



December 16, 2005

Office of Associate Chief Counsel (Passthroughs and Special Industries)
Internal Revenue Service
Branch 7, Room 4315
1111 Constitution Avenue, NW
Washington, DC 20224

Attn: Leslie Finlow, CC:PSI:Br.7

RE: ALTERNATIVE MOTOR VEHICLE INCENTIVES IN EPACT 2005

Dear Ms. Finlow:

I am writing on behalf of the Vehicles Committee of the Tax Incentives Assistance Project (TIAP) regarding the implementation of the hybrid and diesel vehicle tax credit provisions in Section 1341 of the Energy Policy Act of 2005. TIAP was formed to support implementation of tax credits for energy efficiency, so we have not provided comments below on the credits for alternative fuel vehicles.

Several issues, both technical and non-technical, will need to be resolved to allow successful implementation of the credits. Some of these can and should be resolved immediately by the Treasury Department to ensure an orderly start to the program, given that many consumers are eager to take advantage of the credits starting January 1, 2006. In the case of light-duty vehicles, relatively little clarification of technical issues is needed, but guidance regarding provision of consumer information will be critical and should be provided right away. Other aspects of the credits, such as fuel economy measurement for heavy-duty hybrids, call for substantial technical background preparation, and care must be taken to carry out this work both thoroughly and expeditiously. Consequently we urge the Treasury Department to issue rules or guidance on the credits in stages, the first in the very near future. Discussion and recommendations regarding the matters that need to be resolved follow.

Quality and availability of model-specific information

The applicability and amount of the tax credit for a given vehicle depend upon several pieces of information that a vehicle purchaser may not know, including weight class, relevant fuel economy, and emissions certification. Availability of the credit will also depend on the status of the vehicle manufacturer at a given point in time with respect to the 60,000-vehicle cap that triggers a phase-down. Consequently, a simple and reliable mechanism is needed to allow consumers to ascertain the amount of credit that will be available for a given vehicle at a given time. As the credits are intended to encourage consumers who might not otherwise do so to purchase advanced technology vehicles, any confusion or inadequacies in the information regarding the availability and amount of the credits will detract considerably from the value of the program. Even though purchasers

will not receive the credits until they pay income tax, this information must be accessible at the time of purchase, when the credit can serve as an incentive.

Recommendation: The Treasury Department, in consultation with auto manufacturers, auto dealers, consumer interests, and the EPA, should devise a mechanism for making widely available clear and up-to-date information on what models are eligible and the amount of the credit for each. We recommend that EPA be used as a source of the data necessary to calculate the credits, so that eligible vehicles will be handled uniformly with respect to the determination and announcement of credits. The Treasury Department should also provide timely and reliable information on the phase-out of any manufacturer's credits. In particular, for hybrids with a waiting list, purchasers should be able to know whether they will receive a credit when they reserve a vehicle. All of this information needs to be issued or approved by the Treasury Department and posted for consumers online and, for light-duty vehicles, in dealerships as soon as a vehicle is offered for sale. For existing, eligible vehicles, this information should be posted no later than December 31, 2005.

Leased vehicles and recapture

In section (c)(3)(C) of the vehicle tax credit provision and elsewhere, an eligible vehicle is specified to be one "which is acquired for *use or lease* by the taxpayer" (emphasis added). This wording makes clear that leased vehicles are eligible for credits, but it is unclear to us whether it is the lessor or the lessee that receives the credit.

Section (h)(8) of the vehicle tax credit provision requires the Treasury Department to issue regulations that provide for recapture of the credit for a vehicle that "ceases to be property eligible for such credit". The terms of the recapture should be specified as soon as possible, since this provision could in principle influence a consumer's decision to buy an eligible vehicle. The treatment of recapture in the case of the credits and deductions currently available for electric and "clean-fuel" vehicles, respectively, would be appropriate here, in general terms. Recapture in those cases is triggered by either a physical change to the vehicle (e.g., loss of ability to meet required emissions standards) or a change in the use of the vehicle, but generally not by sale of the vehicle.¹

The parenthetical example of "a lease period of less than the economic life of the vehicle" in the recapture provision ((h)(8)) raises concerns in this regard. The economic life of a vehicle is not defined in the provision; but if a credit for a leased vehicle would be subject to recapture should the vehicle change hands after a few years, it is not clear that a vehicle purchaser would be permitted to sell his or her vehicle and retain the tax credit. Also, this example seems to imply that the lessee (i.e., the person using the leased vehicle) would be the recipient of the tax credit, a matter that needs clarification, as noted above.

¹ IRS Publication 535, "Business expenses for use in preparing 2004 returns."

Recommendations: The Treasury Department should clarify by December 31, 2005 1) who receives the tax credit in the case of leased, qualifying vehicles and 2) conditions under which the credit is subject to recapture. Those conditions should be limited, as they are in the case of the existing deduction for “clean-fuel” vehicles, to situations in which the vehicle “ceases to qualify” within 3 years of being placed into service by virtue of modifications to the vehicle or to the use of the vehicle.²

Light-duty hybrid and diesel vehicle credits

Three points of the language on light-duty credits need clarification:

1. Fuel economy – The fuel economies that determine the credit amount are referred to in some places as “city fuel economy” and elsewhere as “fuel economy” alone (see e.g. (c)(2)(A)(i)). Furthermore, the fuel economies are not identified as “unadjusted” (i.e., laboratory) values or “adjusted” values.
2. Gasoline gallon equivalence – The city fuel economy for diesels is to be determined “on a gasoline gallon equivalent basis as determined by the Administrator of the Environmental Protection Agency” ((c)(2)(A)(ii)). We believe that the intent of the drafters was that the basis for that equivalence be the energy content of the fuels, but this is not stated explicitly.
3. No double benefit – It was not to our knowledge the intent of the drafters to grant double credit to light-duty diesel hybrids, yet the language of the bill seems to allow this.

Recommendations: The Department of Treasury should make the following three clarifications by rule or guidance:

- i. The fuel economies that determine the amount of the credit for a given vehicle are unadjusted, city fuel economies.
- ii. The gasoline gallon equivalence that determines diesel fuel economy for purposes of the credit is based on the energy content of the fuels. That is, the fuel economy of a diesel vehicle in this case is by definition:
$$\text{miles per gallon (on diesel fuel)} \times (\text{Btu per gallon gasoline} / \text{Btu per gallon diesel}).$$
The second factor, whose value lies between .87 and .90 depending on fuel formulation, should be set by the EPA based on expected average energy content of diesel fuel and gasoline to be used by the covered vehicles.
- iii. A light-duty diesel hybrid can receive a credit either as an advanced lean-burn vehicle or as a hybrid vehicle, but not both.

Hybrid vehicles over 8,500 pounds GVW

² One element of the recapture policy set out in IRS Publication 535 that should *not* be applied to the advanced technology vehicle tax credits is that a vehicle sold to certain tax-exempt organizations or governmental units would become “nonqualifying property” and consequently would be subject to recapture if the sale occurred in the first three years of the life of the vehicle. The advanced technology vehicle credits in EPAAct 2005 are intended to benefit tax-exempt entities as well, albeit indirectly, through a credit to the seller; so there should be no recapture of credits when such an entity purchases a used, eligible vehicle.

A major issue to be resolved with respect to tax credits for hybrids over 8,500 pounds gross vehicle weight relates to the credits' basis in the fuel economy of the hybrid relative to a "comparable" conventional vehicle. Heavy vehicles currently have no fuel economy ratings, so the Treasury Department will need to define a means for assigning them such ratings. It is important that this be done in a manner that is both rigorous and timely.

For trucks in the 8,500- to 10,000-pound range, EPA's light-duty test procedures would be appropriate. For trucks over 10,000 pounds GVW, assigning fuel economies will require a new test protocol and set of test cycles to ensure an appropriate level of consistency in the treatment of all trucks. The test protocol should cover such matters as: whether the test will be conducted on a track or a dynamometer; how the state of charge of a vehicle's energy storage system is to be accounted for; and what the general rules will be governing vehicle payload. The Society of Automotive Engineers and others have created test procedures (e.g. J1321 and J2711) that can serve as the basis for a protocol once there is agreement on the basic elements the protocol needs to capture.

Test cycles must be developed as well. Truck duty cycles vary greatly, and the fuel economy gain of a hybrid over a conventional vehicle depends strongly on duty cycle.³ While it is not essential that the test cycle replicate precisely the duty cycle of the vehicle being tested, the cycles must be sufficiently similar to yield about the same percentage gain in fuel economy of the hybrid over its conventional counterpart. Using the same test cycle for all trucks therefore would be inappropriate; but the number of cycles needed may be quite small. Some flexibility should be allowed in the specification of test cycles so that appropriate cycles can be developed as needed when new hybrid models approach commercialization.

Guidance on the notion of "comparable vehicle" will also be important, since heavy-duty hybrids may not always have obvious conventional counterparts against which to measure fuel economy gains. A "comparable vehicle" is defined in the provision as "any vehicle which is powered solely by a gasoline or diesel internal combustion engine and which is comparable in weight, size, and use to such vehicle" (Section (d)(2)(iv)). Heavy-duty vehicles need to be specified precisely by the purchaser, however, so this definition is too vague. Performance specifications should take precedence over physical specifications in the determination of comparability, since a hybrid may achieve a given performance target through an alternative means, e.g. using a smaller engine boosted by the electric motor.

Another matter that should be resolved by the Treasury Department relates to "series" hybrids. The heavy-duty tax credit language provides for a modified definition of maximum available power (section (d)(3)(C)) for vehicles in which the sole means of propulsion is the "rechargeable energy storage system". If this were interpreted to mean only the battery or other energy storage device and not the electric motor or other means

³ See e.g. An, Stodolsky, Vyas, Cuenca and Eberhardt, "Scenario Analysis of Hybrid Class 3-7 Heavy Vehicles," Society of Automotive Engineers, March 2000.

to deliver that power, it would inappropriately exclude from this modified definition certain series hybrids.

Recommendations:

- i. The fuel economy of vehicles in the 8500-10,000 pounds gross vehicle weight range should be measured using EPA's light-duty test procedures.
- ii. The Treasury Department should announce a schedule for establishing a fuel economy testing program for vehicles over 10,000 pounds in two phases. First, a test protocol should be established as soon as possible, using existing test protocols as starting points. Second, the Treasury Department should specify that test cycles will be developed by the EPA in consultation with truck users groups and other interested parties to represent each of a number of duty cycles as new hybrid vehicle types are developed. Test procedures should specify a representative test payload and what aerodynamic devices are to be used for each drive cycle.
- iii. The Treasury Department should provide guidance on the meaning of "comparable vehicle", clarifying that the comparable conventional vehicle should be specified to meet the same performance requirements as the hybrid, which may not lead to comparability of physical specifications. The guidance should set procedures for designating a comparable conventional vehicle for any new hybrid over 8,500 pounds GVW.
- iv. To ensure that heavy-duty series hybrids are treated fairly and as intended, the term "rechargeable energy storage system" in (d)(3)(C)(ii) should be interpreted to include the motor for purposes of determining whether such a system is the sole means of propulsion for the vehicle.

Thank you for your consideration of our comments. Please let me know if any clarification is needed. We would welcome further opportunities to comment on the implementation of the advanced technology vehicle tax credits.

Sincerely,

Therese Langer
Transportation Program Director
American Council for an Energy-Efficient Economy

Cc: Mary Manners, USEPA