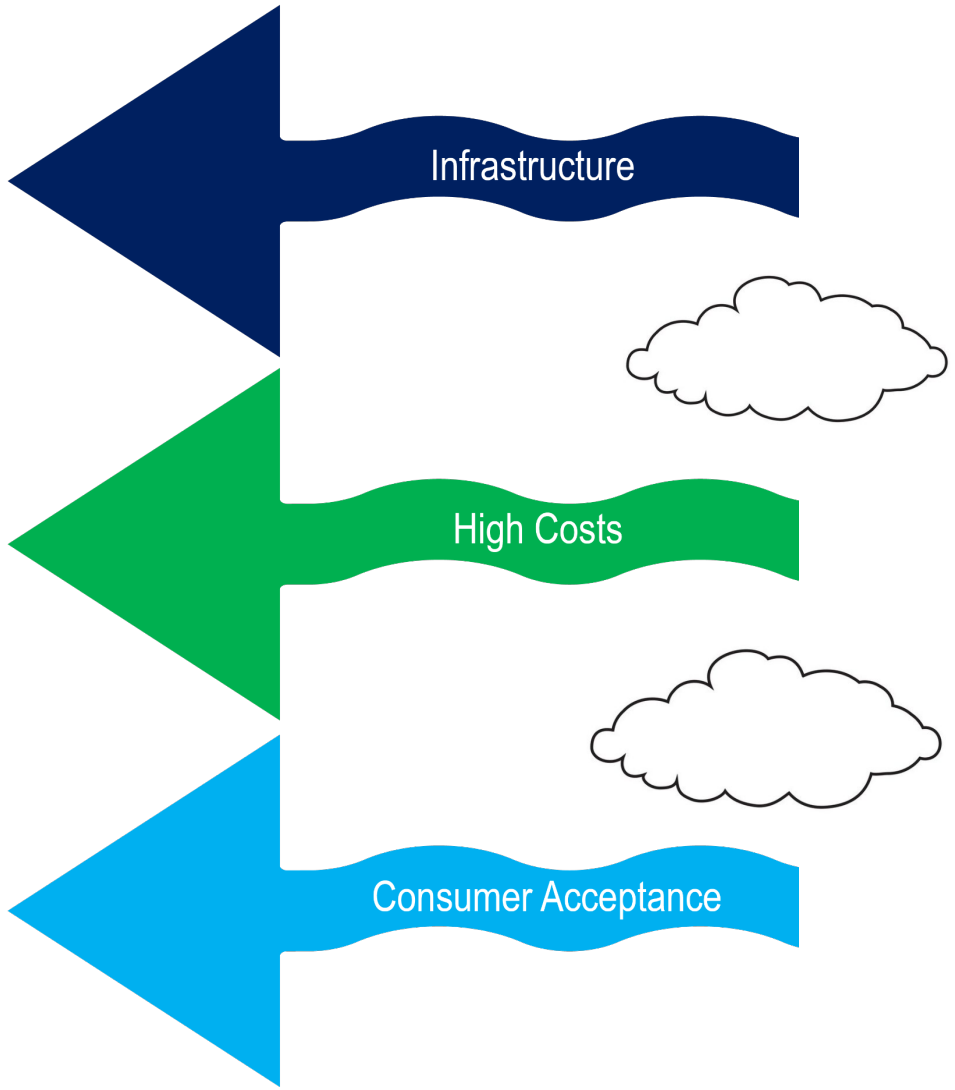
National Security

This is key to energy independence and getting off our reliance on foreign oil

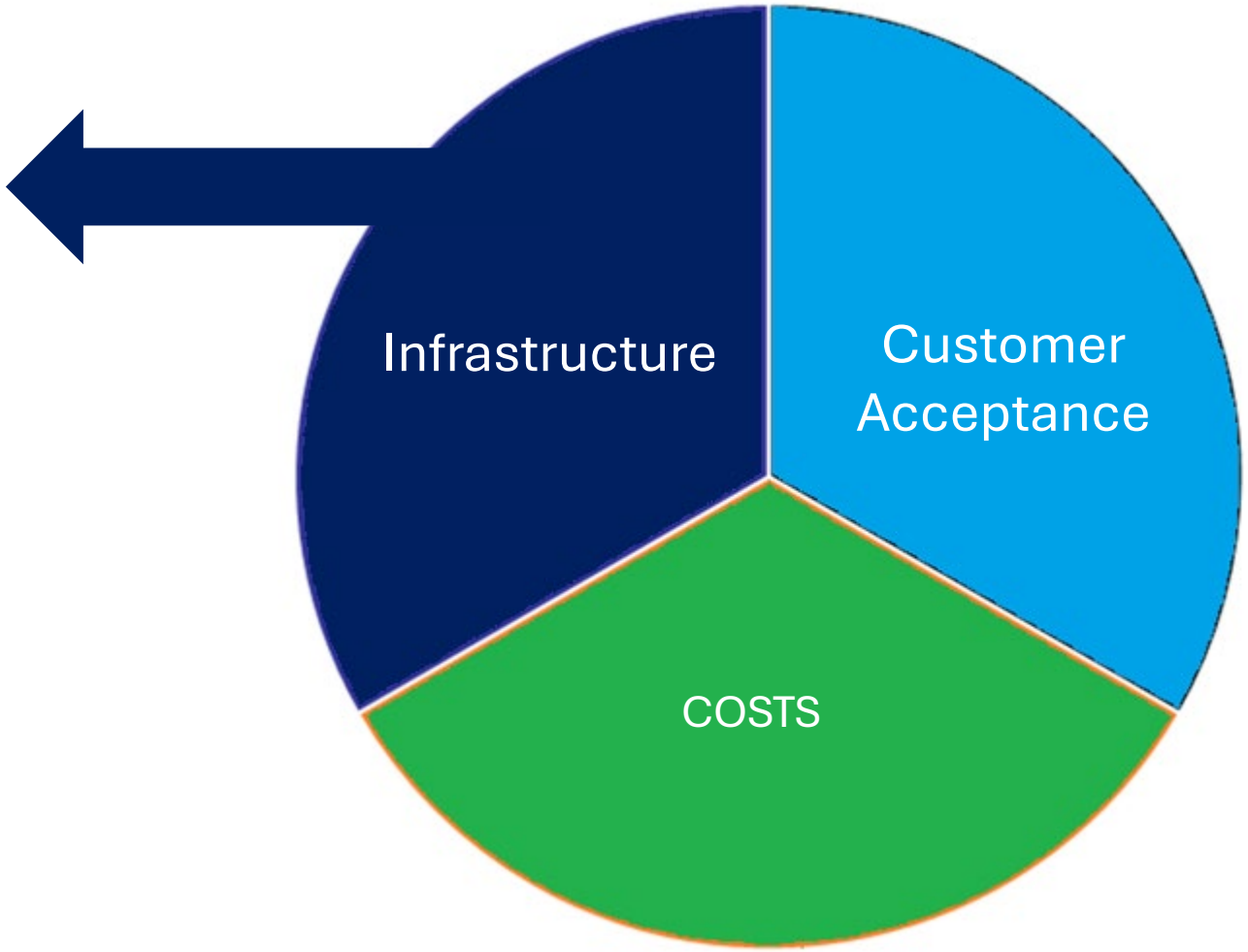
Nations that develop and adopt innovative technologies, will shape supply chains, define global standards, and reshape the international marketplace.

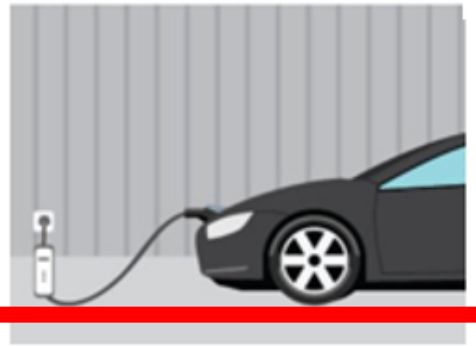
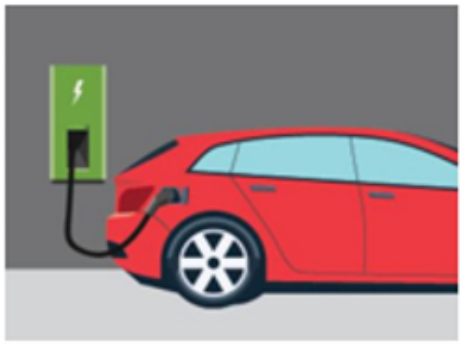
This is not just about the future of the auto industry in the U.S. – it is about the nation's global competitiveness and economic security

Headwinds to Electrification



- This is the #1 Concern our dealers and marketing team hear from would be consumers
- Customers demand a convenient, easy to use charging network across the country
- They are looking for something that rivals the existing petroleum network
  - We need to educate them that this isn't what they need.



		Range	Application
Level 1		**3 to 6** Miles of range/hour	**Last resort for Residential & Workplace charging**
Level 2		**20 to 40** Miles of range/hour	• **Residential** • **Workplace** • **Public** • **Small Fleets**
Level 3 (Direct Current Fast Charge, DCFC)		**250 to 500** Miles of range/hour	• **Highways and Transportation Corridors,** • **City Centers** • **Transit Hubs** • **Large Fleets**

Level 2 chargers

- These are critical as >80% of charging happens at home or work via Level two chargers
- Maintaining that ratio is critical for grid resiliency
- Soon EV charging will be seen as a necessity, in much the way broadband access is today

Level 3 chargers

- DC Fast chargers need to be placed strategically!!

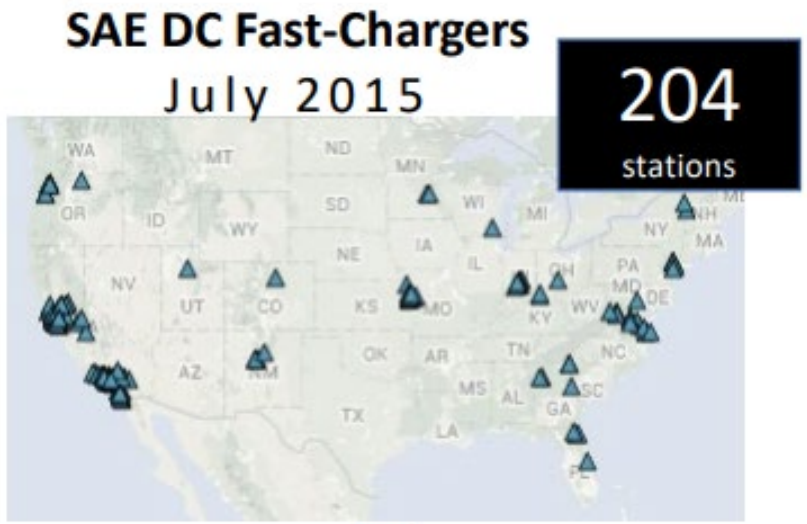
- Along major highways & in city centers

- In places where customers will want to spend 20-30 mins:
  - Restrooms
  - Food service
  - Retail operations; and
  - Additional amenities

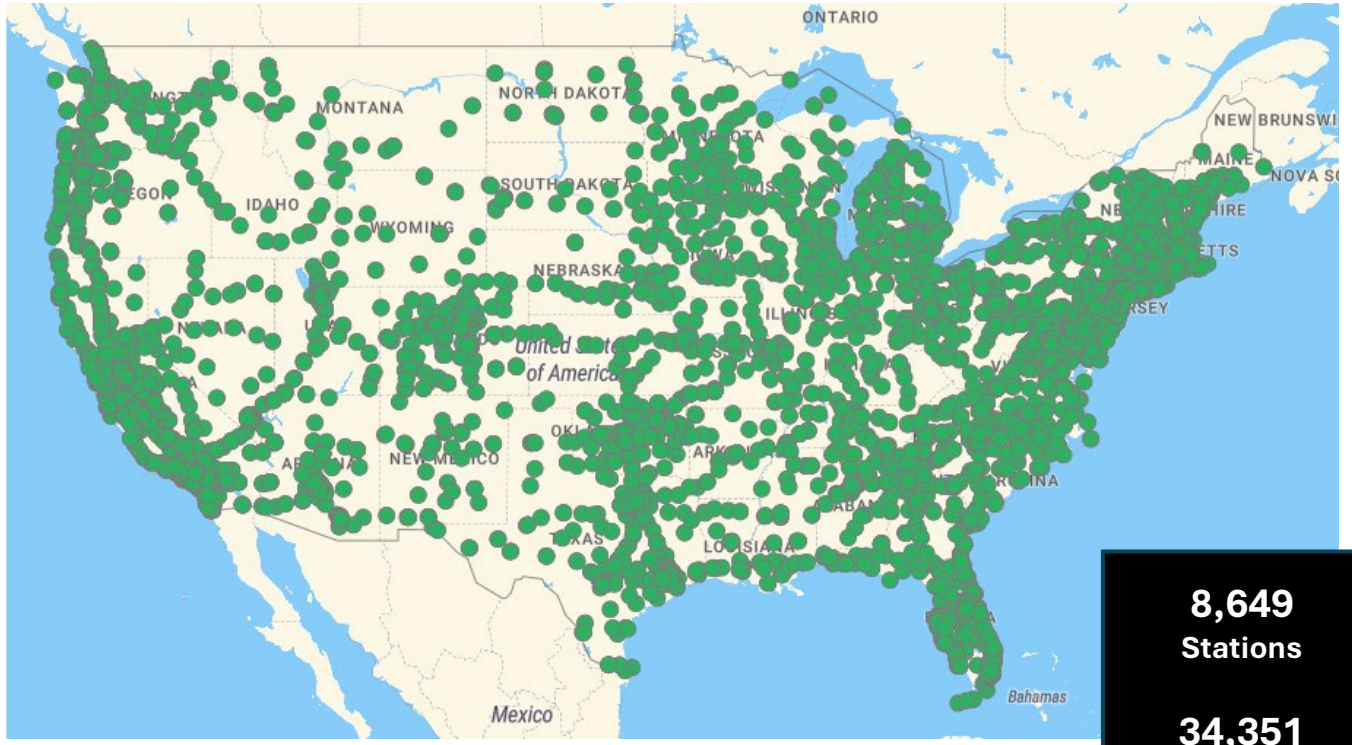
We also need to change how customers fundamentally think about “filling up”

EV Charging Infrastructure Growth (2015 – 2024)

DC Fast-Chargers (July 2015)



DC Fast-Chargers (March 2024)



8,649
Stations

34,351
Charging Ports

DC Fast Charging infrastructure has grown dramatically over the past several years, but we have a long way to go as EV's become a larger % of the domestic fleet

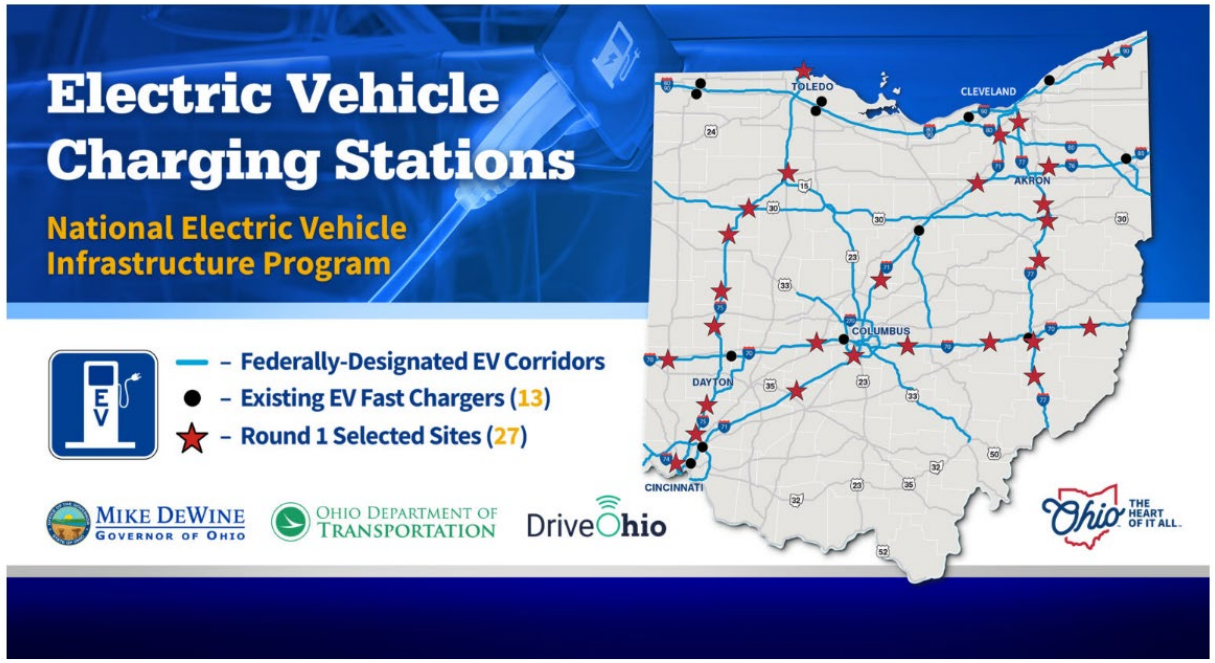
Level 3 – Federal investment

- The Federal Bipartisan Infrastructure Law provides states with **$7.5 billion** to help make EV charging more accessible to all Americans for local and long-distance trips.

- Every state submitted a plan to deploy these funds
  - Ohio became the first state to announce the locations of their first round of fast charger locations
    - Built along federally designated EV Corridors and major highways
    - Locations where customers will spend some time

- **The goal is to build 500,000 new DC Fast chargers by 2030.**

- **Ensure a convenient, affordable, reliable, and equitable charging experience for all users.**



EV charging station sites, graphic courtesy of the Governor's office.

Level 3 – Private Investment

- Seven major automakers have agreed to create an unprecedented new joint venture that will significantly expand access to high-powered charging in North America

- **Aiming to install at least 30,000 high-powered charge points in strategic urban and highway locations to ensure customers can charge whenever and wherever they need**

- First stations scheduled to come online in Summer of 2024

How can States Help

- Policies that will encourage public and private investment in charging infrastructure
  - Providing direct funding
  - Building chargers at schools and other government buildings
  - Tax Credits
  - Streamlining regulatory / zoning hurdles

- AFAI Model building code legislation
  - Mandates that new construction be “EV Ready”

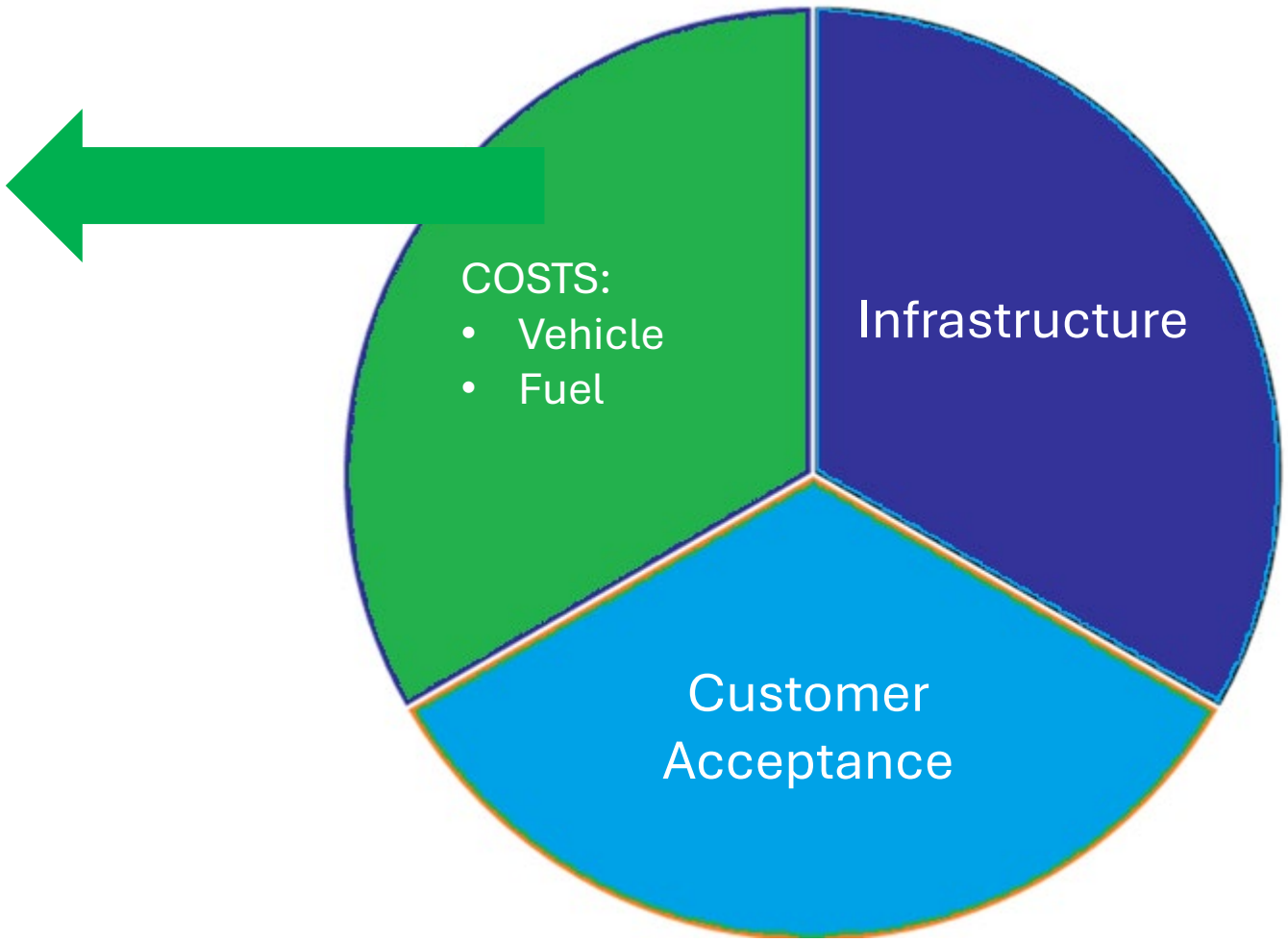
- “Right to Charge” legislation

Costs

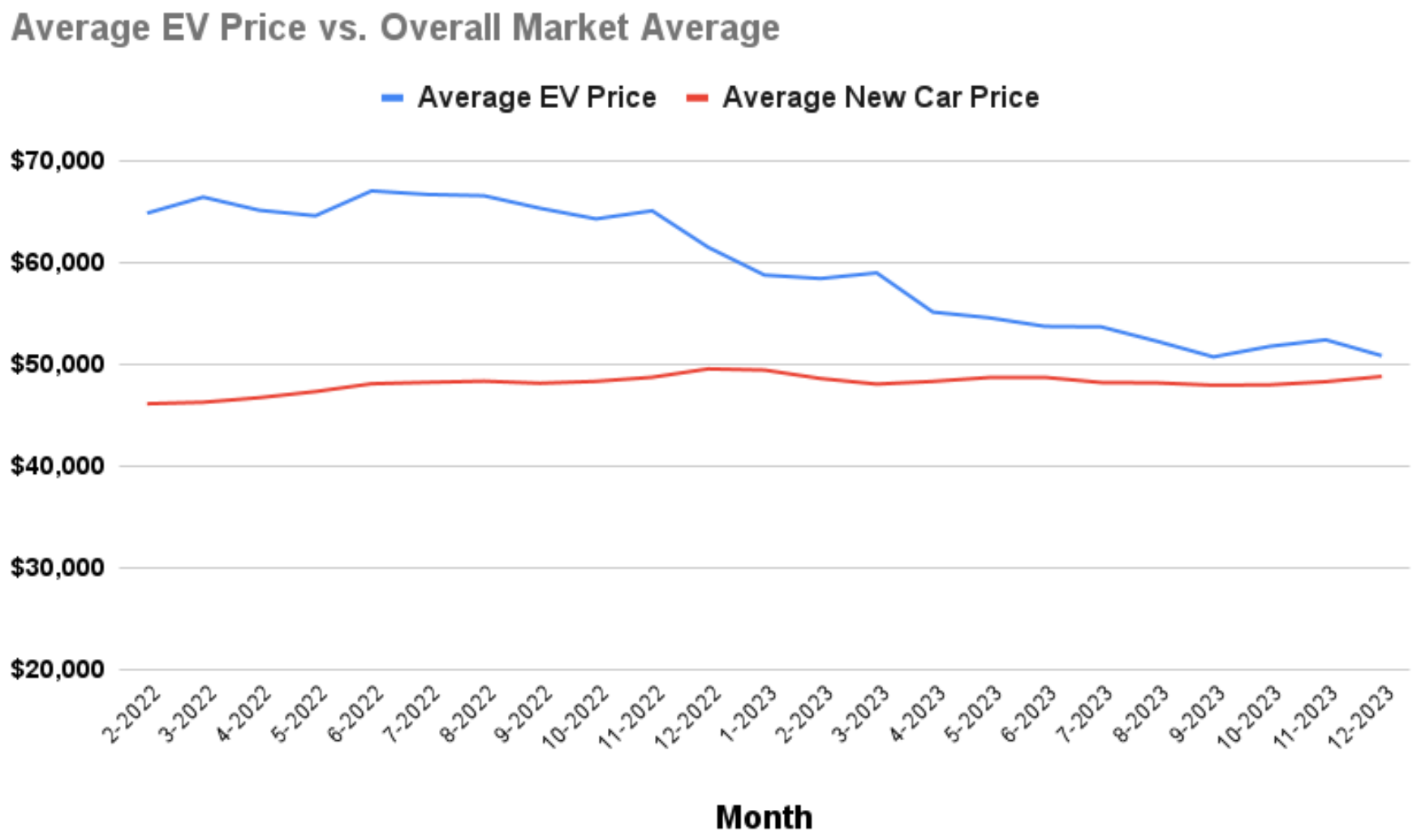
EV's are currently more expensive than ICE powered cars

- Current customers are mostly affluent single-family homeowners
- We need a broader cross-section of society to participate as this transition progresses

Today's new cars are tomorrow's used cars!

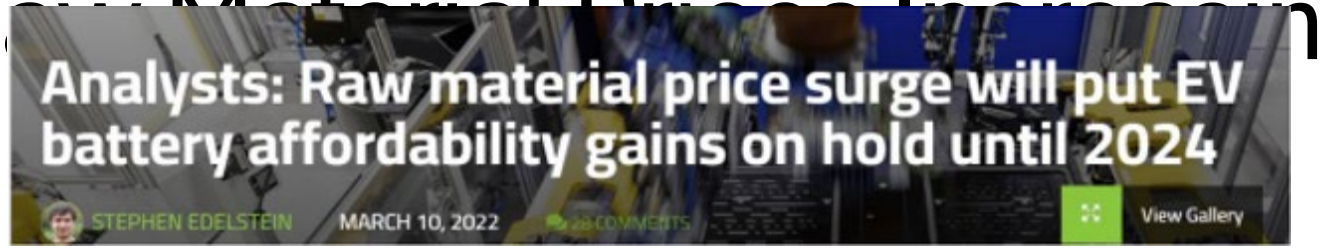


Kelly



The Gap in price between EVs and I.C.E. powered vehicles is closing, but is still significant and will likely last a while for two reasons

EV Battery Raw Material Prices Increasing



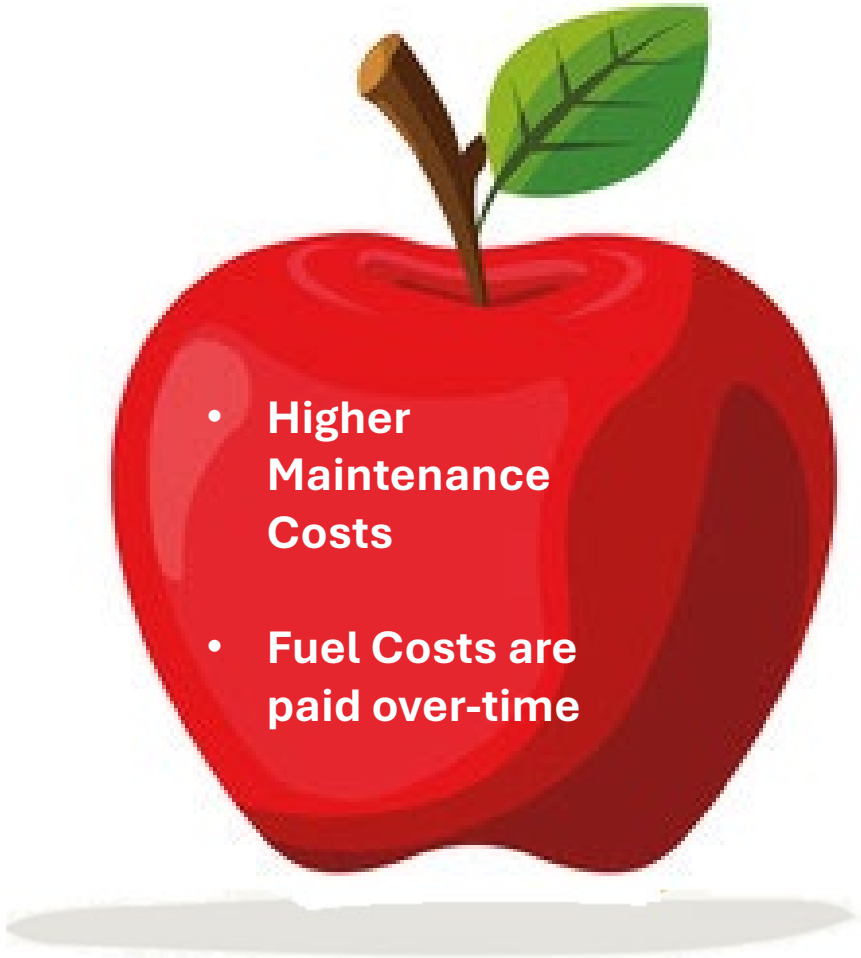
Honda Joint Venture with LG Energy Solution

- **Production Start:** Fall of 2025
- **Square Footage:** 2+ million sq ft
- **Capacity:** ~40 GWh/year
- **Capital Investment:** $4.4 billion
- **Future Employment:** 2,200 associates

Honda is investing BILLIONS in new factories, factory retooling, and upskilling our current workforce

ental cost differe

Traditional I.C.E Vehicles



Electric Vehicles

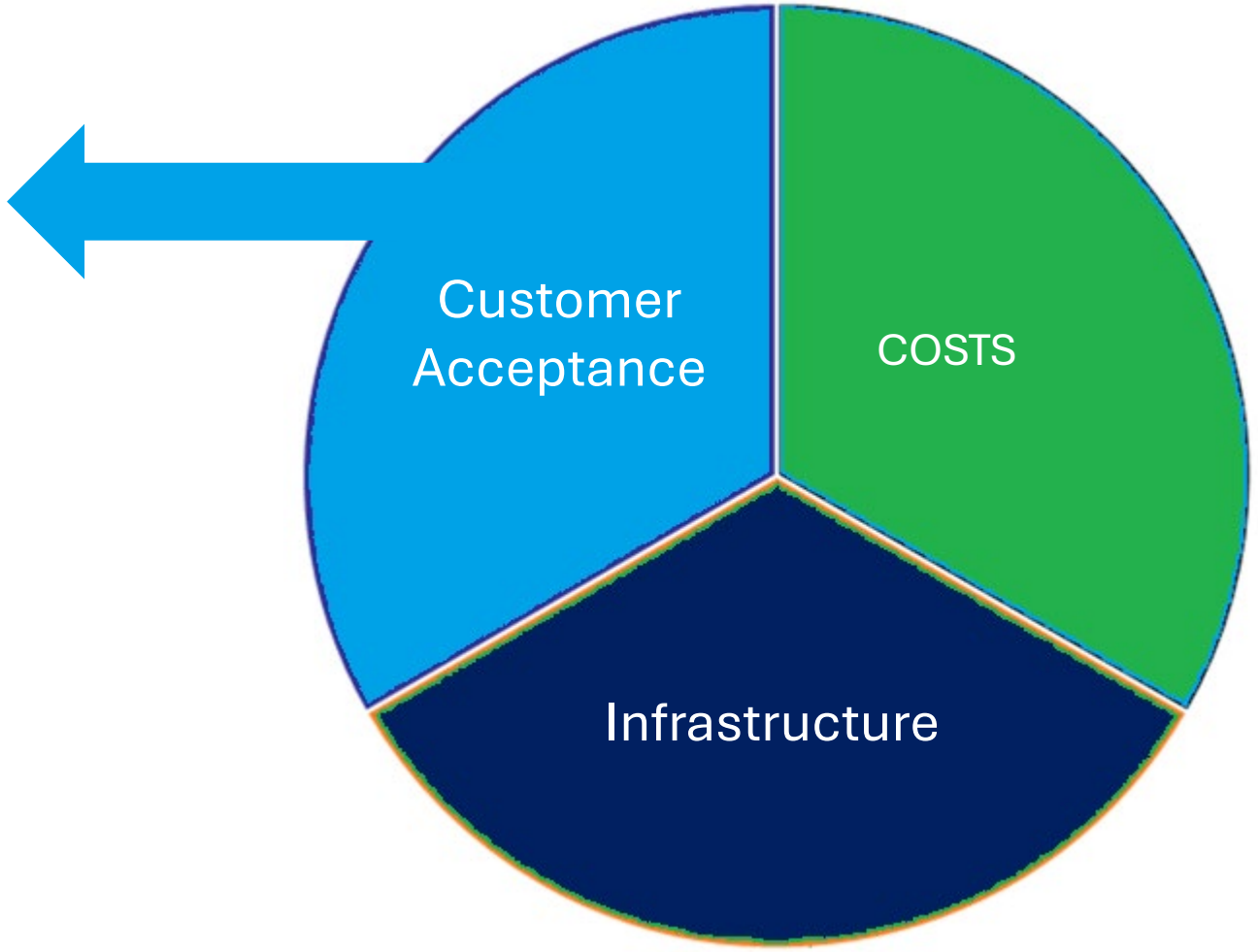
How can States Help

- With fair and non-discriminatory EV incentives
  - Not favoring certain OEMs
  - Not favoring certain buyers
    - The way to achieve equity over time is to build a robust used EV market
    - Early adopters are helping fund the R&D and infrastructure costs

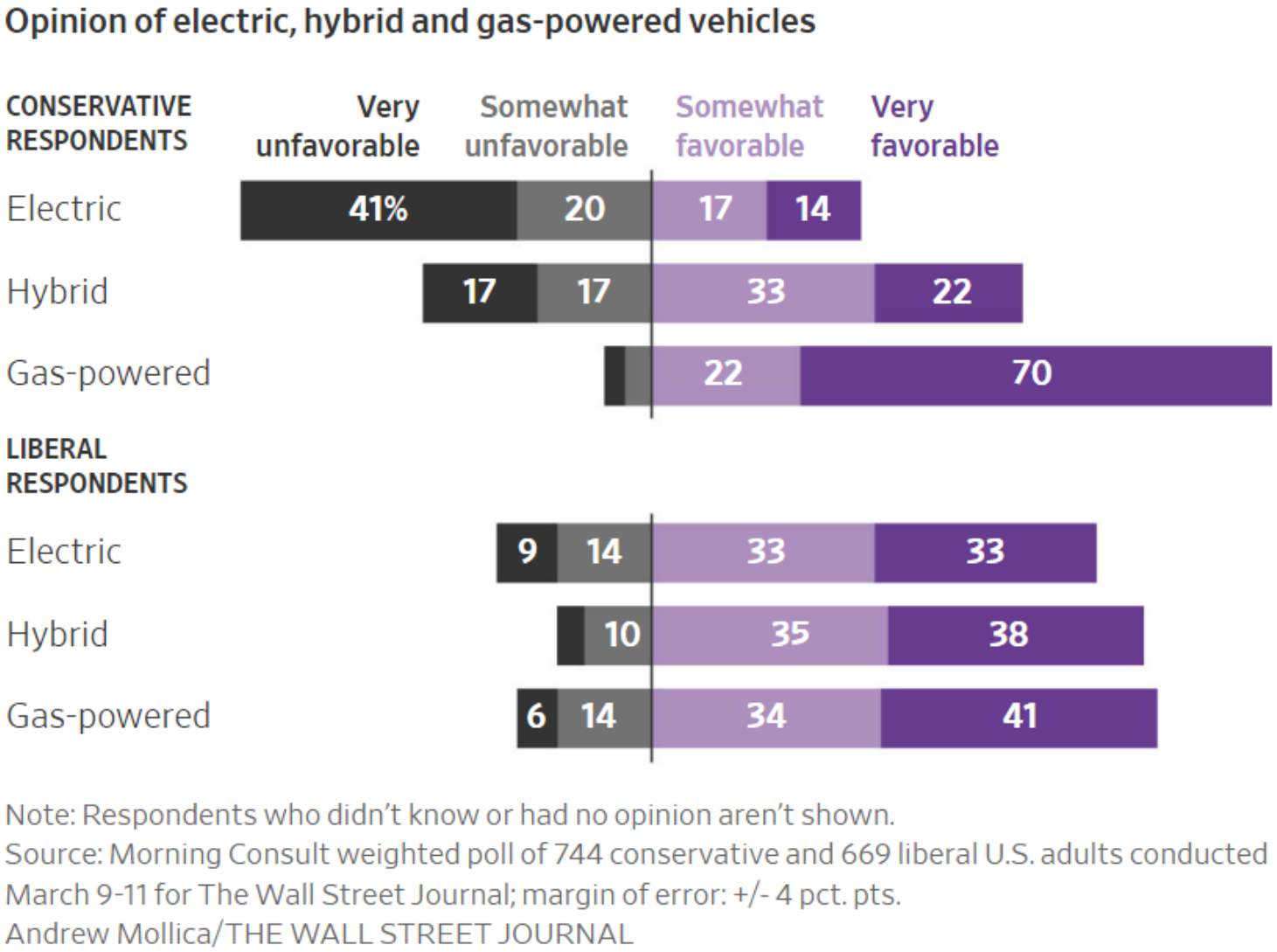
- Fair approach to Road funding
  - Rates should be equivalent to gas taxes
    - People should not be double taxed (KwH & Registration Fees)
    - People should have the opportunity to pay over-time, or have the fee waived year one*

Customer Acceptance

- Current customers are mostly affluent single-family homeowners
- We need a broader cross-section of society to participate as this transition progresses
- Addressing cost and infrastructure concerns will go a long way to winning customer acceptance
- We understand that this issue has become increasingly politicized



Electrification: A Growing Political Divide



Note: Respondents who didn't know or had no opinion aren't shown.
Source: Morning Consult weighted poll of 744 conservative and 669 liberal U.S. adults conducted March 9-11 for The Wall Street Journal; margin of error: +/- 4 pct. pts.
Andrew Mollica/THE WALL STREET JOURNAL

THE WALL STREET JOURNAL.

BUSINESS | AUTOS

Another Roadblock to the EV Transition: Personal Politics

As automakers look to push their electric vehicles, some consumers are resisting for political reasons

By Mike Colias Follow

May 27, 2024 5:30 am ET

How can States Help

- These products sell themselves!!
  - We want to “demystify” EV’s and increase exposure
    - Ride & Drives
- State and local fleets are a great way to expose people to these cars
  - A show of confidence from government
  - Long term benefits to government in terms of fuel and maintenance
- Help us lower the temperature politicly
  - Help dispel mmisconceptions about Chinese benefits

Final Thoughts

- The auto industry is committed to electrification
- The industry and the country need this transition to be successful
- Government and industry are going to need to work together to make it successful

Thank You!

Q&A for Legislator Attendees

Please step up to the standing microphones in the room.
Please keep your remarks in the form of a question.