Agency of Natural Resources Responses to Questions of the Senate Transportation and Natural Resources Committees on May 15, 2025

1) **Are there examples of ratioing occurring? Is this a real concern and not simply a threat?**

For medium- and heavy-duty trucks, in June and July 2024, DEC was made aware of Advanced Clean Trucks (ACT) sales strategies presented by two manufacturers in which they outlined their plans to implement "ZEV sales ratios" in the states that adopted ACT beginning in model year 2025. ACT requirements take effect in Vermont in model year 2026.

MA, NY and OR all adopted ACT requirements beginning in model year 2025, and DEC has heard from our agency counterparts in these states that truck manufacturers are actively engaging in ZEV sales ratio practices, which restricts internal combustion engine trucks sales until ZEV sales occur. Additionally, in January 2025, ANR hosted an information session about ACT for dealers and fleets and heard concerns from fleets and dealers about the manufacturers' plans to ratio sales in Vermont. On March 27, 2025, Vermont Vehicle and Automotive Distributors Association (VADA) and two truck dealers in New York and Massachusetts provided testimony to the House Transportation Committee indicating that manufacturers were imposing "ZEV sales ratios." These ratios required the dealers to sell or have on order an electric truck before they could sell any diesel-powered trucks, resulting in the reduced supply of available diesel-powered trucks to their dealerships.

For ACCII, DEC has no knowledge that manufacturers of passenger cars and light-duty trucks are actively engaging in ZEV sales ratio practices. However, at least one manufacturer has threatened to restrict deliveries of internal combustion engine cars and light-duty trucks in Vermont.

2) **How much charging infrastructure is needed to support the implementation of ACCII and ACT? What charging is needed as public vs. at home?**

On the light-duty side, according to the U.S. Department of Energy, 80% of EV charging happens at home. The U.S. EV charging infrastructure network for light-duty cars and trucks has seen rapid expansion, having doubled since 2021. Vermont public charging deployment is currently keeping up with and outpacing EV adoption, based on the National Renewable Energy Laboratory (NREL) recommended ratio of EVs to charging stations. However, although the number of units of charging is keeping pace, EV charging is not as widely available or as quick as refueling internal combustion engine (ICE) vehicles and these concerns remain challenges to adoption by some Vermonters. Further, to keep pace with the ZEV sales requirements in ACC II and Vermonters' current travel

habits, it is expected that continued investment in the deployment of public charging infrastructure is needed.

Recent federal actions have threatened funding for planned public EV charging infrastructure and caused uncertainty, including pausing federal funds for the National Electric Vehicle Infrastructure (NEVI) Formula Program.

For heavy-duty trucks, there are few public chargers available. Further, there are currently no state or federal funding programs available to assist in establishing this infrastructure. The ACT requirements were designed with the absence of public charging infrastructure in mind and focus on fleet depot charging locations where it is anticipated that the majority of charging infrastructure deployed to support electric trucks will be located in the near term. However, given the rural nature of Vermont, a depot-centered charging network may not support the types of use and travel Vermont heavy-duty fleets will need to be successfully deployed.

3) **What about home upgrades to support charging?**

Home charging needs can be met with either Level 1 or Level 2 charger. Level 1 may be sufficient for Vermonters with shorter daily trips, while Level 2 may be preferred for Vermonters with longer daily trips. Level 1 chargers and smart chargers (which avoid drawing load simultaneously with other major appliances or multiple EV chargers) can serve EV drivers without requiring an electric panel upgrade and may be particularly well-suited to providing reliable home charging solutions in multiunit properties, Vermonters with shorter daily trips, or access to reliable workplace charging, and plug-in hybrid electric vehicle drivers.

Charging with Level 2 equipment is typically more difficult for two types of homes: multiunit homes, including homes in manufactured housing communities (29% of Vermont homes) and single-family homes without sufficient electric panel capacity. Anecdotally, 30% of Vermont homes require an electric panel upgrade to fully serve Level 2 chargers. Taken together this indicates that more than half of Vermont residences are not currently ready to support Level 2 charging.

While costs can range widely depending on a home's setup, a panel upgrade to 200 amps typically costs $1,000 to $3,000. A Level 2 charger installation costs $500 to $1,500 and the charger itself costs $500 to $700. Green Mountain Power, Vermont Electric Coop, and Burlington Electric Department, which together serve 87% of Vermont homes, offer customers a Level 2 charger at no cost, either directly or via a rebate; these free chargers facilitate participation in each utility's managed charging program and allow access to

discounted EV rates. Under these utility-sponsored programs, however, homeowners are responsible for covering the cost of panel upgrades and installation of the charger.

4) Does Vermont have a plan for the buildout of public charging infrastructure?

The State of Vermont began investing in public EVSE infrastructure in 2014, with the launch of the Electric Vehicle Supply Equipment Program, administered by ACCD in partnership with the Electric Vehicle Supply Equipment (EVSE) interagency workgroup. These initial investments were for public Level 2 and direct current fast charging (DCFC) located in Vermont's downtowns and villages. In 2017, Vermont was awarded $2.8 million in VW Settlement Funds which spurred the deployment of additional public DC fast charging in 26 downtown locations. ACCD's EVSE funding programs have expanded to include L1 and L2 EVSE investments for home charging at multiunit and workplace charging, which may be private (restricted to tenants or employees) or made available to the general public. After a successful initial $1M pilot program for affordable multiunit residential properties, the program received an additional $10M appropriation approved in the 2022 and 2023 legislative session. These funds are currently being deployed via a re-branded program - Charge Vermont.

In the fall of 2021, the Agency of Transportation (AOT) worked with Drive Electric Vermont to develop a ten-year, statewide strategic EVSE deployment plan. This initial effort formed the foundation of the required NEVI plan, which is updated annually and serves as the state's EVSE DCFC Deployment Plan. Vermont's initial plan, first update, and second (most recent) update are all available on the AOT website.

In January 2025, AOT submitted a report on Vermont's public electric vehicle fast-charging network and progress to date toward the State legislative goals and the NEVI Deployment Plan as required by Sections 23 and 25 of Act 148 (2024 Transportation Bill). In the report, AOT includes maps showing both existing and planned DCFC infrastructure funded with federal and state sources.

Vermont's NEVI plan includes the build out of 15 DCFC stations along the state's highways designated by FHWA as Alternative Fuel Corridors. Charging at these stations would begin to establish a foundation for future medium and heavy-duty freight charging. AOT plans to look to use remaining NEVI funds to further close gaps along state highways and work toward meeting the 25-mile state goal.

As for continued deployment of Level 1 and 2 charging in multiunit properties and workplaces, Act 148 of 2024 authorized $1.7M to continue providing EVSE incentive via the Charge Vermont program. The act authorized $1.1m, as well as up to $600,000 from the

collection of an EV Infrastructure Fee, a fee that owners of electric vehicles registered in Vermont will pay on an annual basis until a Mileage Based User Fee is developed.

The EVSE interagency workgroup anticipated that these efforts would begin to make the kind of progress needed in the State's infrastructure to support significantly higher levels of EV registrations in each passing year. However, with NEVI funding paused at the federal level, threats to the continuance of tax credits for EVSE, and no longer term or continuous funding source identified, the Plan may be difficult to implement at the scale and pace required to support the ZEV sales requirements in ACC II.

5) **What information is being collected through the email box and what guidance are we going to give manufacturers to use that?**

More information regarding the email inbox and it's intended use is in the process of being added to DEC's ZEV website. Any complaints from dealers, municipalities, or fleets about manufacturers limiting the delivery and sale of gasoline and diesel vehicles to Vermont dealerships should be emailed to ANR at ANR.DEClevzev@vermont.gov. Complaints will need to include the following information:

- Vehicle Make
- Vehicle Model
- Vehicle Model Year
- Number of Vehicles
- Dealership
- Explanation of complaint

All complaints will be evaluated by ANR to determine if a manufacturer remains eligible for the compliance relief provided by the Executive Order.

DEC is also drafting more detailed guidance which will be made available on our website and be provided directly to manufacturers regarding reporting obligations and other steps that must be taken to access enforcement discretion, including documenting efforts to:

- promote and market zero-emission vehicles and submit a report to the Agency detailing efforts to increase deployment of charging infrastructure;
- educate and train dealers including sales and service staff on zero-emissions vehicles;
- and provide zero-emissions vehicles for ride and drive events.

6) Has ANR ever taken enforcement action in ACC?

No. Shortly after the rules were first effective under ACC in Model Year 2000, there were some concerns with federally certified vehicles being sold in Vermont. However, similar to the compliance-first approach ANR uses in the initial period following adoption of any new rule or program, ANR utilized its enforcement discretion and provided warning letters to manufacturers and dealers to communicate our concerns and these issues diminished quickly following outreach and education. ANR continues to work with manufacturers on other compliance issues related to emissions warranties of ACC using a similar process of outreach and education.