

## Suggested ZEV Application Format for Certification

<u>Section No.</u>	<u>Title</u>
01.00.00	Communications
.01.00	Mailing Information
.01	Certification Information
.02	Responsible official
02.00.00	Confidential Information
.01.00	Statement of confidentiality
.02.00	Test vehicle selection "Worst case" test vehicle selection and manufacturer defined criteria if more than one model offered (e.g. 2-door vs 4-door).
.03.00	Projected California annual model-year sales
03.00.00	Facilities, equipment, and test procedures (Manufacturers to keep information regarding facilities and equipment on file.)
.01.00	(Reserved)
.02.00	Battery pre-conditioning procedures (if necessary)
04.00.00	(Reserved)
05.00.00	(Reserved)
06.00.00	Maintenance
.01.00	Test vehicle scheduled maintenance
.02.00	Recommended customer maintenance schedule
.03.00	Lubricants and heater fuels, if any
07.00.00	Vehicle Emission Control Information (VECI) and Environmental Performance (EP) Labels
.01.00	VECI Label locations
.02.00	Sample VECI labels
.03.00	Sample EP label (Formerly called the Smog Index label)
.04.00	Statement of compliance

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<u>Section No.</u>	<u>Title</u>
08.00.00	General technical description (Manufacturer's sales brochures or owner's manual may be submitted to satisfy the requirements in this section.)
.01.00	Description of Propulsion System
.02.00	Description of Motor(s)
.03.00	Description of Batteries
.01	Battery charging capacity
.02	Self-discharge information
.03	Description of thermal management system
.04	Definition of end-of-life
.05	Description of battery disposal plan
.04.00	Description of Controller/Inverter
.05.00	Description of Transmission
.06.00	Description of climate control system
.01	Electric Heat Pump
.02	(Reserved)
.03	Climate control system logic
.04	(Reserved)
.07.00	Description of Regenerative Braking System
.01	Control logic
.02	Percentage of braking performed on road by each axle
.08.00	Description of charger
.01	Proper recharging procedures
.02	Power requirements necessary to recharge vehicle
.09.00	Accessories which draw energy from the batteries
.10.00	Other unique features (e.g. solar panels)
.11.00	Description of warning system(s) for maintenance / malfunction
.01	Cut off terminal voltages for prevention of battery damage
09.00.00	(Reserved)
10.00.00	(Reserved)
11.00.00	Starting and shifting schedules
12.00.00 through 16.00.00	(Reserved)

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<u>Section No.</u>	<u>Title</u>
17.00.00	California requirements
.01.00	Statement of compliance
.01	General statement
.02	Driveability statement
.02.00	Supplemental Data and Certification Review Sheets
.03.00	(Reserved)
.04.00	Credits
.01	Description of multi-manufacturer arrangements
.02	Credit calculation
.05.00	Vehicle Safety
.01	All information for safe operation of vehicle
.02	Information on safe handling of battery system
.03	Description of emergency procedures
.06.00	(Reserved)

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MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: \_\_\_\_\_ Test Group: \_\_\_\_\_

Vehicle Class(es): PC \_\_\_\_\_, LDT1 (0-3750 lbs. LVW) \_\_\_\_\_, LDT2 ( $\geq$  3,751 lbs. LVW) \_\_\_\_\_,  
MDV6 (8,500-10,000 lbs. GVW) \_\_\_\_\_, MDV7 (10,001-14,000 lbs. GVW) \_\_\_\_\_

ZEV Type: NEV \_\_\_\_\_, Type 0 \_\_\_\_\_, Type I \_\_\_\_\_, Type I.5 \_\_\_\_\_, Type II \_\_\_\_\_, Type III \_\_\_\_\_, Type IV \_\_\_\_\_, Type V \_\_\_\_\_

No. of ZEV Credits per vehicle: \_\_\_\_\_

Fuel Type: Electro-chemical Battery \_\_\_\_\_, Fuel Cell \_\_\_\_\_, Capacitor \_\_\_\_\_, Other (specify) \_\_\_\_\_

Battery Type(s): Lead Acid \_\_\_\_\_ Nickel Cadmium \_\_\_\_\_ SBLA \_\_\_\_\_ Sodium Sulfur \_\_\_\_\_  
Sodium Nickel Chloride \_\_\_\_\_ Nickel Metal Hydride \_\_\_\_\_ Lithium Metal Disulfide \_\_\_\_\_  
Zinc Air \_\_\_\_\_ Zinc Bromine \_\_\_\_\_ Lithium Polymer \_\_\_\_\_, Lithium Ion \_\_\_\_\_,  
Other (specify): \_\_\_\_\_

Total Battery Weight (kg.): \_\_\_\_\_ Total Battery Volume (liters): \_\_\_\_\_

No. of batteries or modules per vehicle: \_\_\_\_\_ Total Battery Voltage: \_\_\_\_\_

Charger(s): On-board \_\_\_\_\_ Off-board \_\_\_\_\_ Conductive \_\_\_\_\_ Inductive \_\_\_\_\_.

Drive Motors(s): AC Induction \_\_\_\_\_ DC Brush \_\_\_\_\_ DC Brushless \_\_\_\_\_  
Switched Reluctance \_\_\_\_\_ Other (specify ): \_\_\_\_\_.

No. of Drive Motors \_\_\_\_\_ Rated motor power \_\_\_\_\_ @ \_\_\_\_\_ rpm Max rpm: \_\_\_\_\_.

Drive: FWD \_\_\_\_\_ RWD \_\_\_\_\_ 4WD-FT \_\_\_\_\_ 4WD-PT \_\_\_\_\_

Regenerative Braking: No \_\_\_\_\_ Yes \_\_\_\_\_ FW \_\_\_\_\_ RW \_\_\_\_\_ AW \_\_\_\_\_.

Driver Controlled Regen Braking: Yes \_\_\_\_\_ No \_\_\_\_\_ Coast Regen Braking: Yes \_\_\_\_\_ No \_\_\_\_\_.

Air Conditioning: Yes \_\_\_\_\_ No \_\_\_\_\_, Fuel Fired Heater:<sup>1</sup> Yes \_\_\_\_\_ No \_\_\_\_\_

Vehicle Make & Models (If coded, see attachments)	Trans type M5, A4 (If applicable)	GVWR	Curb Weight	ETW or Test Weight	DPA / RLHP or Dyno Coeff. a=, b=, c=

Date Issued: \_\_\_\_\_

Revisions: \_\_\_\_\_

<sup>1</sup> Fuel fired heaters are not allowed in pure ZEVs for model year 2009 and subsequently.

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MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET  
ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: \_\_\_\_\_ Test Group: \_\_\_\_\_

Range Test Results							
Vehicle ID	Trans	(check one) ____ TW ____ ETW	(check one) ____ DPA ____ RLHP Or dyno coeff.	City Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)
				Hwy. Range	System AC (Wh/mi)	System DC (Wh/mi)	Vehicle DC (Wh/mi)

Battery Test Results: Specific Energy: Wh/kg \_\_\_\_\_

Remarks:

Date Issued: Revisions:

----- **ARB USE ONLY** -----

Application:  
Processed By: \_\_\_\_\_ Date: \_\_\_\_\_ Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_