

Exhibit to Agenda Item #1

Brief the Board on the state of the electric transportation industry and SMUD's Electric Vehicle (EV) Strategy.

Board Strategic Development Committee and Special SMUD Board of Directors Meeting

Tuesday, November 11, 2025, scheduled to begin at 6:00 p.m.

SMUD Headquarters Building, Auditorium

The Big Picture

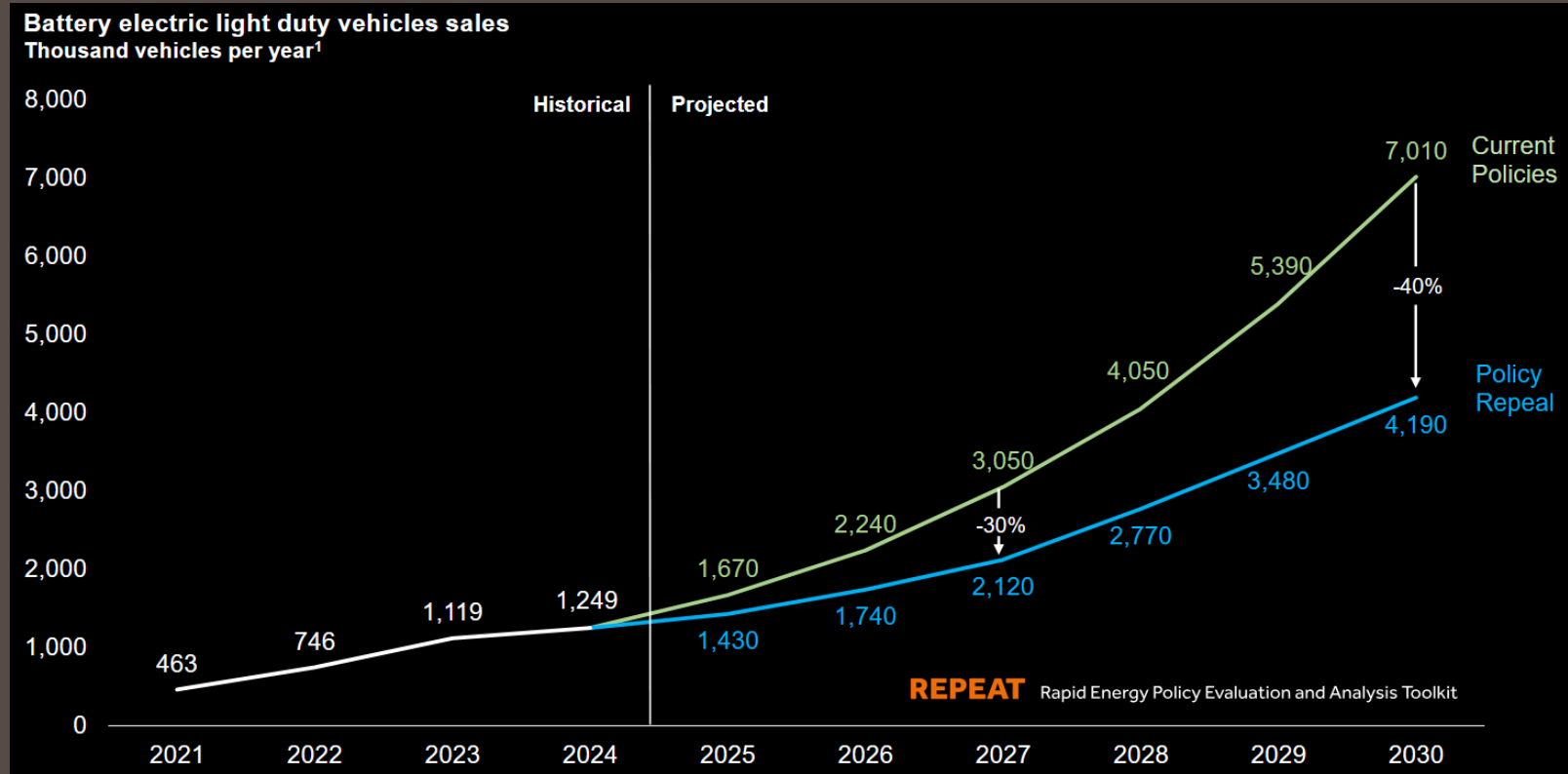
Why does this matter?

- Improves **air quality**, **public health**, and addresses **climate change**, all of which disproportionately impact underserved communities
- EVs can **reduce** annual household transportation bill burden **by \$2,000** (total savings of **~\$575M per year** by 2030)
- EVs drive load growth & revenue – **4,700 GWh** of new load, **\$1.07B gross revenue** from 2025-2030
- Vehicle Grid Integration (VGI) technologies & programs promise substantial grid savings by shifting peaks, increasing system utilization & minimizing grid upgrades

Key Policy Changes:

- Light Duty Vehicles (LDVs):
 - Advanced Clean Cars II (ACC II, 100% EV sales by 2035) repealed by Congress in May 2025
 - \$7,500 new & \$4,000 used EV federal tax credit terminated – no state-level backfill due to budget shortfalls
 - Clean Air Vehicle (CAV) program for High-Occupancy Vehicle (HOV) lane access ended
- Medium/Heavy Duty (MHD): Advanced Clean Fleets (ACF) waiver withdrawn by CARB, Advanced Clean Trucks (ACT, % OEM sales requirement) repealed by Congress in May 2025
 - *ACF goals still enforced for State, County, City, and other public agencies pending court battle
 - Low Carbon Fuel Standard (LCFS)-funded Clean Fuel Rewards (CFR) to offer MHD EV purchase incentives

State of the Light Duty Vehicle Market



REPEAT Project, Princeton University ZERO Lab. Jesse Jenkins.

Expected Impact

Decreased and delayed EV adoption anticipated in the immediate to near term; re-emphasizes the importance of focusing on charging access & affordability

State of the Medium/Heavy Duty Market

Primary market policies rescinded:

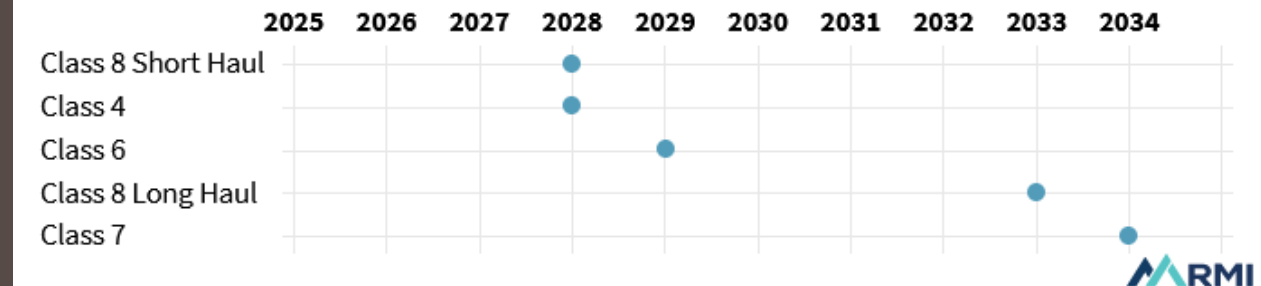
- ACT (OEM % sale requirement) – policy repealed by Congress
- ACF (purchase requirement) – rescinded for private fleets
 - Public fleets still subject to ACF rules
- IRC-45W tax credit – terminated
- Automakers sue to withdraw from 2023 CA Clean Truck Partnership; CARB countersues

Expected Impact

Delayed fleet transition, but structural cost reductions may drive adoption in late 2020s/ early 2030s

Electric trucks are quickly approaching cost parity with diesel trucks

Dropping battery costs alongside other efficiency gains are creating rapid drops in the purchase cost of medium- and heavy-duty trucks. The years below indicate when price parity is expected in the US truck market between battery electric and diesel powertrains.



Here are some examples of these weight classes:

Class 4: Small to medium box trucks

Class 6: Beverage trucks and school buses

Class 7: Dump trucks, garbage trucks, fire trucks

Class 8: Tractor trailers; "long haul" means trucks driving very far each day with accommodations like sleeper cabs for drivers

Source: [Energy Innovation & ICCT](#)

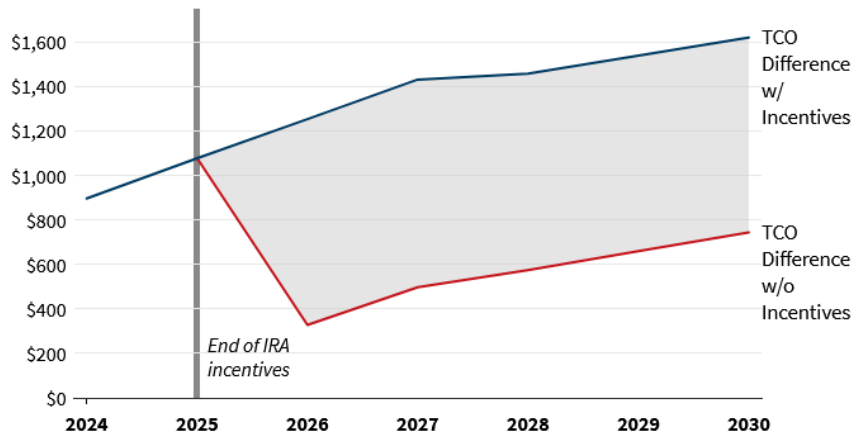
Policy headwinds, price tailwinds

EV Market Trends

Total Cost of Ownership (TCO) for new EVs lower than ICE without tax credits

Lower Annual Cost of Ownership Saves EV Drivers Money

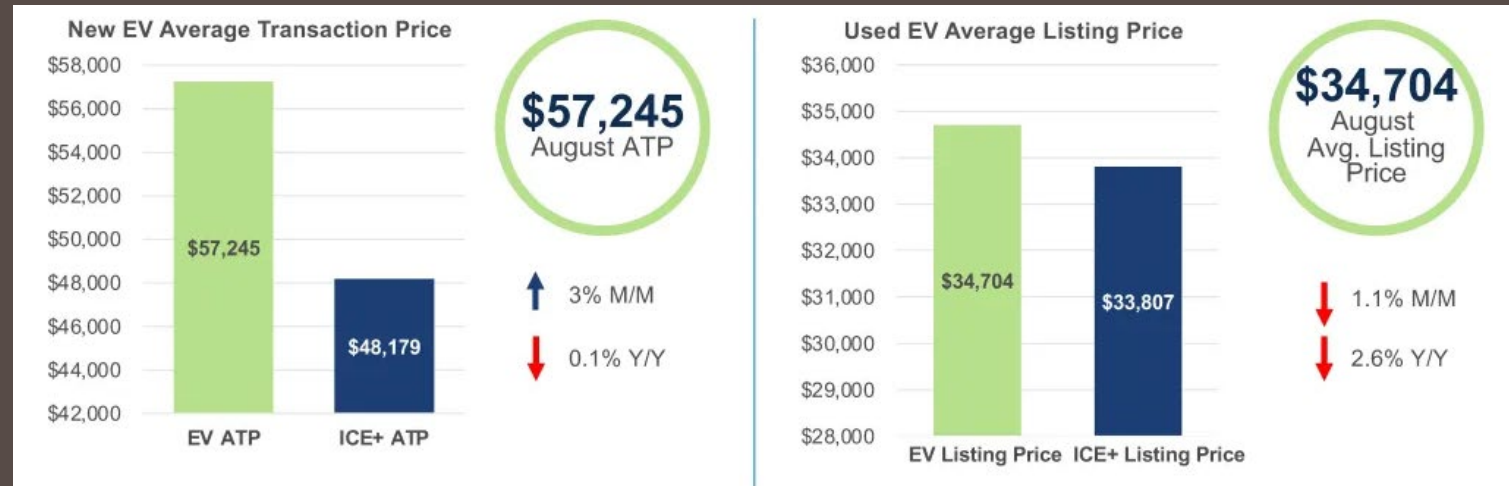
While EVs have higher up-front costs, they require less maintenance and are cheaper to "fill up" than gas-powered vehicles. EV incentives, like the one passed in the Inflation Reduction Act (IRA), helped to mitigate that price difference and help consumers benefit from the lower operating expenses. When this benefit is ended in September 2025, the cost benefit of driving an EV instead of a gas car will drop but still create a net benefit for drivers.



These results are for passenger vehicles. We assume a vehicle drives 11,026 miles per year in 2023. This value grows in line with FHWA projections. Our model calculates the total cost of ownership calculation from a number of factors. We include annualized cost of the vehicle purchase price, maintenance spending, fuel costs, and insurance coverage. Vehicle purchase price includes relevant incentives.

Source: RMI analysis, FHWA

Used EVs near price parity with used ICEV - \$34.7k (EV) vs. \$33.8k (ICEV)

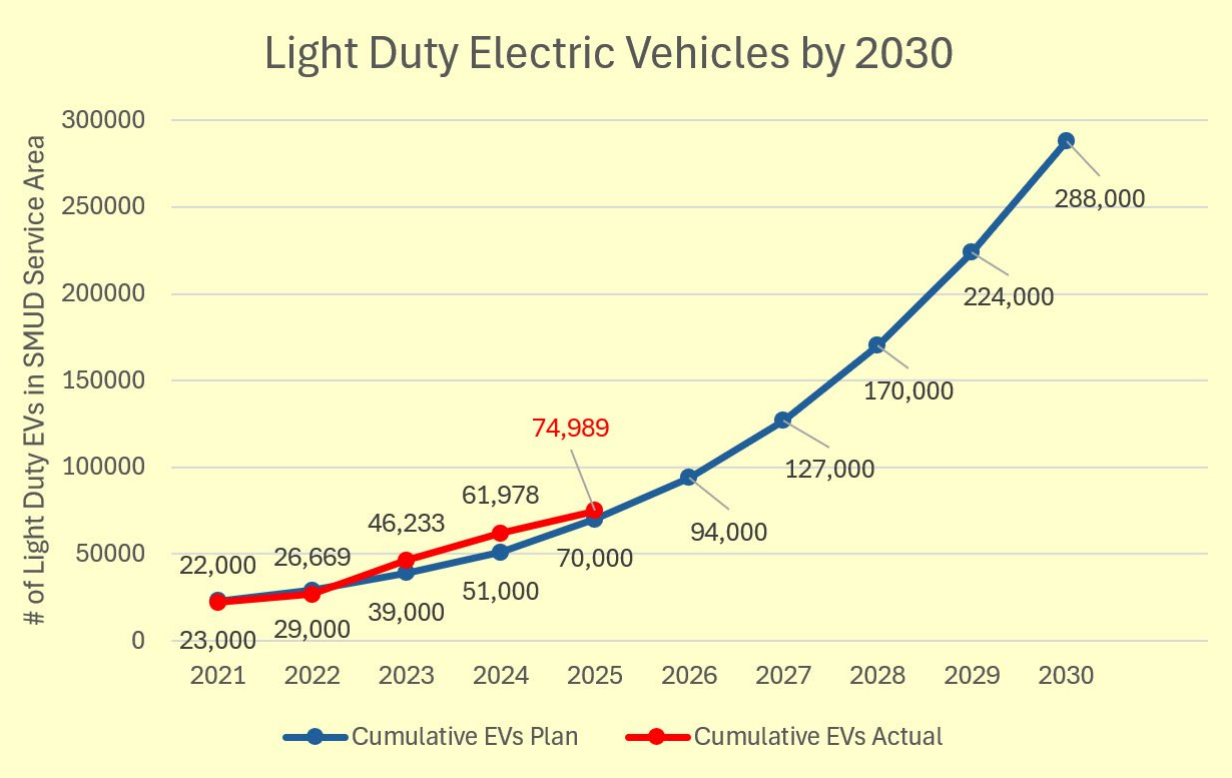


August 2025 – New & Used EV vs. ICE, Cox Automotive

Industry News

- Ford invests additional \$2B in manufacturing capacity, <\$30k platform
- GM & Nissan releasing <\$30k, 300 mi range EV models in 2026
- GM commits \$4B to expand EV manufacturing capacity over next 2 years
- Toyota to launch next-gen solid state battery technology by 2028; Mercedes and Nissan by end of decade

SMUD's Progress



Current Snapshot:

2024: ~61,000 EVs on the road (26% sales share)

2025: ~73,000 EVs on the road (24.8% sales share as of Q3 2025)

Progress Against CEC 2030 Targets (*2025H1):

Type	2030 Target	2025 (Est)	% of Target	Need
DCFC	942	593	63%	349
Workplace	11,460	521	5%	10,939
MFH (L1 + L2)	6,123	304	5%	5,819

*Sources: March 2024 Biennial CEC AB 2127 Report, NREL Alternative Fuels Data Center, & CEC ZEV Infrastructure Dashboard

SMUD EV Strategy

Charging Affordability & Equity

Affordable charging, equitable access



Facilitate deployment of EV chargers & an affordable charging experience that encourages EV adoption

Scalable Charging Solutions

Easy to build, easy to energize



Proactively support TE infrastructure deployment with rapid & cost-effective interconnection & energization approaches

Flexible Grid Integration

Flexible integration for a resilient grid



Ensure all EVs can be flexibly integrated to minimize infrastructure upgrades, increase asset utilization, & create downward rate pressure

Workforce Ecosystem Development

A workforce for an electrified ecosystem



Facilitate development of a skilled local workforce & business ecosystem to support transportation electrification & enable equitable job creation

Affordable charging, equitable access

Objective Facilitate deployment of EV chargers & a charging experience that encourages EV adoption

2030 Success Metrics

- Cost to charge = 50% cost of gasoline/diesel or lower
- Achieve comparable cost to charge between SFH & MFH EV drivers

Challenges

- Federal policy changes increase upfront cost of EVs & delay fast charging deployment
- Multi-Family Housing (MFH) customers pay 2x-6x more to charge than Single Family Housing (SFH) customers
- Public DCFC costs in SMUD territory are equivalent to \$2.70*/ gal to \$6.20/ gal (**only available for Tesla drivers*)

Strategy

- 2026: Launch SMUD Charging Network & leverage SMUD EV App to increase MFH access to affordable DCFC and at-home rates via FAST & REACH 2.0
- 2026-28: Install at-home charging with EV app integration at MFHs; launch workplace program
- 2030+: Deploy EV submetering technologies to offer lower cost, EV-specific rates at MFH

Easy to build, easy to energize

Objective Proactively support TE infrastructure deployment with novel interconnection & energization approaches

2030 Success Metrics

- Enroll 25+ customers in flexible connection agreements
- Faster development & cheaper operating environment than PG&E

Challenges

- High costs & long timelines for service upgrades due to increased market demand & inflationary policies
- Lack of make-ready programs may encourage development in other territories
- Building to peak approach increases system costs, delays 'time to energization'

Strategy

- 2026: Implement hosting capacity maps to guide developer siting & infrastructure decisions
- 2026: Develop & implement flexible service connections to accelerate time to energization & decrease grid costs
- 2028-2030: Explore & launch commercial EV economic development packages & novel programmatic commercial rates to encourage fleet & MHD adoption

Flexible integration for a resilient grid

Objective Ensure all EVs can be flexibly integrated to increase asset utilization, enhance system utilization, minimize infrastructure upgrades, & create downward rate pressure

2030 Success Metrics

- 50% of EVs on constrained transformer participating in managed charging
- Enable at least 35MW of V2H / V2G EV resources

Challenges

- EVs will cause localized strain on the distribution grid, requiring costly upgrades to the system
- Future winter morning peak & increased solar generation will necessitate shifting some EV charging to midday

Strategy

- 2026-2027: Promote adoption of automated load management systems & participation in managed charging programs
- 2026: Develop customer energization pathways to avoid grid upgrades & enhance system utilization
- 2026-2028: Explore low cost, scalable V2G hardware to enhance resiliency & increase system flexibility

A workforce for an electrified ecosystem

Objective Facilitate development of a skilled local workforce & business ecosystem to support transportation electrification & enable equitable job creation

2030 Success Metrics

- Stand up Employer Driven, Job Derived EV & EVSE workforce training programs with a focus on entry level positions leading to high road careers

Challenges

- Inability to properly anticipate & time demand for labor with appropriate funding or other efforts
- Attracting new jobs to SMUD territory with transportation electrification related companies
- Recruiting & training electrician workforce to serve electrification project demands

Strategy

- 2026-2028: Identifying & tracking job demand growth by sector to understand needs & potential stages for intervention
- 2027-2029: Creating employer coalitions in specific industries to create employment pipeline
- 2028-2030: Attracting new TE businesses to the area for new employment opportunities

EV at SMUD

EV Team & Primary SMEs

Group Distributed Energy Solutions

Sub-Group

General Functions

Strategy	<ul style="list-style-type: none">• EV strategy & long-term planning• Initiative & program development• Policy support
Program Planning	<ul style="list-style-type: none">• Near term planning• Project management & program implementation
Program Delivery	<ul style="list-style-type: none">• Program management & operations• Project & incentive execution• Customer engagement

Additional Customer Facing Teams

Group

Commercial

Strategic Account Advisors Commercial customer engagement & support	Commercial Development Project conceptualization & implementation
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Residential

Customer Support Center Call center operations, "Contact SMUD First"	Sustainable Communities Low-income & equity program implementation
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Additional

Distribution Planning & Line Design Project engineering & energization support	Research & Development Technology development & testing
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Key messages

To drive & capture the next wave of EV adoption, SMUD's strategy is centered on:

- Facilitating **accessible charging** – either by SMUD or via 3rd parties
- Delivering **affordable, scalable, and grid-friendly charging** across all segments

With policy uncertainty & federal pull back, Our plan is to stay our course with current strategy to bridge gaps in our service territory with some key adjustments:

- Focusing on **total cost of ownership** & improved **customer experience** to drive and capture the next phase of EV adoption
- More regional partnering, pooling of resources, and tighter coordination for impact
- Shifting to more online self-service tools for broader, more cost-effective support
- Leveraging state grants to lay the foundation for affordable charging beyond SFHs
- Driving higher utilization of our forthcoming charging network for cost recovery and long-term program viability