

# Hurdles to Commercial ZEV Adoption

Comparing Capabilities of Diesel and Electric Commercial Vehicles

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	Diesel	Electric (ZEV)
<i>Fuel Type/Charging</i>	Diesel fuel is widely available with over 145,000 fueling stations nationwide. <sup>1</sup> Each station has multiple pumps and diesel fuel is available at over half (over two-thirds in some parts) of the nation's fueling stations. <sup>2</sup>	A national commercial charging network does not currently exist. Truck buyers are unlikely to buy vehicles without a reliable public refueling infrastructure designed for commercial ZEVs.
<i>Range</i>	The current range of most diesel Class 8 trucks is 1,000-1,500 miles.	The average range for an electric Class 8 truck is about 150 miles. <sup>3</sup>
<i>Time to Refuel</i>	A diesel truck can take as little as 15 minutes to refuel. This is a critical difference when truck drivers operate under strict "hours of service" rules (maximum of 11 hours driving after 10 consecutive hours off duty). <sup>4</sup>	A long-haul ZEV can take up to 10 hours to charge.
<i>Weight</i>	Diesel trucks are designed to be as light as practicable for purposes of fuel efficiency.  A typical diesel day-cab weighs about 15,600 pounds.	An electric day-cab with 200 miles of range weighs about 22,000 pounds. ZEV trucks with a 350-mile range and a larger battery can weigh 29,000 pounds without a driver and trailer.  The payload of heavier ZEV trucks is less than a comparable diesel, and since trucks are subject to strict federal weight limits it will increase the number of trucks on the road, increase congestion, and create more wear and tear on the road. <sup>5</sup>
<i>Affordability</i>	The average cost for a diesel-powered vehicle is \$180,000.	A typical electric Class 8 truck today costs roughly \$400,000.
<i>Federal Excise Tax (FET)</i>	Congress imposes a 12% FET on the sale of Class 8 diesel trucks, which adds an average of \$21,600 to the price of a new truck.	Congress imposes a 12% FET on the sale of electric Class 8 trucks, which adds an average of \$48,000 to the price of a new truck.

<sup>1</sup> American Petroleum Institute, [Service Station FAQs](#), (April 6, 2023).

<sup>2</sup> Engine Technology Forum, [Petroleum Fuels](#)

<sup>3</sup> American Trucking Associations, [Regulators have put the cart in front of the horse](#), (April 19, 2023).

<sup>4</sup> Id.

<sup>5</sup> Heavy Duty Trucking, [What Fleets Need to Know about Electric-Truck Batteries](#), (April 11, 2022).