



U.S. DEPARTMENT OF

ENERGY

Advanced Technology Vehicles Manufacturing Loan Program

NOTICE: Submitting Company Confidential, Proprietary, or Privileged Information with Loan Applications

If elements and/or attachments of an application for a loan under Section 136 of the Energy Independence and Security Act of 2007 (the U.S. Department of Energy's [DOE] Advanced Technology Vehicles Manufacturing Incentive Program) contain information the applicant considers to be trade secret, confidential, privileged or otherwise exempt from disclosure under the Freedom of Information Act (FOIA, 5 U.S.C. 552), the applicant shall assert a claim of exemption at the time of application by placing the following text on the first page of the application, and specify the page or pages of the application to be restricted:

"The data contained in pages [_____] of this document which hereby forms a part of the application have been submitted in confidence and contain trade secrets of proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that, if this applicant is issued a loan under Section 136 of the Energy Independence and Security Act of 2007 as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein, other than such data that have been properly reasserted as being trade secret or proprietary in the loan agreement. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the applicant."

To further protect trade secret, confidential, privileged or otherwise exempt information, each line or paragraph on the page or pages containing such data must be specifically identified and marked with text that is similar to the following:

"The following contains proprietary information that [name of applicant] requests not be released to persons outside the Government, except for purposes of review and evaluation."



TECHNICAL SUPPORT DOCUMENT

SUBSTANTIALLY SIMILAR ATTRIBUTES DETERMINATION

Under Section 136, Advanced Technology Vehicles (ATV) must have at least 125% of the average base year combined fuel economy for vehicles with "substantially similar attributes." The Department of Energy (DOE) has determined that model year (MY) 2005 will be used as the base year for the determination of vehicle attributes and fuel economy. Details concerning the determination and calculation methods for "substantially similar attributes" are presented below.

Use of Existing EPA Vehicle Fuel Economy Classes

To identify vehicles with substantially similar attributes, DOE relied in part on EPA's existing 2005 vehicle classes to establish appropriate vehicle classifications. For MY 2005, EPA segmented the U.S. vehicle fleet each into classes of vehicles for the purpose of fuel economy comparisons between vehicles with similar characteristics. DOE based its identification of vehicles with "substantially similar attributes" for the purpose of the ATV definition on the EPA classes. DOE further segmented vehicles into performance classes where appropriate, as explained below. The initial EPA classes plus the addition of performance subclasses (and consolidation of two categories) resulted in 18 categories that define the vehicles with substantially similar attributes as shown below:

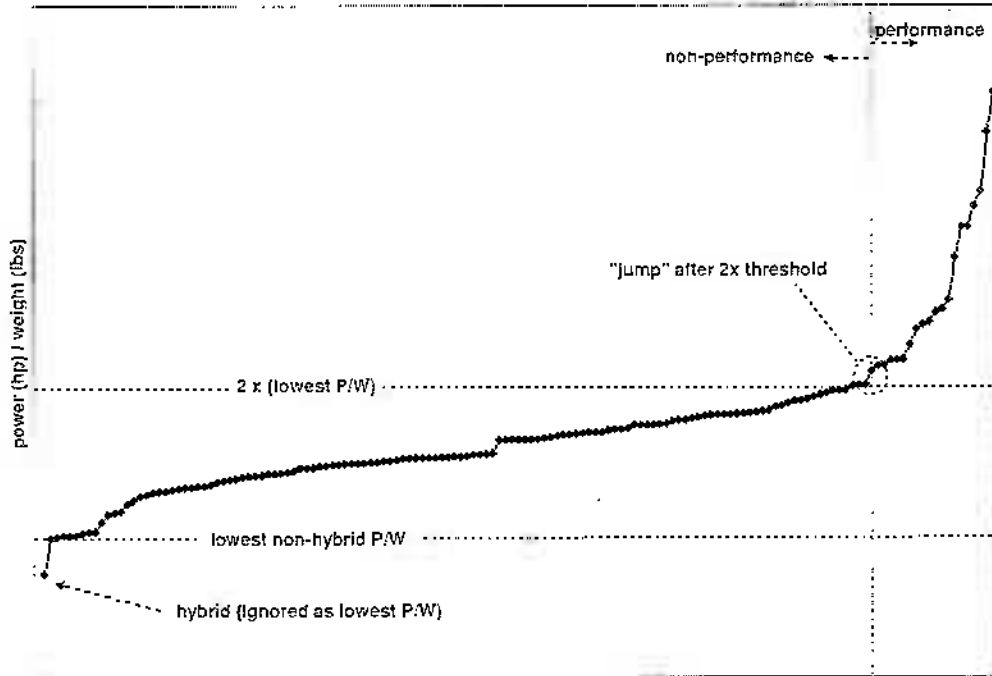
EPA Vehicle Class Definitions*	EPA Vehicle Classes	EPA Vehicle Classes plus Performance Classes**
Any vehicle designed to seat two adults	Two Seater	Two-Seater
		Two-Seater Performance
< 85 ft ³	Mini-compact Sedan	Minicompact Sedan
		Minicompact Performance Sedan
85-99 ft ³	Subcompact Sedan	Subcompact Sedan
		Subcompact Performance Sedan
100-109 ft ³	Compact Sedan	Compact Sedan
		Compact Performance Sedan
110-119 ft ³	Midsize Sedan	Mid-Size Sedan
		Mid-Size Performance Sedan
120 ft ³ or more	Large Sedan	Large Sedan
<130 ft ³	Small Wagon	Small Wagon
130-159 ft ³	Midsize Wagon	Mid-Size and Large Wagon
160 or more	Large Wagon	
< 6000 lbs	Small Pickup	Small and Standard Pickup
6000-8500 lbs	Standard Pickup	



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The division of a class into performance and non-performance classes was made at the point along the P/W line at which there was an apparent increase in the P/W values. Visually, this increase appeared as a jump on a plot of P/W ratios ranked in increasing order, as shown below:



The P/W evaluation resulted in the creation of five performance classes - two-seater performance, mini-compact performance sedan, sub-compact performance sedan, compact performance sedan, and midsize performance sedan. Conversely, because other vehicle classes—large Sedans, all classes of wagons, small and standard pick-ups, all classes of vans, and sport utility vehicles—have relatively flat P/W curves or narrow P/W ranges across the entire class, DOE did not create performance classes in those categories.

Average MY 2005 Combined Fuel Economy for Vehicles with Substantially Similar Attributes

In order to identify the average fuel economy for vehicles with substantially similar attributes, DOE calculated the harmonic production weighted average fuel economy for each class identified by DOE. DOE calculated the average fuel economy for each vehicle class using a harmonic production weighted average as illustrated below:

$$MPG = \frac{\#VehicleA + \#VehicleB + \dots}{\frac{\#VehicleA}{MPG_{VehicleA}} + \frac{\#VehicleB}{MPG_{VehicleB}} + \dots}$$