

# AEG – Mobility Challenge Accelerating Urban Fleet Electrification



**Integrated Clean Energy  
Solutions**

November 4, 2021

# NEXTERA<sup>®</sup> ENERGY



## World leader in electricity generated from wind and solar

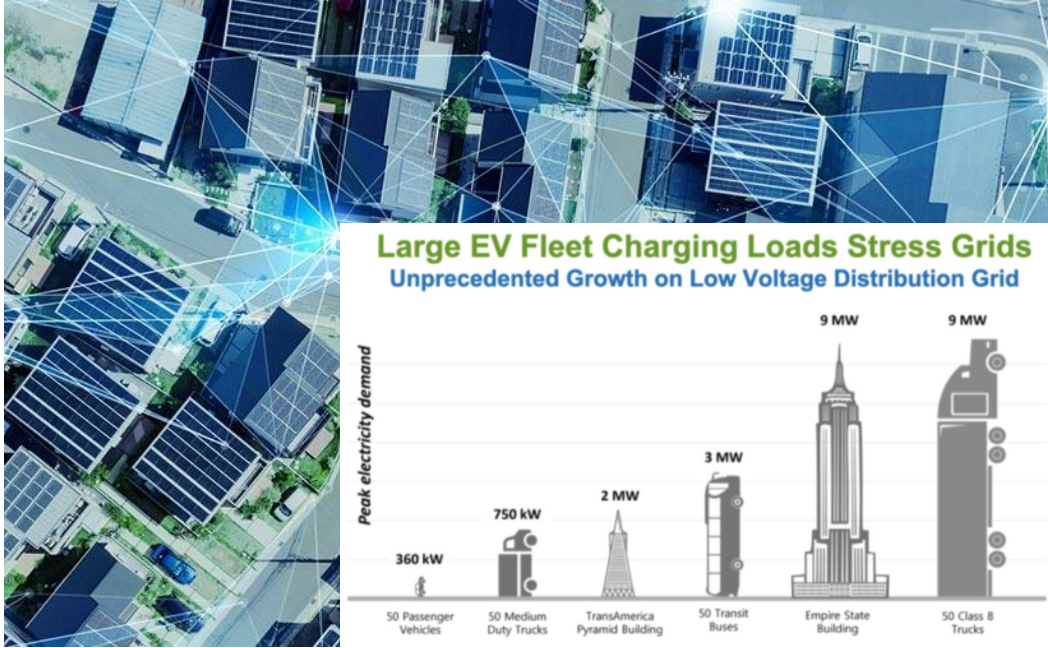
- **\$153 B** Market Cap
- **\$135 B** Assets; **\$6–9 B** deployed annually
- **47% better** CO<sub>2</sub> emissions rate than industry average
- **98% power** generated from clean or renewable resources
- **25 GW** operating renewables
- **16 GW** renewables in development
- **3 GW** battery storage operating and under development



Forbes 2021  
THE BEST  
EMPLOYERS  
FOR DIVERSITY

POWERED BY STATISTA

## Issue – Space and Time

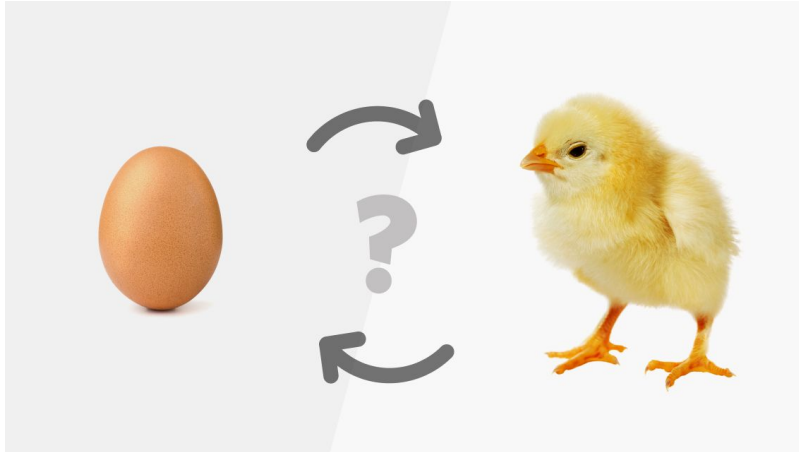


**Urban real estate and grid constraints vs. Decarbonization goals**

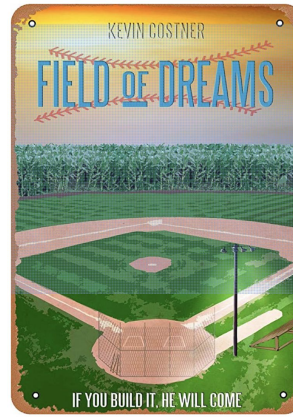


**Quick impact on Climate goals vs. Traditional fleet management that converts as fleets age out**

# Issue – Reaching a tipping point to in the market



Which comes first?  
EVs or Infrastructure?  
V2G Ready Fleets vs.  
meaningful V2G revenues

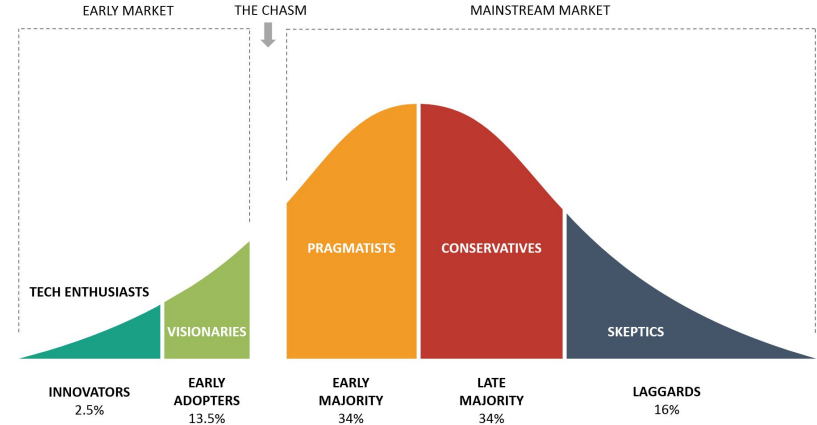


Infrastructure Utilization  
If you build it, will they come?  
When will they come?  
How many will come?

# Key Obstacle – Crossing the chasm

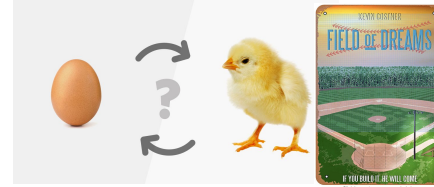
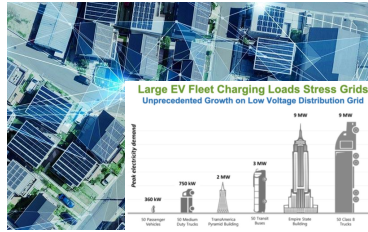


Fleets need strategically located, dedicated, resilient, right-sized, economic charging infrastructure to minimize downtime & cost



How do we de-risk the commitment to electrify?

# Emerging Solutions – Privately-owned, Shared, Multi-Modal Charging Hubs



- Fleet-centric locations
- Priority slots for fleets
- Restricted access
- Uptime guarantees
- Shared-space is most space-efficient - reducing need for multiple locations
- Community Solar
- Can be designed to service public and dedicated fleets
- Opportunity for Environmental justice?
- Anchor Tenants
- Back-stop utilization risk
- Rebates & Incentives
- Low Carbon Fuel Standard
- Accelerated Permitting
- Accelerated interconnecti on / upgrade process
- Clear but flexible grid services rules

# Benefits of crossing the chasm

## Clean Energy DC Goal:

Reduce GHGs by 50% including  
65% per vehicle mile by 2032



CEDC Plan Action Area	Percent GHGs Reduced from Total 2032 BAU	Addressed in CEDC <u>ACT</u>
Federal Fuel Economy Standards	7.1%	CAFE
New Construction Policies	4.6%	codes
Existing Building Policies	9.0%	
District Government Buildings	0.5%	
Renewable Portfolio Standard	9.5%	
RPS Local Solar Requirement	1.9%	
PPA for Standard Offer Service	6.6%	PSC
Neighborhood-Scale Energy	0.6%	
Mode Share Change	3.6%	moveDC
Electric Vehicle Adoption	0.9%	
Transit Bus Fleet Electrification	2.6%	
Total GHGs Avoided vs. 2032 BAU	47.0%	
Total GHGs Reduced vs. 2006 Baseline	55.7%	

# Consequences of inaction

- Fewer fleets electrify because economics of dedicated depots are not as compelling
- Small fleets won't electrify due to complexity and economics
- Slower conversion of fleets due to time required to develop sites
- Unlikely colocation of public access if private, dedicated fleets

## Challenge Statement

**Regarding Mobility & Transportation, to achieve Washington's Carbon & Equity goals, a critical obstacle for NextEra Energy Resources to overcome is minimizing the permitting and interconnection timeline and the utilization risk of launching a new energy infrastructure asset-type – multi-modal green charging hubs.**