

# Georgia Joint Study Committee of Electrification on Transportation

# **EV Infrastructure Development Considerations**

October 3, 2022

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#### The U.S. comprised 15% of electric vehicle sales globally in 2019, however infrastructure concerns in the U.S. persist



U.S. Annual Passenger Vehicle Sales by Drivetrain

#### BEV Targets

- While there is no Federal target in terms of BEV sales, numerous states have enacted legislation for zeroemission vehicle ("ZEV") targets by 2025 and 2050:
  - <u>2025</u>: 3.3 million ZEVs in 11 states <sup>(1)</sup>
  - <u>2050</u>: All passenger vehicle sales to be ZEVs in 10 states <sup>(2)</sup>

#### Inflation Reduction Act of 2022

- All EVs assembled in the US and put in service after December 31,2022 will be eligible for a \$7,500 federal tax credit
  - EVs at least 2 years old are eligible for a tax credit up to \$4,000
- Tax credits are extended for alternative fuel refueling property (EV Charging) placed in service before December 31, 2032 and removes the per location limitation
- The previous phase-out policy for companies that have produced over 200,000 EVs has been removed

According to a Deloitte Global Auto Consumer Study, U.S. consumers are now most concerned about the lack of EV charging infrastructure than they were in 2018 about cost/price

# In your opinion, what is the greatest concern regarding all battery-powered electric vehicles?

	2018	2020
Driving range	24%	25%
Cost/price premium	26%	18%
Time required to charge	10%	14%
Lack of electric vehicle charging infrastructure	22%	29%
Safety concerns with battery technology	8%	13%
Others	10%	1%
Total	100%	100%
Sample size	1,513	3,006

Source: IEA Global EV Outlook (2020), Deloitte Global Auto Consumer Study, Bloomberg New Energy Finance.

- 1) The California Air Resources Board (CARB) manages the Zero-Emission Program (ZEP) which includes PHEV, BEV and FCEV. Ten other states have adopted the program: Colorado, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island and Vermont.
- 2) As part of ZEP Alliance membership: California, Connecticut, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont and Washington.



#### EOS' First Installation

#### Location Details

- Installation Date: 10/13/2021
- Address: Peachtree City, Georgia
- Location: BP Stevens Entry
- Location Partner: BP





# EOS' first Charge Station was deployed in Peachtree City, Georgia.

# \$5M investment in GA in 2022.

- As of today, 28 locations with EOS Aurora Charge Stations deployed in Georgia.
- A minimum of 18 additional Stations are expected to be installed in Georgia before year end.

# Additional key connections to the State

- Manufacturer of displays LG-MRI based in Alpharetta.
- Lease of staging area in Stone Mountain.

### EOS market installation

- Georgia, Tennessee, Texas, Alabama
- Working toward North Carolina, South Carolina, Florida
- Arizona and New Jersey as first stages in new regions
- We started prepping for Georgia in Q1 of 2021 and installations in October of 2021.
  - Installed at 10 locations in the last two months.
  - Ramp up time took almost two years.
- Time is not on the side of the commercial enterprise
  - The accelerated, exponential growth of the EV industry requires an even faster pace of infrastructure development
  - Things are getting better but we hear similar messaging from most cities "we are working on a plan so please check back in six months to a year.
    - Translation "go someplace else"
- Challenges that drive product and business model changes
  - Administrative
  - Business



#### Extending infrastructure from the current highway programs into the communities.

- Building beyond the NEVI program focus on electrifying the highways.
- Establishing programs that are inclusive of economic development, LMI (low-middle income), and multi-tenant housing.
- Ensuring safety and accessibility for consumers.
  - Implementation of consistent requirements regarding ADA compliance.
  - Security integration and site placement requirements. Lighting and amenities included.

#### Standardizing the regulatory framework for EV chargers to increase speed to market.

- Currently, most jurisdictions have no EV permit and struggle to classify the various types of charging stations that exist.
- Many of these solutions have secondary sources like digital out of home advertising, mobile integration, and data collection revenue to help subsidize the installation and bridge the gap until self-sustaining revenues can be attained in EV charging. These also provide enhanced customer functionality and potential commercial subsidization for the driver as well.
- Future phases of development and expansion to avoid re-permitting to add additional chargers.

#### Effectively accounting for lost gas tax revenues.

- The financial transaction with EV drivers is drastically different from fossil fuels.
- For EVs to facilitate the collection of this replacement revenue the technical solution needs to be connected, interconnected, and data rich.
- Providing public support and funding in ways that incentivize the right behavior.
  - Public investment focus on foundational infrastructure needs rather than commodity and consumable resources.
  - Commercial industry focus on capital investment in EV charging hardware.
  - Follow the right components of the federal guidelines regarding networking, standard compliance, accessibility, payment processing.
  - This needs to be interoperable, safe, and easy for the consumer.

# THE EOS Approach



## Development of a multi-value, edge technology platform

- Consists of an integrated suite of technologies that support electric vehicle charging, enhanced user management capabilities, and brings green energy to the site where possible.
- Our solutions are smart, connected, and allow for interoperability between systems.

## Focused on the technology behind the EV equipment

- Vendor agnostic among connected and standard-compliant hardware solutions.
- Facilitates effective management of supply chain risks.
- Focused on bringing the best, customized solution to each use case.

### **Energy matters**

- Managing power concerns and cost through efficient design and storage.
- Generating power where we can.

# Building strategic partnerships to deliver comprehensive solutions

• The EOS organizational ecosystem includes expertise in renewable energy, real estate development, telecommunications, technology, implementation, and fund management.

Solutions are designed for maximum flexibility & sustainability and can easily scale with needs



Unit Flexibility allows EOS to accommodate customer needs and reposition deployment based on the local regulatory environment



#### Aurora Charge Station

- High impression count
- Big impact locations
- EV educational awareness
- Flagship product in production
- Modular data center at the edge
- Solar incentive integration



#### Solstice Charge Station

- Medium impression count
- Permit friendly
- Extremely modular
- Solar option
- Digital option
- Smaller footprint



#### Axis Charge Station

- Can be extended off either charge station or standalone
- ADA compliant satellite stations
- Indoor facilities
- Urban settings
- Fleet integration



## EOS Charge

- Simple and easy to use
- Integrated loyalty not just for EOS but for our location partners and advertising clients

ROLLI

- Highly customizable partner programs and rate management
- Residential controls for the utilities
- Focused on best practices for customer satisfaction. Site amenities, integrated feedback, reservation system
- Integrated public safety features





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