Fact Sheet

States Pave the Way for ZET Adoption: Assessing the Impact of ACT and ACF Through 2030

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August 2024

State-level regulations are one of the main drivers of zero-emission truck (ZET) adoption across the United States. As of May 2024, 11 states have adopted the Advanced Clean Trucks (ACT) regulation, including California, which has also adopted the Advanced Clean Fleets (ACF) regulation. These states comprise roughly **27 percent** of the U.S. medium- and heavy-duty vehicle (MHDV) market and **37 percent** of national ZET deployments.[1]

This assessment projects the impact that ACT and ACF (together ACT/F) will have on ZET deployments in the states that have adopted these regulations to date through 2030. The results show that **by 2030, ACT/F compliance will lead to the deployment of at least 461,000 ZETs in the 11 ACT/F states.** A majority of these vehicles (or 66%) will be in the pickup, delivery, and straight truck classes, with Class 8 tractor demand starting to grow near 2030.

In addition, demand is concentrated geographically in key states with supportive state-level policies. These projections allow stakeholders to understand the market through the end of the decade and the need for focused infrastructure investment in key hubs, and to plan well in advance in areas with high anticipated Class 8 demand.

ACT and ACF at a Glance

ACT is a supply-side regulation that requires original equipment manufacturers (OEMs) to sell ZETs as an increasing percentage of their MHDV sales each year, with requirements varying by vehicle weight class and some use applications. ACF is a demand-side regulation that requires fleets to purchase ZETs, with the stringency of the purchasing requirements varying by fleet type and size.

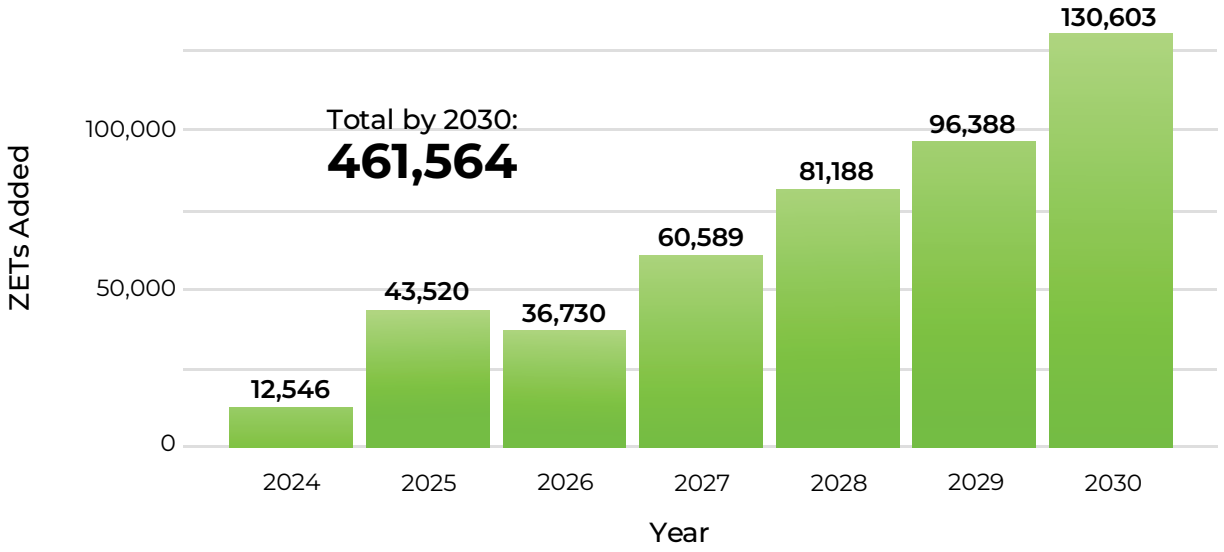
Key Findings and Observations

The assessment projects that ACT/F will have a sizeable impact on ZET demand in the 11 ACT/F states (Figure 1); taken together, at least 461,000 Class 2b–8 ZETs will need to be deployed by 2030 to comply with the regulations, representing a nearly 2,500% increase in **ZET deployments from 2023**.

The buildout of ZET charging and refueling infrastructure will need to be scaled up to meet this increase in demand, but as shown in CALSTART's **Phasing in U.S. Charging Infrastructure** report, such a buildout can be affordably achieved by a strategically targeted and phased-in approach.

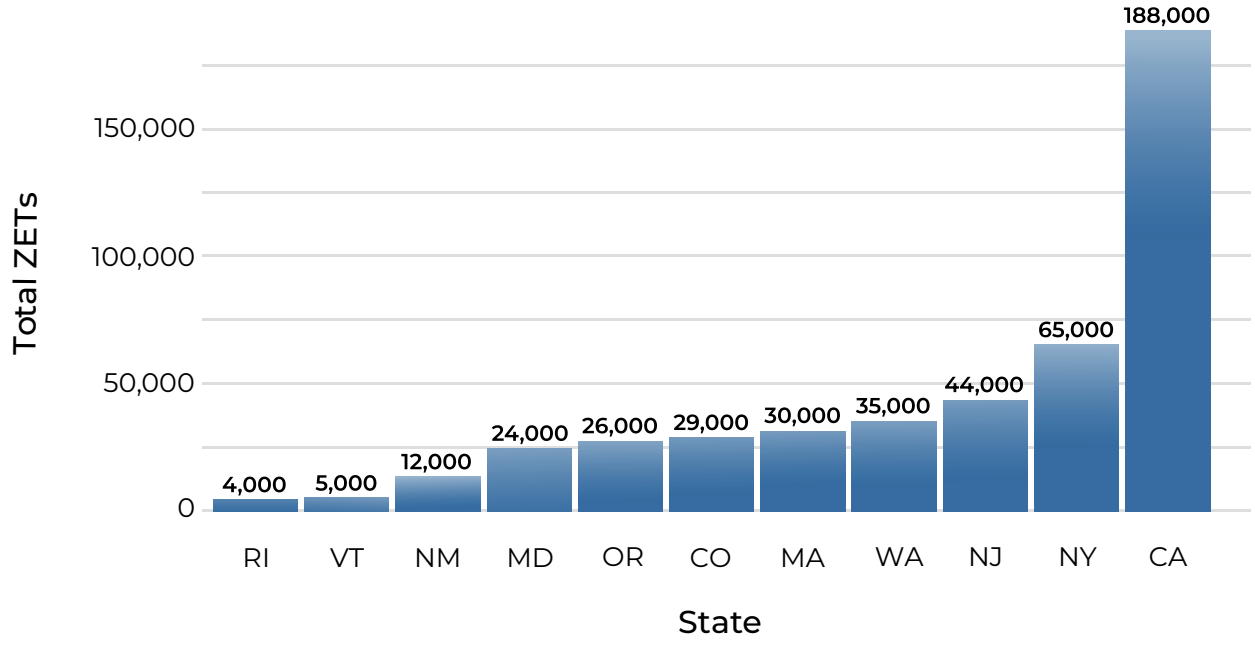
[1] Please note that Zeroing in on ZETs: May 2024 Market Update does not include electric pickup trucks, while this assessment does include that vehicle segment.

Figure 1. ZETs Deployed Yearly Through 2030 Under ACT and ACF



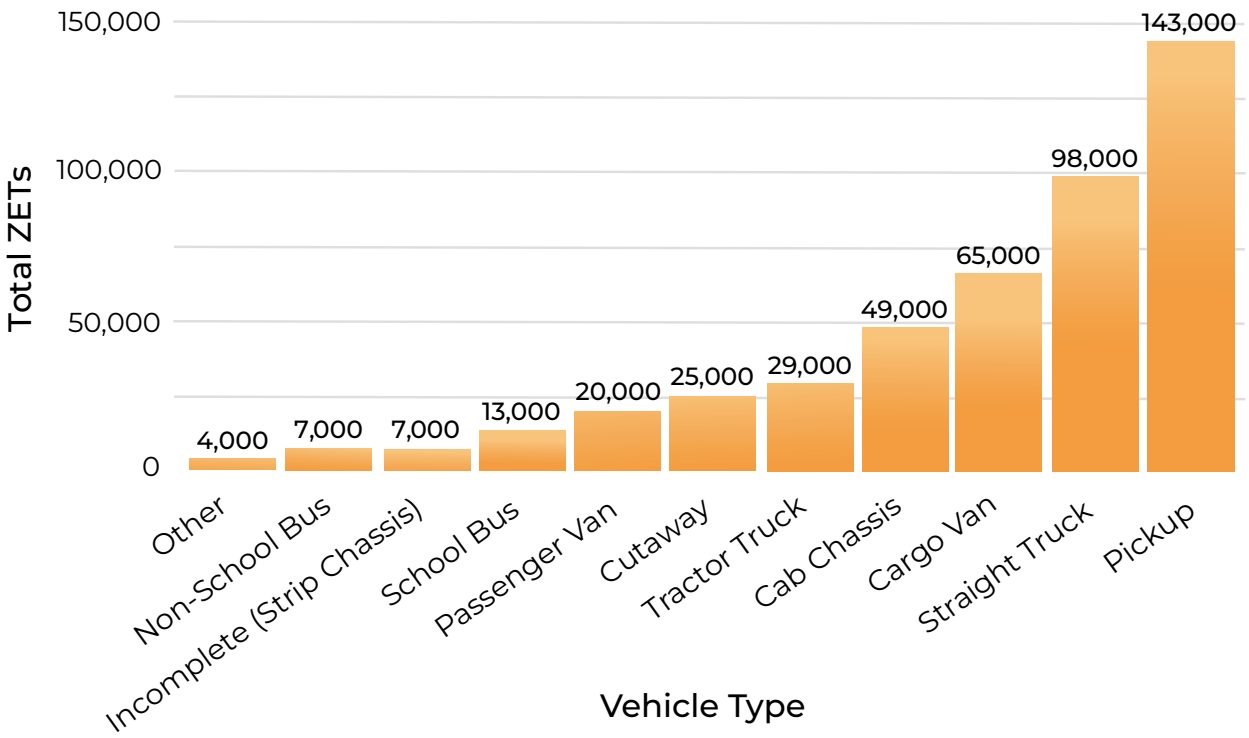
Roughly 297,000, or 64%, of these new ZETs will be deployed in California (188,000), New York (65,000), and New Jersey (44,000) alone, with California making up 40% of projected deployments (Figure 2). This concentration is good news for ZET charging infrastructure buildout to meet demand, since it can then be targeted and concentrated in areas in which demand is clearly growing. Consequently, infrastructure and charging-as-a-service (CaaS) providers may consider focusing their efforts on California and the other leading states through the end of the decade.

Figure 2. ZETs Deployed by State Through 2030



The most common ZET types that will be added to fleets are pickup trucks, straight trucks, and cargo vans, which total more than 306,000 vehicles (Figure 3).[2] Market readiness for ZETs in these categories is promising but uneven. Production of ZE pickup trucks and cargo vans is currently the most advanced and will be easily scalable. For Class 4–8 trucks like straight trucks and tractors, there are many ZE models in production, but production and deployment of these vehicles will need to increase.

Figure 3. ZETs Deployed by Vehicle Type Through 2030 From ACT and ACF



For a detailed discussion on the methodology and assumptions behind these projections, plus more in-depth analysis of the ACT/F regulations, read the full briefing paper with appendix and list of references at **http://www.calstart.org/act-acf-impact-on-zet-adoption**.

[2] "Other" includes vehicle types that are not projected to see a large increase in ZET deployments under ACT/F such as specialty and sport utility trucks and certain step vans.

About the Authors

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Acknowledgments

The authors would like to thank the following individuals for their contributions to this report:

- Ellen Robo, Manager, Transportation and Clean Air Policy, Environmental Defense Fund
- Dave Cook, Senior Vehicles Analyst, Union of Concerned Scientists

The authors would also like to thank key CALSTART staff, including Emily Castrichini, Michael Joseph, Chase LeCroy, Jasna Tomic, Bill Van Amburg, Tor Larson, and Emily Varnell for their critical review of and additions to this report. Any errors are the authors' own.

About CALSTART

A mission-driven industry organization focused on transportation decarbonization and clean air for all, CALSTART has offices in New York, Michigan, Colorado, California, Florida, and Europe. CALSTART is uniquely positioned to build the national clean transportation industry by working closely with its member companies and building on the lessons learned from the major programs it manages for the State of California. CALSTART has more than 280 member companies and manages more than $500 million in vehicle incentive and technical assistance programs in the United States.

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