

Agency of Agriculture Food & Markets 116 State Street Montpelier, VT 05620-2901 www.Agriculture.Vermont.gov

Retail Electric Vehicle Supply Equipment (EVSE) Weights & Measures Handout

The Weights & Measures Section of the Vermont Agency of Agriculture Food & Markets (VAAFM) has the responsibility to regulate all weights and measures, and weighing and commercial measuring devices in the state, pursuant 9 V.S.A. § 2631 & 2651, Commerce and Trade.

This document is designed to assist and inform businesses as they enter the electric vehicle charging market by clearly establishing the expectations and requirements of this new market as it applies to Vermont Weights & Measures (W&M) subject matter. To ensure that Vermont businesses and consumers work in a fair and reliable market, all equipment must meet the same standards required by laws, including method of sale.

The W&M Program will be testing and inspecting electric vehicle supply meters used commercially in direct sale to consumers, not those operated by a public utility system. Devices where electricity is supplied for free will not be considered commercial as no transaction is taking place for the charging of the vehicle, and therefore will not be tested and inspected by the W&M Program.

Method of Sale

All electrical energy sold at retail as vehicle fuel must be sold in terms of kilowatt-hour (kWh), as required by <u>NIST Handbook 130</u>. Unit price for electricity must be displayed in in terms of whole cent (\$0.32) or tenth of one cent (\$0.319).

In addition to the fee for electrical energy, fees may be assessed for other services, such as parking. These additional charges can be fixed or based on time. These fees must be displayed to the consumer prior to services.

Selecting a Device

All electrical vehicle supply equipment (EVSE) not operated by a public utility need to be "Legal for Trade" and comply with all the requirements in NIST Handbook 44. EVSE units are categorized by the power supplied and speed at which they can charge a vehicle.

Level	Power	Speed of Charge
1	AC	Adds 3 to 5 miles of range
		per hour of charging
2	AC	Adds 20 to 30 mile of range
		per hour of charging
3	DC	Charges battery to 80% of
		Range in 20 minutes
AC: Alternating Current		ent DC: Direct Current

Level 1 and level 2 charging are the equivalent

of plugging a vehicle into regular home wall outlets (120V) and larger home outlets (240V), respectively. Level 3 charging (also referred to as "DC Fast") uses direct current at higher





voltages (up to 1000V) to charge the vehicle quicker.

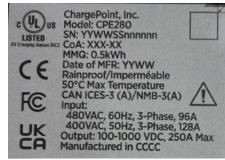
CTEP Approved and NTEP approved EVSE are recommended (manufacturers are issued a Certificate of Approval). These will have a CTEP CoA number on the plate. The number may be prefaced by terms such as: "CTEP", "CoA", and "Approval". NTEP Certificates of Conformance Database Search | NCWM

The device will have a nomenclature plate containing the following information:

- Make
- Model
- Serial Number
- Voltage and Type of Current
- Maximum Current Deliverable
- Temperature Limits
- Minimum Measured Quantity

After January 1, 2024 all commercial EVSE must be placed into service by a service person who is registered with the W&M Program at the VAAFM. All companies that manufacture EVSE make commercial and noncommercial equipment, so make sure you ask the installer/manufacturer if the device meets all these requirements if you intend to charge for the power provided by this equipment. This industry is evolving, and equipment is changing rapidly.

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Example nomenclature plate

Commercial EV Charger Brands

ABB
Autel
Blink
BTC Power
ChargePoint
EVgo
EvoCharge
Freewire
Proterra
Shell Recharger Solutions
Tellus Power Green
Tesla
Tritium

