Electrifying Fleets:

Opportunity for Illinois to decarbonize transportation, grow load, and improve community health

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Introduction: eIQ Mobility, the leader in fleet electrification assessments

#1 provider of fleet electrification assessment solutions for utilities, OEMs, and fleets.

Deep experience with utilities, telecom, delivery, pharma, food & beverage, cities, states, universities, K-12, and other fleets.

Dozens major customers

150,000+ vehicles

4+ Million trips

350+ Million miles

Introduction to fleets, OEMs & policy.

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Vehicles in the US

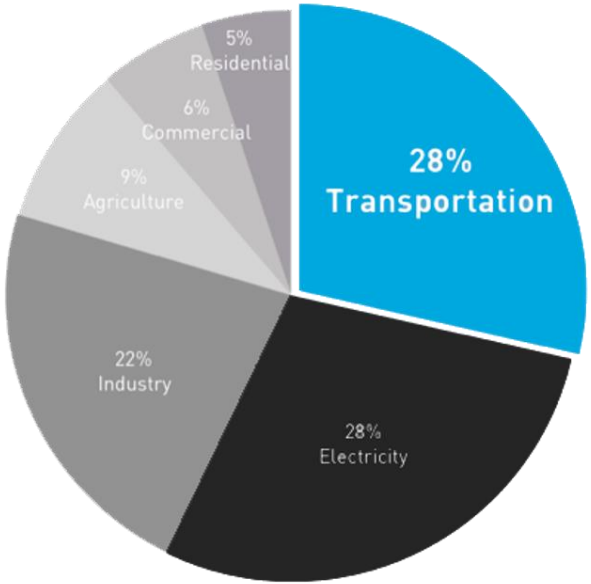
		Class		# vehicles (M) – 2016	Miles/day
Cars	112M (44%)		Passenger car	112.9	35
Light truck	129M (51%)	**1** *(< 6k lbs)*	Utility Van, SUV	83.5	37
		2 *(6-10k lbs)*	Mini Bus, Step Van	45.1	40
Medium truck	5M (2%)	**3** *(10-14k lbs)*	Walk-in, City delivery	1.1	44
		4 *(14-16k lbs)*	Large walk-in, Landscape Utility	0.5	48
		5 *(16-19.5k lbs)*	Large walk-in, Bucket	0.3	37
		6 *(19.5-26k lbs)*	Beverage, School bus	2.8	40
Heavy truck	6M (2%)	**7** *(26-33k lbs)*	Home Fuel, City transit bus	0.5	96
		8 *(33+k lbs)*	Heavy Semi Tractor, Dump	6.0	144

Fleets are a huge industry, ready for electrification

300 billion
Miles Traveled

$200 billion
Annual Spend

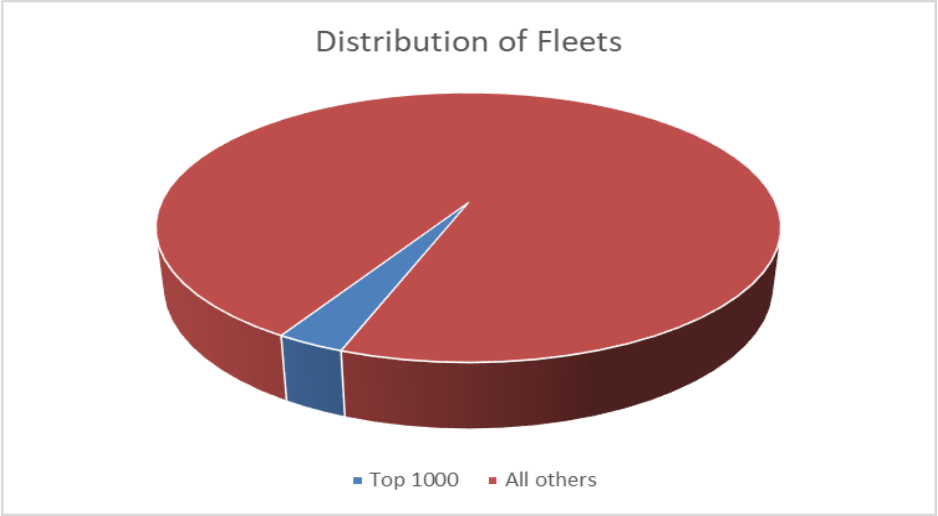
40+ million
vehicles



Most fleets are small & medium sized

large fleets	All other fleets

Estimated over 500,000 fleets (FleetSeek data)



**estimate*

Private fleets

#500 has 212 vehicles

Logistics fleets

#500 has 220 trucks

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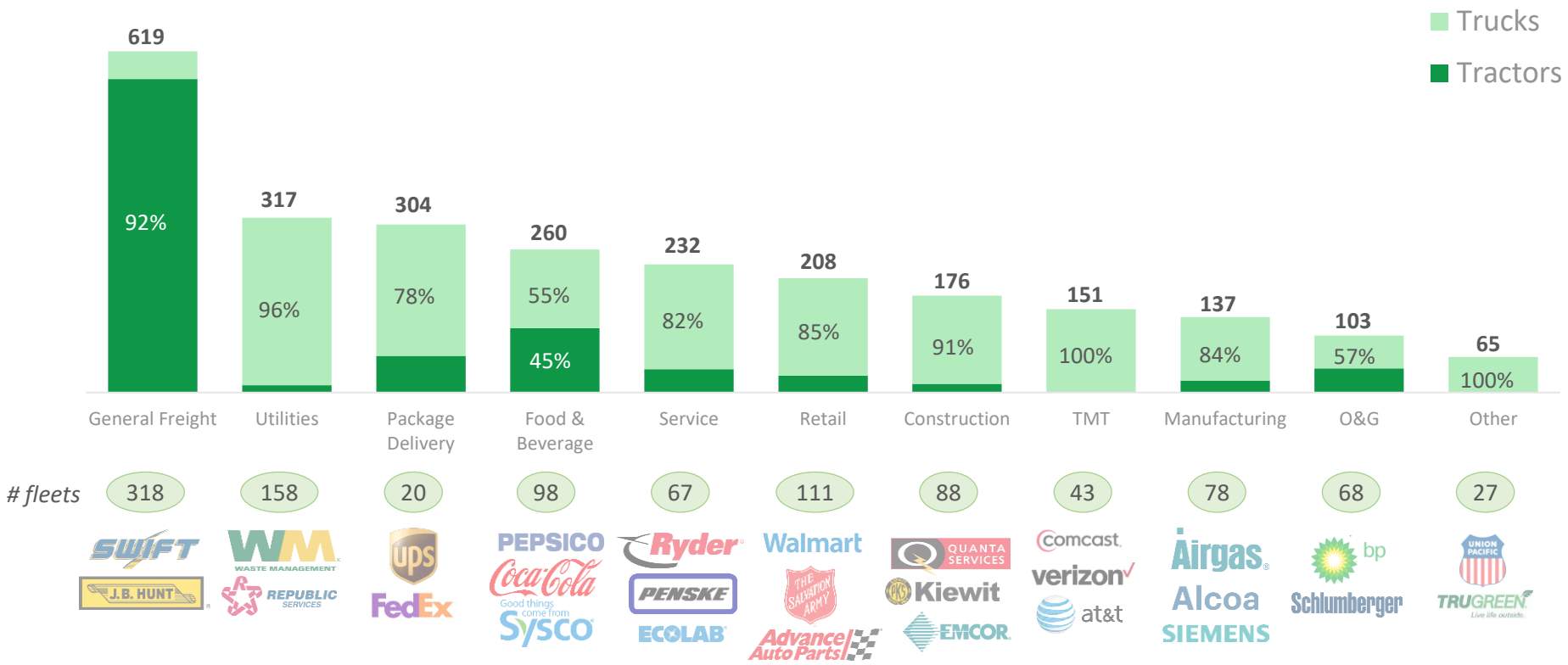
Most fleets are small & medium sized



Auto manufacturers invest $250 billion in EVs for the US

Source: Bloomberg News 2021

Rivian R1T

Tesla model 3

Nissan Ariya

VW ID4

Ford Transit EV

GMC Hummer EV

Tesla Cybertruck

Lordstown Endurance

GM Silverado

Ford F150 EV

Tesla Semi

Chanje EV delivery

Rivian Amazon

LION 8 truck

Daimler eCascadia

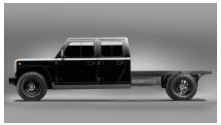
Volvo VNR EV

Arrival UPS

MOTIV box truck

Lightning E-450

Nikola Refuse

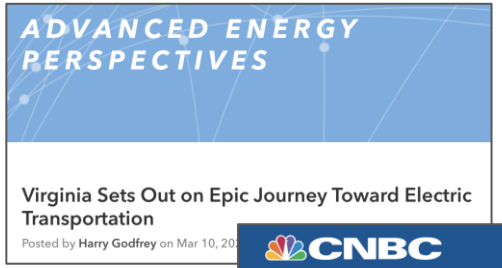

Bollinger class 3

Peterbilt 220 EV

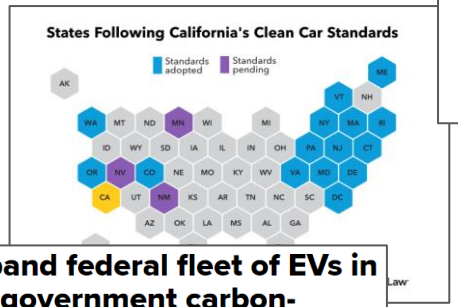
Growing Policy, and sustainability mandates

Santa Monica, CA

VA passes 5 EV-friendly bills



15+ states follow CA clean car standards



EVOLVE HOUSTON

CLIMATE MAYORS

EV 100

First Student

EV feasibility in fleets

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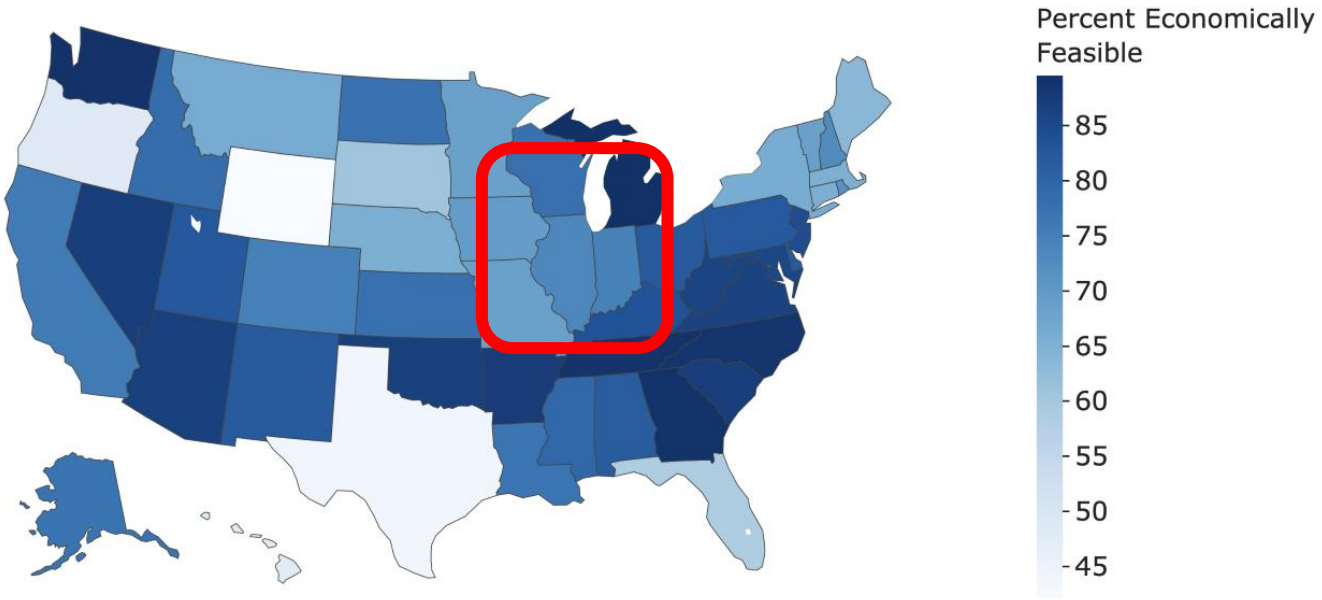
Illinois & Midwest have very strong Fleet EV opportunities

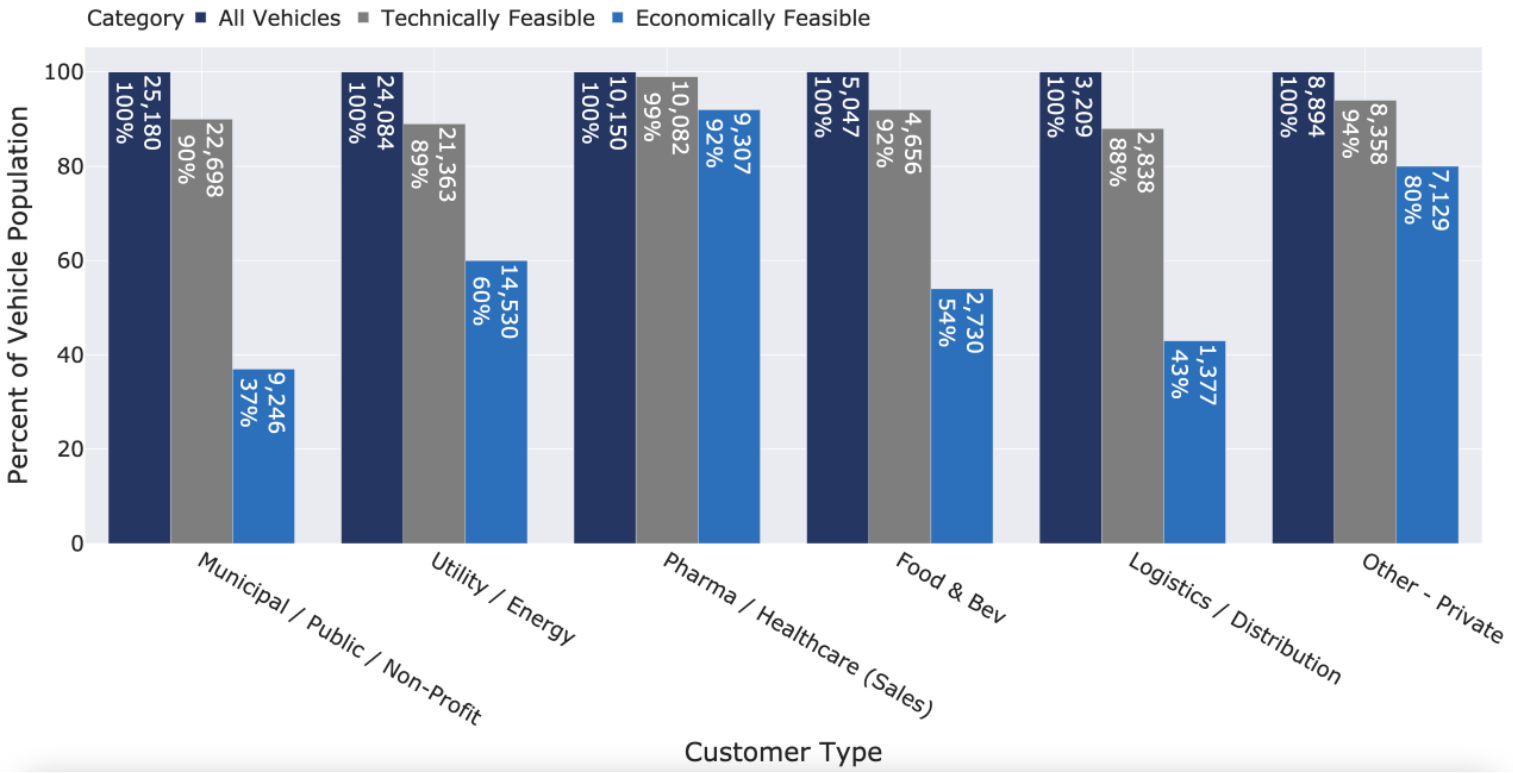
67% of Passenger Vehicles are Economically Feasible



Based on 88,000 vehicles assessed by eIQ Mobility

Across all industries & fleet types

Based on 88,000 vehicles assessed by eIQ Mobility



Hurdles to fleet electrification

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Fleet Electrification is a very complex journey

Source: 300+ interviews, dozens of fleet customers, and 150,000+ vehicles analyzed by eIQ Mobility

1. Pick location, EVs, chargers, vendors, define costs, emissions and incentives

2. Finance and deploy assets: Electric Vehicles and charging infrastructure

3. Operate & optimize the new electric fleet and facilities

4. Learn from pilots, create a fleet-wide strategy and scale across operations

What answers fleet need, to make decisions

1-What Electric Vehicles?

(fleet manager)

Identify the EV makes and models that meet the fleet's operational & cost requirements.

2-What chargers, and how many?

(Facility & energy managers)

Define the exact EV chargers, Evs, costs, and short to long-term energy load expected for each fleet facility.

3-What will it cost?

(finance manager)

Model the Capex, Opex and Total Cost of Ownership, and impact between existing ICE vehicles and EVs.

4-Will it reduce emissions?

(sustainability manager)

Calculate the emissions of the current fleet, and the future EV emissions, based on local electric generation.

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Key obstacles for fleets

1- Time
Fleet managers are understaffed and have little time to investigate, learn and plan for a new energy. Focus on immediate issues.

2- Knowledge
Fleet managers are experts in gas & diesel. EV & kWh is totally new. Smaller fleets have less access to resources to assist from vendors, energy providers...

3- Incentive / motivation
Many small & medium fleets are under the radar and have little policy or sustainability pressure on zero-emissions.

4- Risk
Fleets focus on maintaining current operations and minimizing disruptions. Very low appetite for risk.

5- Capital
Many fleets have less access to capital, tax skills, and ability to leverage incentives

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Some recommendations

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Lessons learned for Utilities & Public Utility Commissions

DO

1. Leverage data that fleet customers already have (fuel, odometer, M&O, costs, locations…)

2. Give fleets the answers they need: total cost of ownership, EV & EVSE selection, facility load-profiles, emissions

3. Make it simple, fast & repeatable to build a 10-year long relationship

4. Consider needs of smaller fleets: small cities, communities & schools, family owned

DON'T

1.Ignore the fleet decision process, and focus only on incentives, rates & make-ready

2. Focus only on certain fleet applications, such as school or transit buses. Look at municipal, corporate, hospitals, delivery, and other fleets

3. Provide support once, and ignore the everchanging needs of fleets, and new EV models, incentives, etc

4. Wait till 'it gets better' (cheaper EVs, more public charging,…). Now is the time to help fleets.

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Q&A
Thank you

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