



EV Grid-Readiness – Fleet Electrification

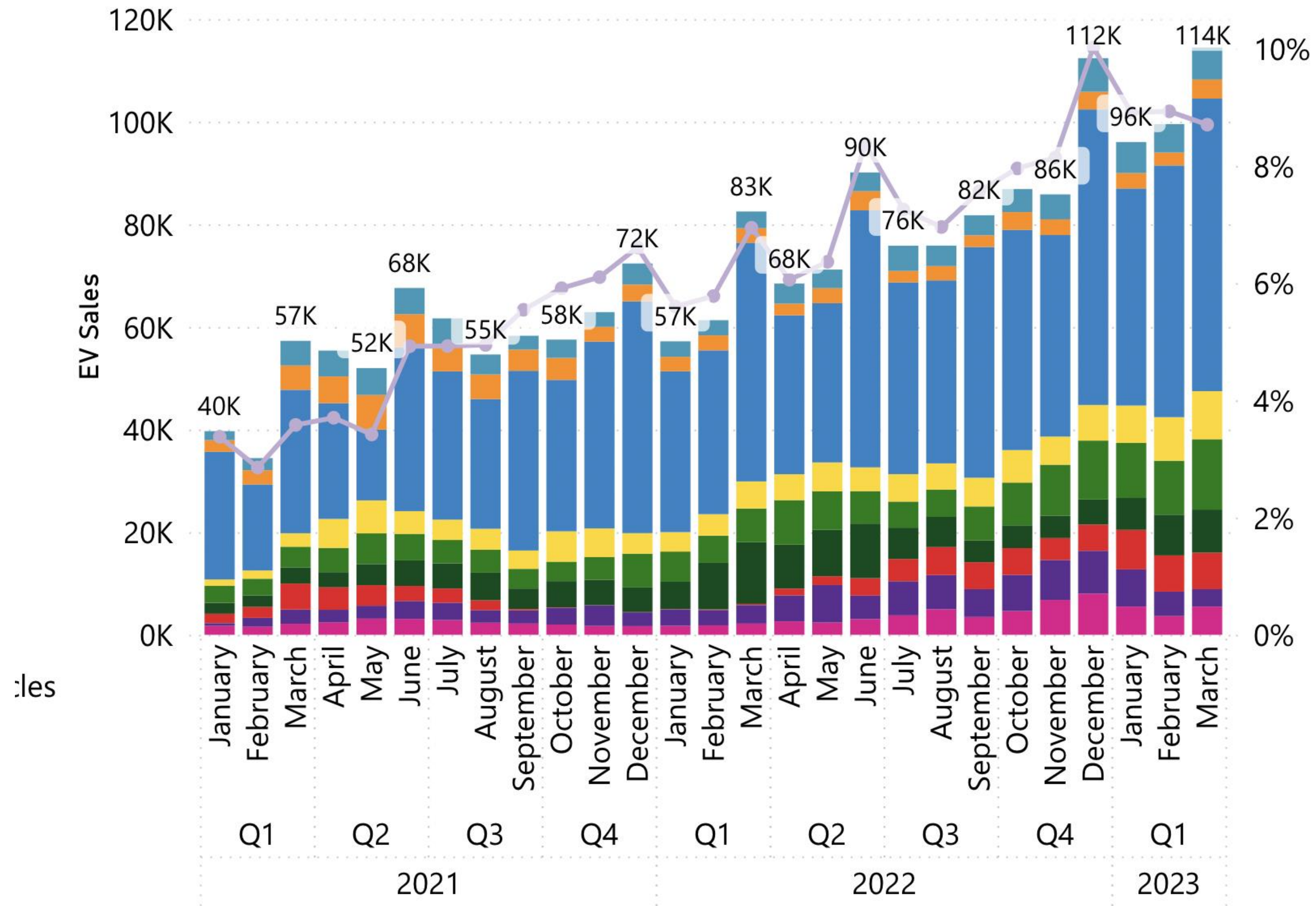
October 1, 2024



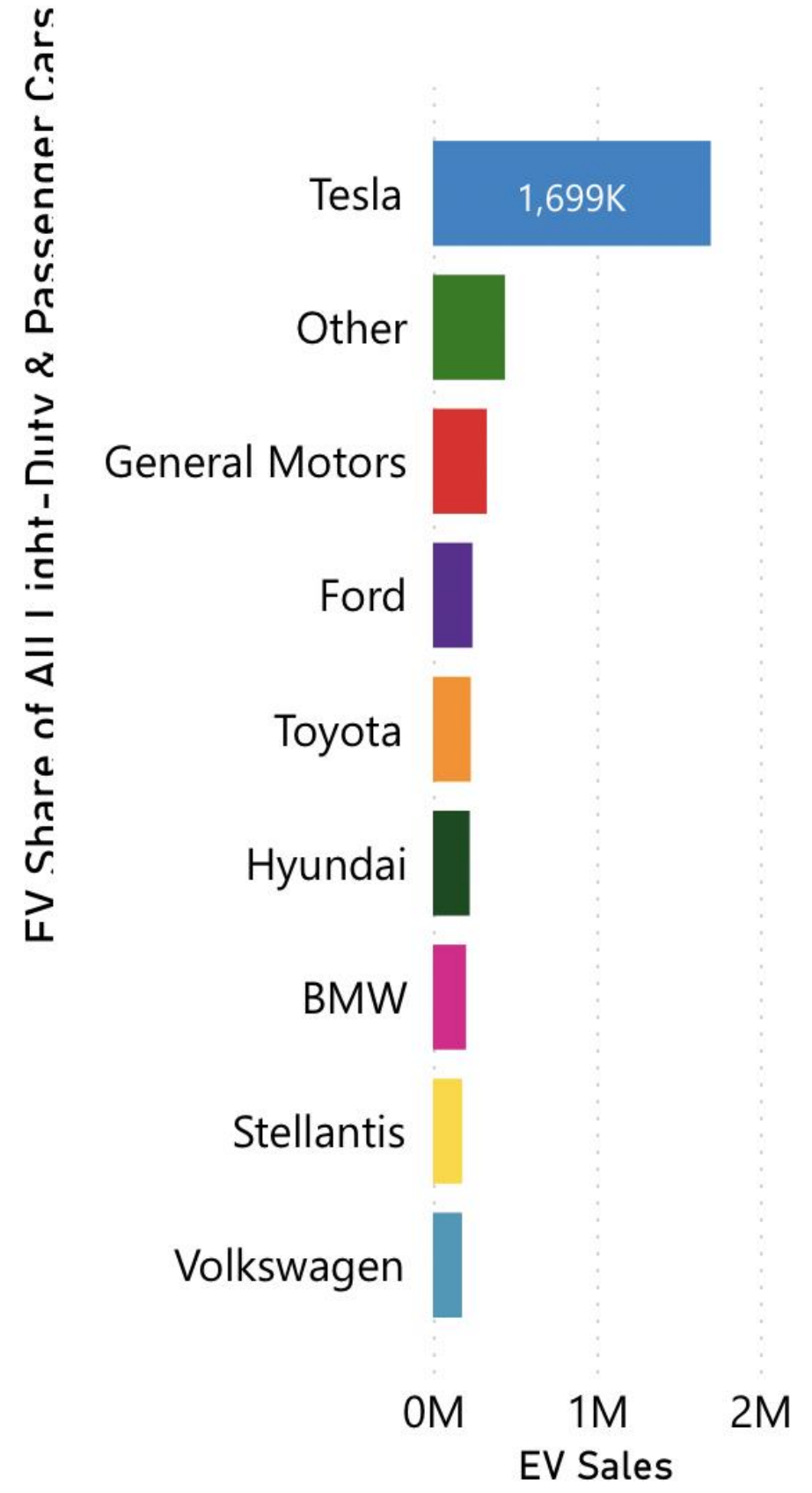
Passenger EVs are growing about 50% YOY

More work needed on medium and heavy-duty (MHD) fleets

EV Sales & EV Share of Total Sales (Jan 2021 to Mar 2023)



Cumulative Sales from 2011 to 2023

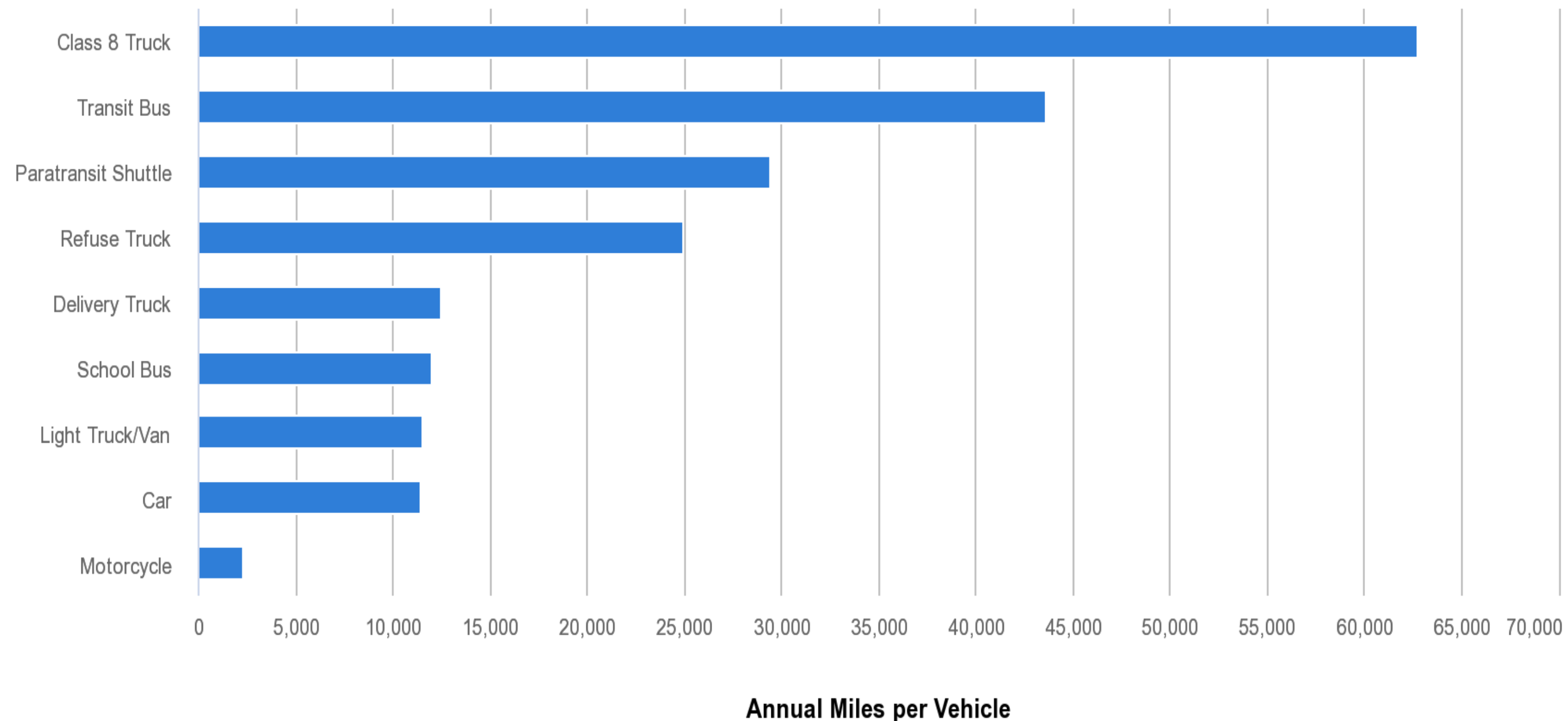


- **Less than 1% of MHD vehicle sales in 2022 were EVs**
- Manufacturers and fleets are ramping up commitments
- Electric MHDVs are at cost parity with combustion vehicles across all vehicle classes (2b-8) when considering total cost of ownership. **Policy needs to reduce up-front cost.**
- The MHD vehicle sector IS NOT on track for 100% net-zero emissions by 2050; **policy measures urgently needed** (Bloomberg Global EV Outlook 2023)

Source: Atlas EV Hub – EV Share of all Light-Duty Vehicles Sales

Electrifying Fleet Vehicles Means Cleaner Air and Healthier Communities

Average Annual Vehicle Miles Traveled by Major Vehicle Category



Last updated: February 2020
 Printed on: May 24

Source: <https://afdc.energy.gov/data/10309>

- IL has ~615,000 MHDVs
- 1 in 7 vehicles on the IL highways are trucks (CMAP)
- MHDVs are ~7% of on-road vehicles, yet **~36% of US transportation emissions, ~67% of NOx emissions, and ~59% particulate matter (ERM)**
- **~50% of traffic-pollution deaths** from diesel (ICCT)
- Electrifying 30% of HDVs in Chicago would save **610 lives and save \$5.8B in healthcare**, annually (Northwestern)
- Cook County in **the top 1% of diesel-polluted counties** in the US (RHA)

Policies and Legislative Initiatives

Illinois Policy Framework

- **Utility Beneficial Electrification Plans (BE Plans)**

- CEJA, enacted in 2021, requires utilities to offer programs that lower emissions, replace fossil fuels, improve electric grid operations, reduce peak demand, optimize electric usage and align with renewables. Focus on transportation programs.
- ComEd's plan focuses on equitable access, rates, make-ready programs, pilots for V2G and curbside charging
- Incorporated into grid planning – EV load capacity maps

- **Performance Incentive Mechanisms (PIMs)**

- CEJA also required development of PIMs for utilities to align their business model with the goals of decarbonization and transition by providing incentives.
- Statutory goal: “...support and take advantage of potential benefits from the EV charging and other electrification while mitigating the impacts”
- Approved tracking metrics: Emissions reductions, peak load reduction, managed EV charging, V2G export compensation, grid flexibility

Fleet Electrification Incentives

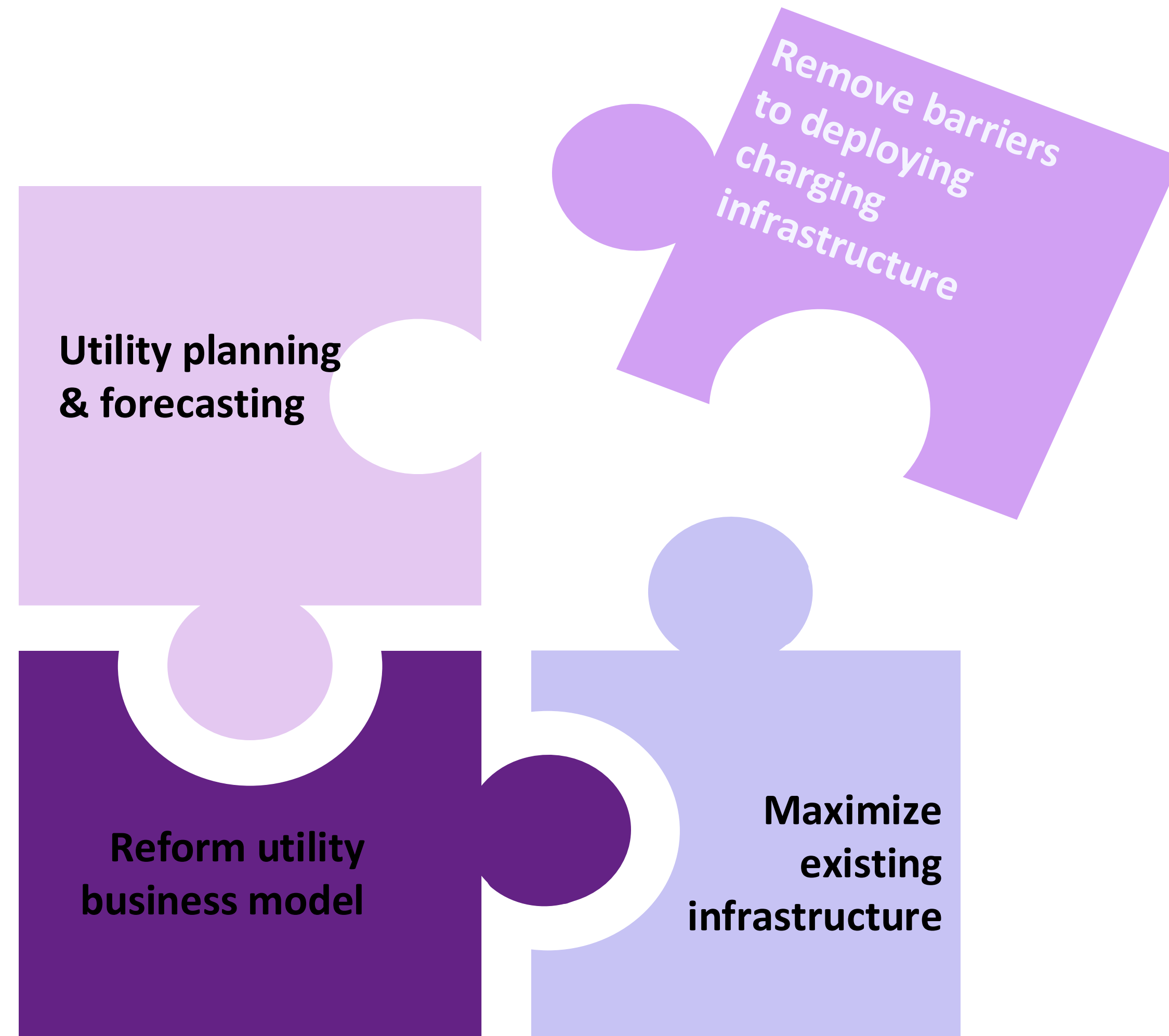
- HB 4959 – Budget Implementation Bill (BIMP) includes a fleet electrification incentives program
 - Provides grants to businesses, schools, transit agencies, and government units to electrify fleet vehicles classes 2b-8 (commercial pick-ups to semis)
 - Prioritizes fleet applicants in environmental justice communities and schools
 - Stackable with other incentives
- First state in the Midwest and one of the few states outside the coast to establish a state program
- Coalition included EV manufacturers, commercial fleet operators, and environmental and health advocates

Powering Up Illinois Act

- HB 5610 / SB 3794 – the Powering Up Illinois Act would:
 - Enable utilities to make timely investments by supporting staffing
 - Establish average and maximum target energization timelines that include accountability and enforcement mechanisms
- Building once, Building right – forward-looking investments, right-sizing, is more cost-effective (e.g. it's a lot cheaper to install one 10,000kV transformer than sequentially installing seven 1,500 kV transformers)
- Avoiding delays seen in other states like California – EVs purchased, charging stations built but not energized

EV Ready Grid Principles

Building an EV-Ready Grid – 4 Principles



Removing Barriers to Charging Deployment

Inefficiencies slow infrastructure deployment

- **Updated interconnection/energization timelines and standards** – utility bottlenecks, unpredictability, data and equipment delays, permitting processes
- **Streamline permitting and zoning processes** – lengthy approval times, lack of standardization, inadequate resources, multiple agency approvals
- **Incentives and rate structures to grow the EV charging industry** – phase-in charges, managed charging programs, flexible rates, incentives for co-located assets

Thank you.

Samarth Medakkar, Policy Principal
smedakkar@advancedenergyunited.org



advancedenergyunited.org
@AdvEnergyUnited

1801 Pennsylvania Avenue NW, Suite 410
Washington, DC 20006

