



VERMONT TRUCK & BUS ASSOCIATION, INC.

September 29, 2022

Agency of Natural Resources  
Secretary Julie Moore  
1 National Life Drive, Davis 2  
Montpelier, VT 05620-3901

Via email to: [ANR.DECLEVZEV@VERMONT.GOV](mailto:ANR.DECLEVZEV@VERMONT.GOV)

CC to: [Deirdre.Ritzer@vermont.gov](mailto:Deirdre.Ritzer@vermont.gov), Air Quality and Climate Division, Mobile Sources Section

RE: Vermont proposed Advanced Clean Truck rules

Dear Secretary Moore:

I am writing on behalf of the VTBA to express our reservations and concerns about the proposed Advanced Clean Trucks rules. I understand that other associations and business owners will also be commenting with regard to the legality of using California rules and the questionable authority California has to implement them based on the Clean Air Act, and I echo those concerns.

We know that the rules are directed at manufacturers, and that medium and heavy duty truck availability is of great concern, regardless of how they are powered. The overall number of available new trucks at Vermont dealerships is already severely restricted. Our comments below are focused on the cost to a Vermont business to purchase an electric truck, when one becomes available. Trucking companies have to replace their trucks every 5 years or so, with typical mileage being 80,000/yr for local haulers, and 100,000/yr for long haul.

First, I understand the effort. We all want cleaner air and less hydrocarbons being emitted. However, in order to purchase an electric medium or heavy duty truck or bus, there are substantial real world impacts on Vermont trucking and bus companies that cannot be ignored. They break down into three essential areas: Cost of vehicle, cost of infrastructure to the business, and lack of adequacy of electric trucks to meet the hauling needs of customers. I will be focusing on the truck side of this equation, in the interest of space, but I do know that bus company impacts will be similar in regard to up front costs and infrastructure requirements.

1. Cost of vehicle.

To use Class 8 tractor units as an example, a Freightliner electric tractor will cost in excess of \$415,000 to purchase. This is in contrast to a diesel tractor costing \$155,000. The timeline to deliver the electric truck is two years, versus the diesel truck at roughly 8 to 12 months. This is 2.5 times the cost, 2 times the delay. Can any business sustain an added cost, up front, of over a quarter million dollars? This also does not address the availability of any new heavy trucks for sale in VT. My members are being told that Freightliner will have 15 class 8 power units for sale in VT next year; International may have zero.

2. Cost of infrastructure to the business.

a. Cost of charging station

Estimates I have received indicate the cost to purchase and install a charging station is about \$200

per kilowatt hour (kWh) of engine power. A typical class 8 truck will have 400kWh, with a resulting cost of \$80,000 to install each charging station.

b. Cost of replacement battery after service life

The current estimated service life of passenger car batteries is 100,000 to 200,000 miles. I have read nothing to indicate a larger battery will have a longer life, so using 200,000 miles between battery replacements, we have the following: since it costs \$132/kWh per battery (2022 figure) to buy one--- that is over \$52,000 per battery. That is a \$26,000 per year cost for each truck.

I have been told by advocates for EV that truck and bus companies can solve some logistical problems by owning multiple battery packs for each truck. In addition to the cost of extra batteries, there is the cost for the space to store them, and the equipment to safely move them.

While it is easy to tell someone else to spend money to solve a problem, this does not answer the impact on a business of requiring them to spend hundreds of thousands of dollars up front in order to use a mandated product.

c. Cost to ensure electric power at the business location is sufficient

It is simply unknown if the grid itself, or the current electrical system to a particular business, is sufficient to supply the kind of charging capacity which will be needed at businesses. What is certain is that there will be a cost for any upgrades into a business, and that cost will primarily be borne by the business.

Fuel cost savings versus costs of acquisition and operations: The total VT tax on diesel fuel just went up 4 cents to 36 cents/gallon, and Federal tax is 24 cents/gallon. With an 80,000 mile/yr at 6mpg, that is \$4800/yr in state tax revenue lost, and \$3200/yr in federal tax revenue lost, per truck.

3. Hauling issues

a. Reduction in payload due to weight of battery

The weight of a class 8 electric power unit adds 4,000 to 8,000 pounds to the tractor unit versus a diesel unit. This additional weight both must be addressed for maintenance on running gear, and reduction in net payload of 10 to 20% weight. That reduces profitability of the truck to its owner.

b. Charging times on-site and on-road

In long haul operations, where are the charging stations en route and how long will it take to charge a truck? Will the time spent at a charging station be counted against the hours of service of the driver? If a rapid charging station capability is developed---some are being studied now--- they will require megawatts of power to move the charging times down to the 60 to 90 minute range. That will require higher capacity electric grid connections, which will cost even more to safely construct. And the cost of all that power will also be higher.

c. Real world range issues

Manufacturers are post real world ranges of about half of quoted ranges. 250 mile ranges are optimistic, at best, and will be severely degraded by cold temperatures and hilly roads---both of which our state has in abundance. What is a trucker to do, when range ends and no charging locations are available? What are our customers to do, when that load is delayed 90 minutes, or 8 hours? Has this even been considered? Will a charging location have enough capacity (electrical and station) to meet the needs of

Trucks that need charging? I am sure we can all agree that this is not as simple as the passenger car EV charging issue.

The numbers, in the end: The truck owner will save \$50,000-60,000/yr in fuel costs at \$3.71/gallon today, but this is offset: by the likely new tax per mile needed to replace fuel tax revenues; by the added cost of \$50,000/yr over its service life of 5 years for the truck itself; \$26,000/yr for battery replacement after 200,000 miles; the added upfront cost of the charging stations and their power supply, both on-site at business locations and over the road; and the added costs to train and hire mechanics with expertise in electric vehicle power trains---if we can even get them.

VTBA members question the mandate of these rules and whether other agencies were truly aware of their impacts on everything from fuel taxes that pay for road maintenance; to the impact on our electric grid; to the hundreds of thousands of dollars of up front costs that will be borne by Vermont businesses. We urge you to at least ensure that VT businesses will continue to have the ability to use proven diesel technology until such time as electric medium and heavy duty trucks and buses are truly economically viable.

Sincerely,



William S. Smith, Esq., for Vermont Truck & Bus Association, Inc.

Approved as to content by:

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cc: Chairman Richard Mazza, Senate Transportation Committee  
Chairwoman Diane Lanpher, House Transportation Committee