



Electric Power Takeoff (ePTO) Guidance

- 1) **HVIP Vehicle Approval Letters for ePTOs are issued on a basis of ePTO model, model year, and combined GVWR classes – 5 & 6, 7 & 8, or 5-8.** HVIP Approval will not be limited to specifically described vehicle chassis.
- 2) **Class 5 & 6 ePTO plug-in vehicle purchasers must agree to provide access to necessary charging equipment at the domicile location,** or a copy of their company's charging policy showing plug-in access. Class 7 & 8 vehicles with ePTO are exempt from this requirement.
- 3) **ePTO technologies will receive a fixed voucher amount to be determined during vehicle eligibility consideration and re-visited with each model year update.** This will provide price certainty for dealers and purchasing fleets regarding HVIP voucher amounts. If a vehicle quote for a specific sale is substantially lower than the price range provided on the vehicle's initial eligibility application, additional information may be required.
- 4) **HVIP ePTO eligibility is no longer restricted to aerial boom-equipped vehicles.** All applications of ePTO technologies can be considered for HVIP eligibility. All language referring to a 50' boom minimum height requirement has been removed from the FY18-19 Implementation Manual.
- 5) **Demonstration Standards for Aerial Boom-Equipped vehicles** can be found within the technology eligibility application. Demonstration standards for all other ePTO applications will be determined on a case-by-case basis.
- 6) **Additional Updates:**
 - i) a. Vehicles with an ePTO powered by lead acid battery technology are not eligible.
 - ii) b. Vehicles whose PTO is powered by a battery chemistry other than lithium ion or other zero-emission technology will be considered for HVIP funding eligibility on a case-by-case basis, with voucher amounts dependent upon technology incremental cost, potential for technology transfer to other vehicle or equipment applications, and other criteria.
 - iii) An ePTO must use alternating current (AC) to power the electric motor and have a voltage of at least 40 volts. An ePTO system using direct current may be approved by CARB Project Liaison on a case-by-case basis based upon evidence the system is robust and will not compromise workplace safety.
 - iv) The vehicle ePTO system must demonstrate ability to charge from the battery manufacturer recommended minimum state-of-charge (i.e., the remaining battery voltage defined by the manufacturer at which the vehicle engine will turn on to recharge the ePTO battery) to fully charged within twelve hours when plugged in.

- v) The vehicle must include a telematics device that electronically tracks:
- Vehicle location
 - Time of operation in ePTO mode
 - Telematics data for SB 535 DACs: All work vehicles with ePTO, except military vehicles, shall be equipped with a data acquisition system capable of collecting vehicle GPS data.
- vi) Each vehicle manufacturer shall be responsible for providing quarterly reports for each vehicle to data@californiahvip.org Each quarterly report shall have current quarterly and cumulative data listing the following information: a. Hours and percentage of total time when the vehicles are parked and operating in ePTO mode (engine off, providing work power from batteries) within a SB 535 DAC.
- Each report shall be broken into two groups:
 - a. Vehicles domiciled in a SB 535 DAC.
 - b. Vehicles not domiciled in a SB 535 DAC.

For more information:

Review the Vehicle Application Forms and Implementation Manual at www.californiahvip.org