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FLORIDA AUTOMATED VEHICLES

DEFINING THE FUTURE OF MOBILITY

The Leading End-to-end EV Charging & Energy Management Solution



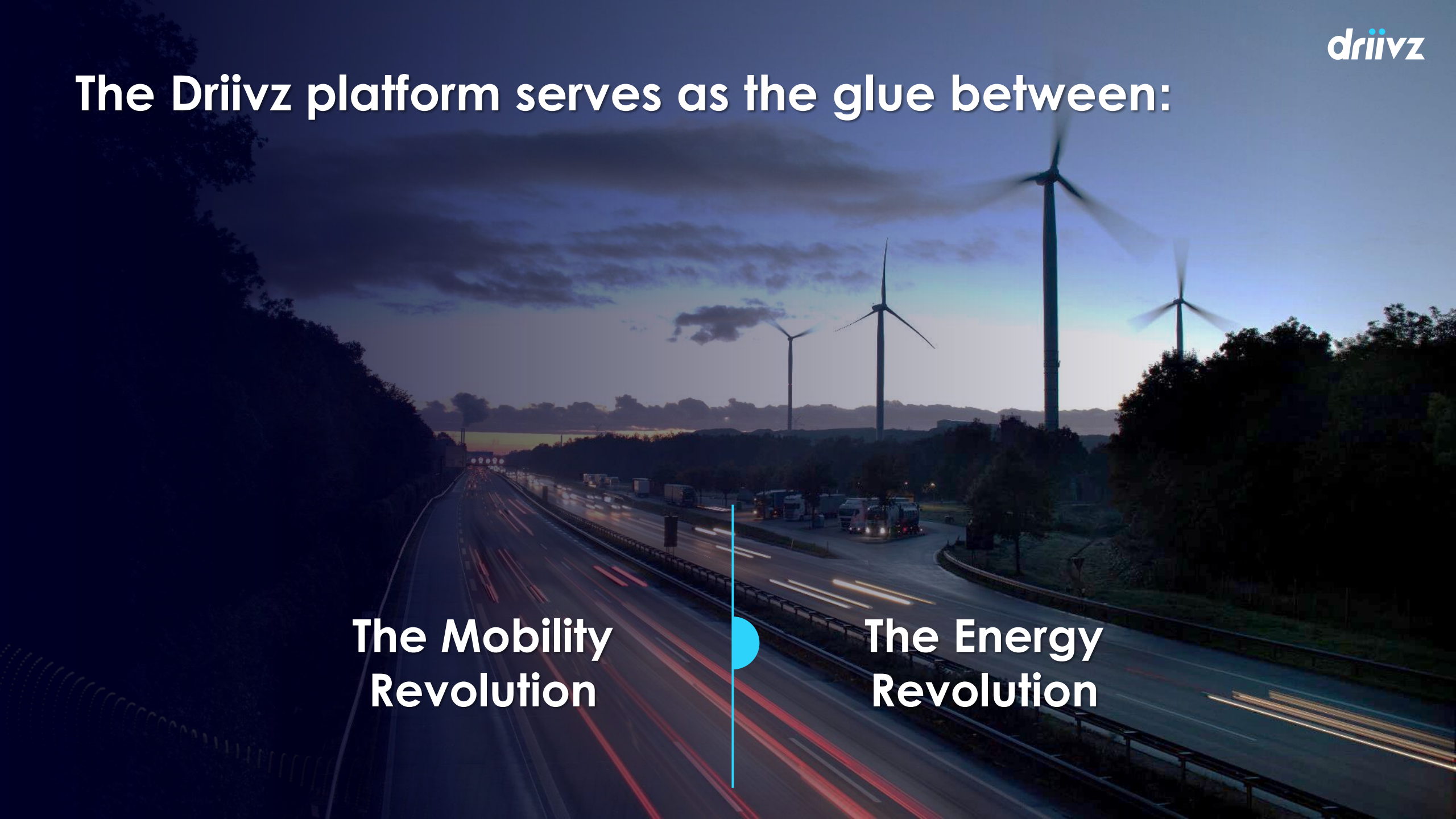
*Driving Beyond: The Future
of Israeli Startups in Florida*

Eran Rozenfeld
VP North America, Driivz
September, 2023

The Driivz platform serves as the glue between:

The Mobility
Revolution

The Energy
Revolution



DRIIVZ VISION

driivz

Recharge the planet for generations to come By driving the transformation of EVs into **'battery storage on wheels'**



DRIVZ AT A GLANCE

- The operating system for global EV charging
- Modular end-to-end architecture
- Future proof platform in a world of disruption and change
- Designed for large scale EV charging network operators
- Significantly reduce operational costs and increase customer satisfaction

 **x10,000s**
managed plugs

 **x100,000s**
roamed plugs

 Used by over
1M+ drivers

 **x100s millions**
transactions

 **~1,000** different
charger types

 **30 countries**
worldwide

Major EV charging networks such as:






Pure energy from Statkraft






DRIVING CHANGE













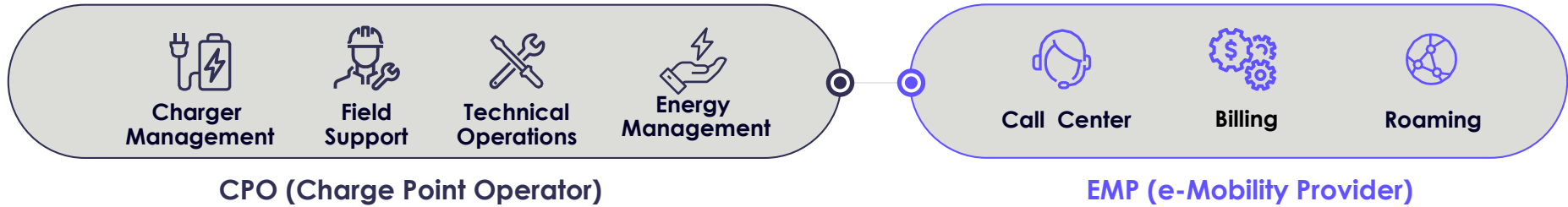




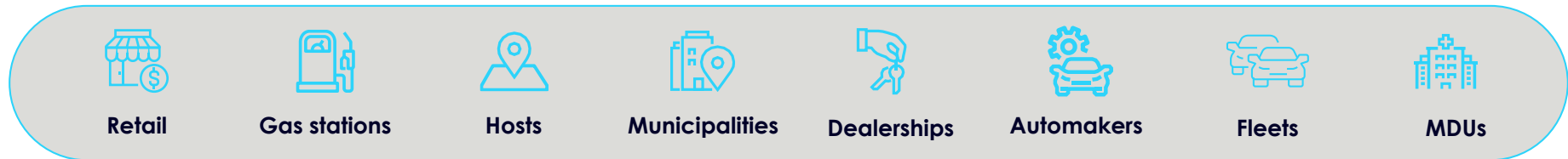


COMPLEXITY OF THE EV CHARGING ECOSYSTEM

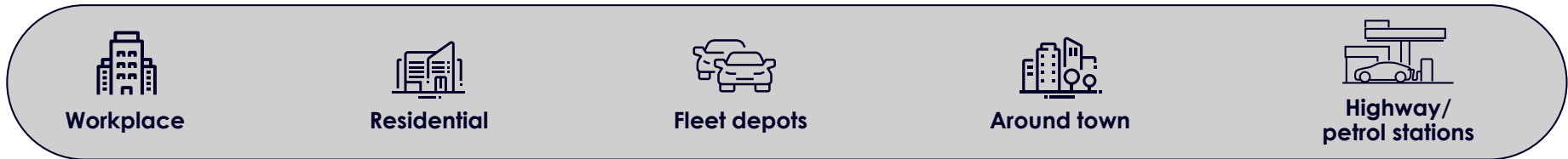
Operations



Vertical business solutions



Drivers' charging experience



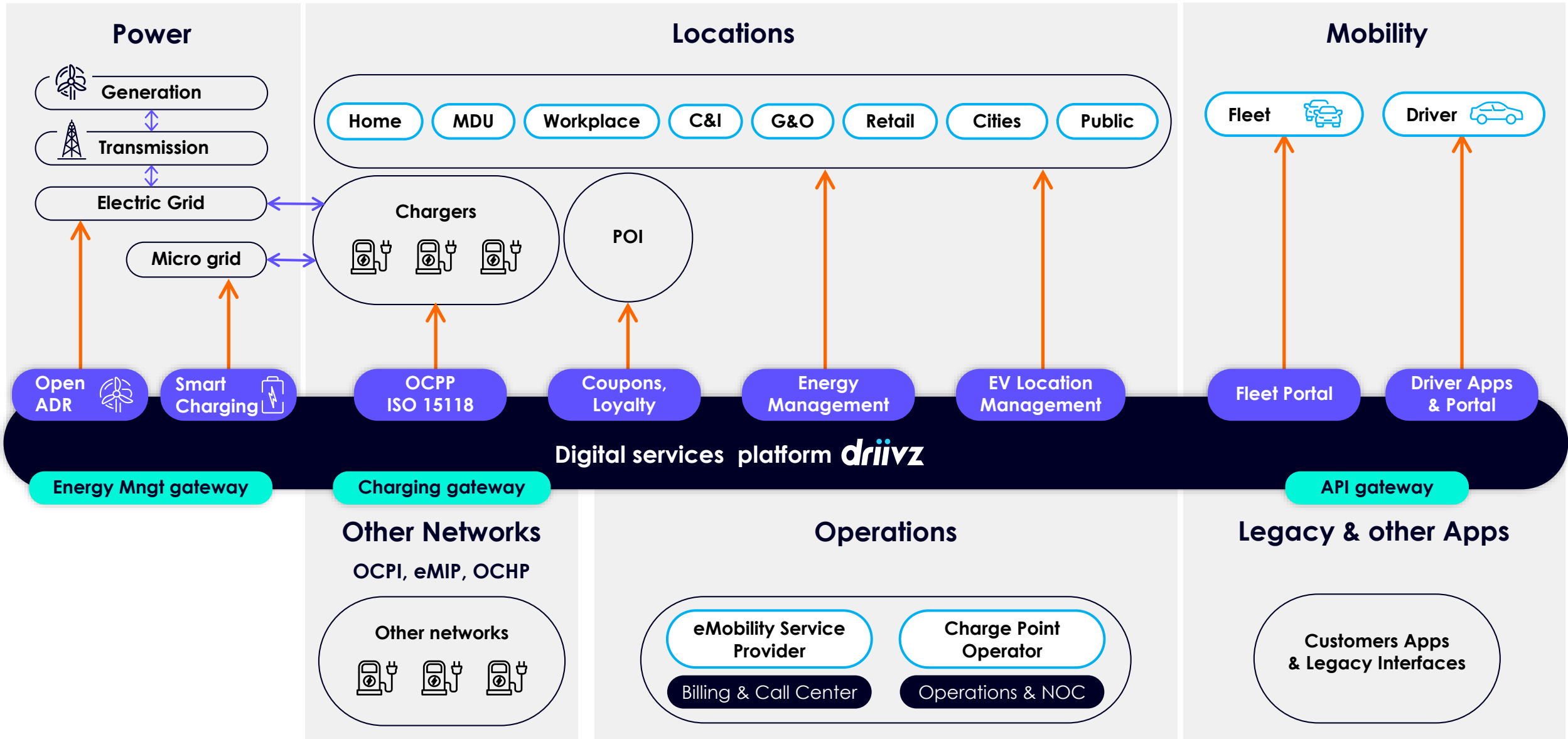
EV energy management



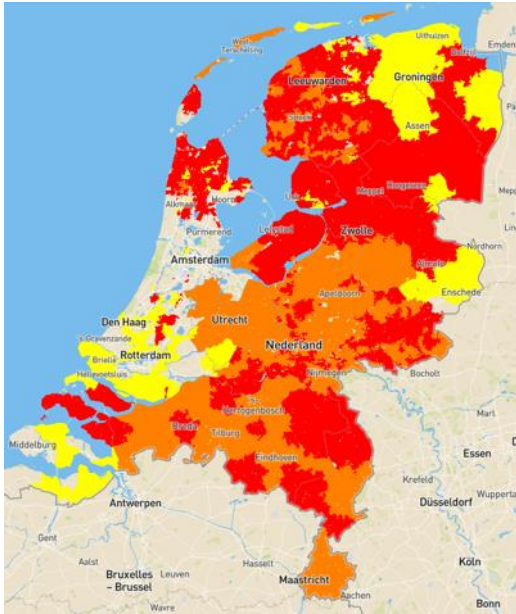
Assets



THE ROLE OF A DIGITAL SERVICES PLATFORM

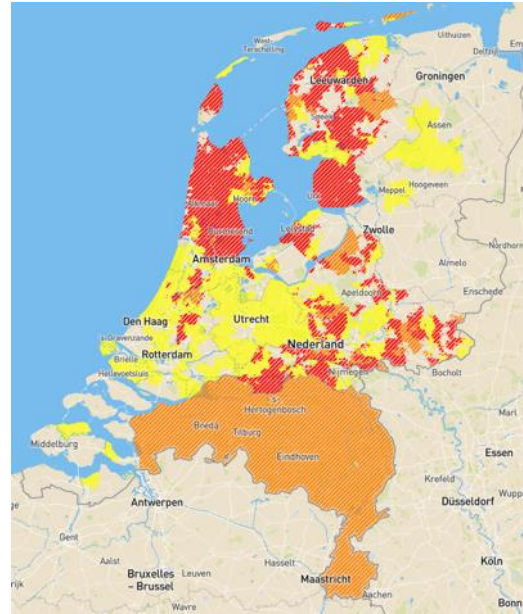


NETHERLAND GRID IS PUSHED TO ITS LIMIT



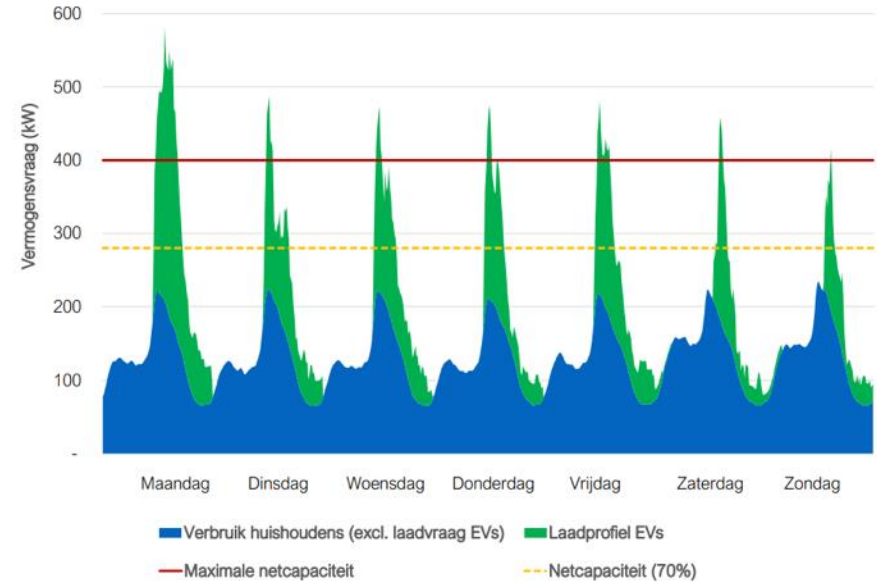
High Voltage congestion

Red: structural congestion, new requests for transport are refused



High Voltage consumption of renewables

Red: too much energy is generated and cannot be used



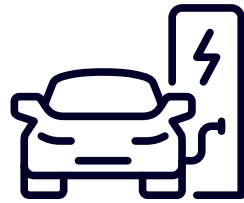
EV charging causes peak demand on Low Voltage grid

Switching the capacity demand to off-peak hours can solve this problem

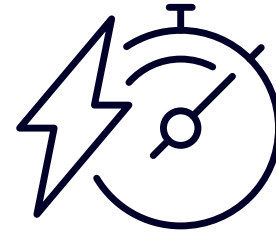
● ● HOW CAN THE GRID COPE WITH THE EXPONENTIAL GROWTH OF EVS?



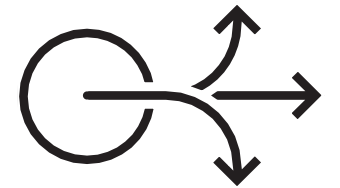
Site level power limitations



Vehicle-to-grid opportunities (V2G)



Spot pricing /
Time of Use
(TOU)



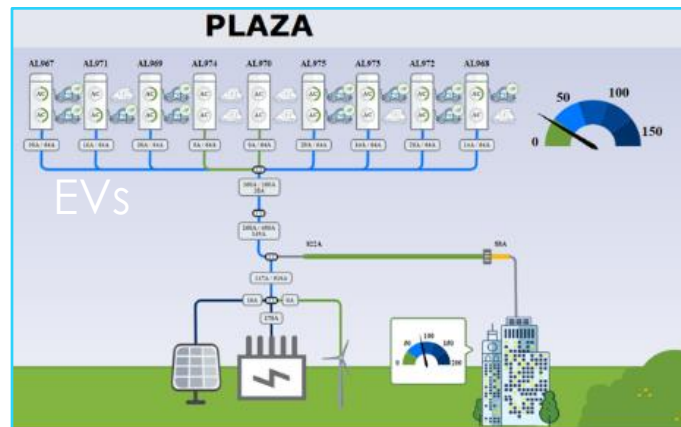
The flexibility markets

DEALING WITH LIMITATIONS AND COSTS AT SITE LEVELS

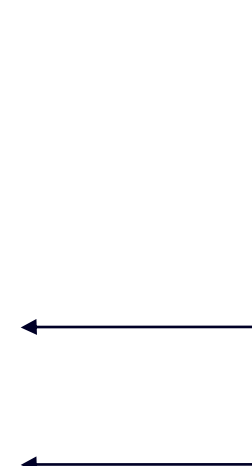
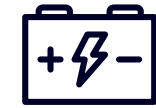
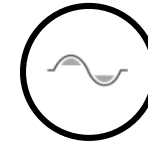
Campus/Smart city



Parking lot



EVs



DEALING WITH LIMITATIONS AND COSTS AT SITE LEVELS

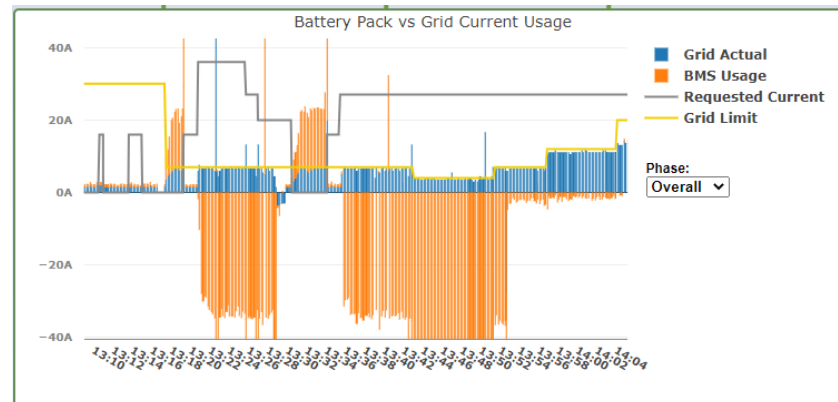
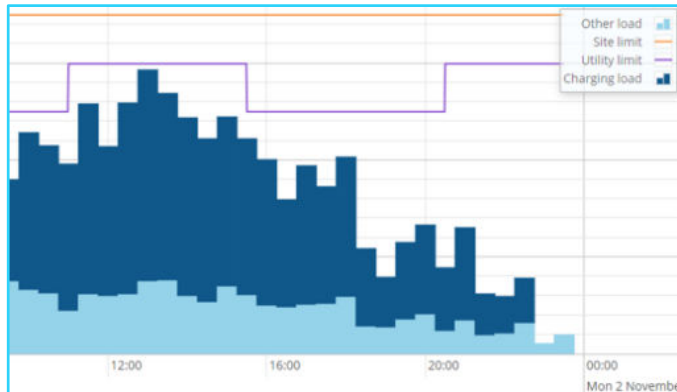
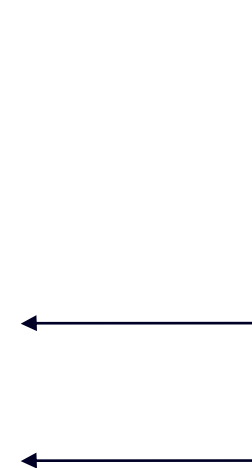
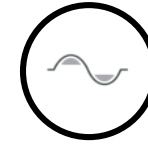
Campus/Smart city



Parking lot



EVs



Thank You !

Eran Rozenfeld
VP North America

516-760-1585
Eran.Rozenfeld@driivz.com



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FLORIDA AUTOMATED VEHICLES

DEFINING THE FUTURE OF MOBILITY

Florida Highway Funding and EVs

Presentation to 2023 FAV Summit

Bruce Edelston

**Chair, Drive Electric Florida Policy
Committee**

and

**Senior Advisor, Alliance for Transportation
Electrification**

September 8, 2023



Introduction

Drive Electric Florida

- Membership organization of charging companies, utilities, NGOs, and others doing business in Florida
- Mission is to support and accelerate the adoption of EVs in Florida by engaging and educating the public, businesses, and policy-makers; facilitating collaboration; and supporting EV-friendly policy and programs

Alliance for Transportation Electrification

- National trade organization representing automakers, utilities, charging companies and others
- We are a “big-tent” organization advocating primarily at the state level for increased infrastructure, a strong utility role, reasonable ratemaking, and open standards

EVs are Not the Problem

- Cumulative motor fuel tax revenue loss of \$288 million between 2019 and 2030 is expected in Florida
- Losses are driven primarily by significant improvements to fuel economy (28% improvement between 2019 and 2030) and slower growth in vehicle miles traveled
- Of the forecasted revenue losses, only \$37 million are due to EVs

Source: Alliance for Transportation Electrification and Drive Electric Florida, "Florida's Highway Funding Gap: Fuel Tax Revenue to Decline \$288 million Through 2030"



The Impact of EV Fees

- Several bills have been introduced in the Florida Legislature to impose varying fees on EVs – through additional annual registration charges
- FDOT's Electric Vehicle Master Plan predicted that under a moderate scenario of EV growth, potential losses would be 2 percent by 2030 and 11 percent by 2040
- **But having said that EVs are not the problem, EVs should pay their fair share of taxes for the use of Florida roads**
- Such taxes should not be punitive, but rather ...

Our Position on EV Taxes

**...should be developed in
a way that does not
exceed what a
comparable gas or diesel
powered vehicle would
pay in state fuel taxes**



Options for EV Taxes or Fees



**Assess an additional
annual registration
fee for EVs**



**Assess a tax on kWh
of sales from EV
charging stations**

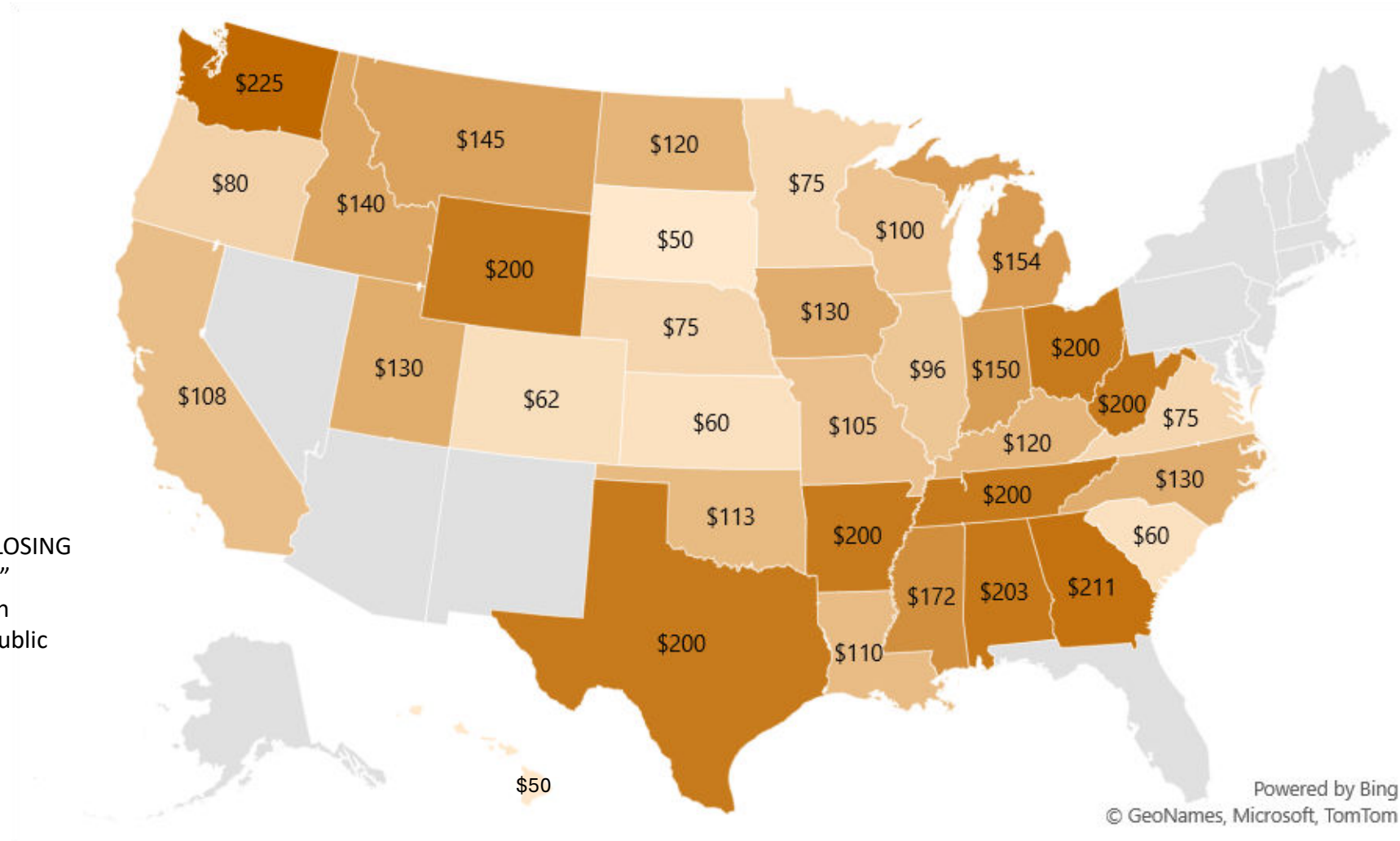


Tax on VMTs

What are Other States Doing?

- Unfortunately, an increasing number of states are implementing EV taxes through annual registration fees and kWh taxes that exceed what a "comparable" vehicle pays
- Most states are adopting additional registration charges
- A few states, including Georgia have also adopted a per kWh tax although how it may be implemented remains unclear
- Washington, Oregon and Minnesota have adopted VMT pilot programs to test the concept
- 31 states have some type of fee ranging from \$50 to \$211

EV Fees by State (2023)



Source: Nate Graham. "CLOSING THE ROAD-FUNDING GAP" Alliance for Transportation Electrification and Atlas Public Policy, August 2023.

What Makes Sense for Florida

- Drive Electric Florida commissioned the Center for Urban Transportation Research at the University of South Florida to develop a “comparable” estimate of gas taxes that EVs should pay
- Study was completed in March 2023
- Author was Alexander Kolpakov

CUTR Study

- Task 1: Review of State EV Fees and Approaches to Reduce Gas Tax Shortfalls on State Transportation Revenues
- Task 2: Assess Current Impacts of Electric Vehicles on Florida's Transportation Revenue
- Task 3: Recommendations for a Florida Electric Vehicle Annual Fee

What is “Fair” and “Comparable?”

$$\text{State EV Tax} =$$
$$(\text{Avg. Annual VMT} / \text{“Comparable” MPG}) \times \text{State Gas Tax Rate (\$/gallon)}$$

Which Denominator Makes the Most Sense?

- Average Vehicles on the Road = 25 MPG
- Average New Vehicles Sold (CAFE) = 41 MPG
- EV Miles Per Gallon Equivalent = 117 MPGe

“The use of CAFE standards can be justified by the fact that EVs are typically newer models and have better-than-average fuel efficiency, which is more comparable to the newest ICE models rather than the average vehicle on the road”

University of South Florida, Center for Urban Transportation Research



CUTR Study Results

- Since state officials have no control over the amount of fuel taxes distributed to the state from Federal Highway Trust Fund, it is suggested to base potential EV fee only on the amount of gas taxes that are collected and kept within the state trust fund. This would include state and local taxes and exclude federal gas taxes
- **A comparable amount of state taxes to be collected from EVs would be in the range of \$125 - \$146.** This is based on a comparable amount in state taxes of \$89 and local taxes which range from \$36 - \$57

Per kWh Tax at Commercial Charging Stations

- These taxes disproportionately target EV drivers who rely on public or shared charging stations as opposed to recharging at residential locations.
- Additionally, concerns have been raised over methods for implementing an electric power excise tax, how taxes would be collected, and the distribution of revenues – significant administrative costs
- May eliminate free charging that many businesses offer
- Are chargers at MFDs commercial or residential?
- Double taxation if both registration fee and per kWh taxes imposed

Conclusions



- Roads have been underfunded for years due to inflation, stagnant gas tax rates, increasing fuel economy, and slow VMT growth
- Road-funding policies should focus on ensuring that all drivers equitably and sustainably fund roads. EV drivers will continue to contribute only marginally to the funding gap for some time
- In the short-term we believe an additional registration fee of \$125-\$146 annually (including local option) is fair and reasonable
- Longer term solutions that put all vehicles on an equal footing should continue to be explored

Contact Information

Bruce Edelston
Senior Advisor
Alliance for Transportation
Electrification
bruce@evtransportationalliance.org
404-374-9812

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