DISCUSSION PAPER FOR STATE AND LOCAL GOVERNMENT STAKEHOLDER MEETINGS TO DISCUSS ALTERNATIVE FUELED VEHICLE (AFV) ACQUISITION REQUIREMENTS FOR PRIVATE AND LOCAL GOVERNMENT FLEETS

Background

On April 17, 1998, the Department of Energy (DOE) published an Advanced Notice of Proposed Rulemaking (ANOPR) concerning possible alternative fueled vehicle (AFV) requirements for private and local government fleets, under the Energy Policy Act of 1992 (EPACT). The ANOPR addressed the fleet acquisition program within Section 507(g) of EPACT, as well as possible alternative fuel requirements for urban transit bus fleets, in accordance with Section 507(k). In May and June of 1998, DOE held three public hearings in Minneapolis, MN; Los Angeles, CA; and Washington, DC.

Comments were received from a broad cross-section of organizations and private individuals, including auto manufacturers, the oil industry, alternative fuel providers, fleet operators, fleet leasing organizations, Clean Cities coordinators and participants, and fuel system manufacturers.

Since the end of the ANOPR comment period, DOE has been engaged in efforts leading to the publication of a Notice of Proposed Rulemaking (NOPR) for the Local Government and Private Fleet Program. Included in this effort has been development of draft NOPR language; analyses, such as the Regulatory Impacts Analysis; and stakeholder meetings during the Fall of 1998, where DOE's regulatory concepts were presented and discussed with a broad cross-section of stakeholders.

On July 20, 2000, DOE published a notice in the *Federal Register* (65 FR 44987) announcing several public workshops, two of which are focused upon State and local Governments, as well as a deferral on the NOPR itself. This deferral was necessary to ensure that State and local Governments were provided an opportunity for input in accordance with Executive Order 13132 "Federalism," issued August 4, 1999. This order requires that each covered Federal agency have "an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications." Since the subject program focuses upon new requirements for local government fleets, many of whom either report to or receive funding from states, it was felt that these public workshops were needed to meet the requirements of the Executive Order.

DISCUSSION OF REGULATORY OPTIONS

DOE has developed several optional rule formulations it may pursue regarding local government and private fleets. Summaries of these optional rule formulations are presented below.

Option Summaries

Option 1 - No Regulatory Requirement for Local Government and Private Fleets is Proposed

DOE could decide that no requirement for local government and private fleets should be promulgated. If this approach is adopted, Section 509 of EPACT requires DOE to provide Congress with recommendations for possible requirements or incentives for fuel suppliers, vehicle suppliers, and motorists that would help achieve EPACT's replacement fuel goals. Under this option, DOE might choose to develop a program focusing primarily upon voluntary efforts, such as successful market niches or definitive development of carefully tailored financial or non-financial incentives.

Option 2 - The Local Government and Private Fleet AFV Acquisition Program as Provided by Section 507(g) of EPACT

The program outlined within Section 507(g) would require certain local government and private fleets to acquire AFVs as a percentage of their new light-duty vehicle acquisitions starting with Model Year 2002. The program was envisioned to parallel the existing program for State and fuel provider fleets. The establishment of a local government and private fleet program by DOE was conditional, and required several findings by DOE before it could be imposed. These included finding that EPACT's section 502(b)(2)(B) goal was achievable and that this fleet program was necessary to its achievement.

This option would establish a program that operates like the existing State and fuel provider fleet programs, starting with a model year 2002 AFV acquisition percentage of 20% and rising to 70% in model year 2005 and thereafter. EPACT allows DOE some ability to modify the percentages downward, but the resulting program will still be held to the requirement of being necessary to achieve the overall goal.

In response to the ANOPR, many comments were received on whether DOE should proceed with a program based upon 507(g) as provided in EPACT. Because of the experiences with the similar programs for State and fuel provider fleets, as well as the Federal fleet, there was a great deal of concern about this approach. Perhaps the biggest problem identified was the fact that, with the exception of fuel providers, EPACT

did not include requirements for the AFVs acquired to utilize alternative fuel. Because several auto manufacturers are making large number of ethanol flexible fuel vehicles (FFVs -- able to run on 85% ethanol or 100% gasoline, or any mixture in between) available at virtually no incremental purchase price, this has resulted in large number of FFVs being purchased to meet acquisition requirements. However, the vast bulk of these FFVs have never operated on alternative fuels. Therefore, this AFV fleet acquisition requirement is not necessarily translating into the amount of petroleum displacement that was expected when EPACT was enacted.

One approach to increasing alternative fuel use could have been to promulgate a rule, based upon Section 507(g), which requires alternative fuel usage. However, it appears doubtful that DOE has the authority to do this. Based upon an initial legal/legislative review, it is believed that imposing such a fuel usage requirement in the context of a 507(g) program would be in contradiction of legislative intent, as identified within the legislative history of EPACT. Additionally, the fact that Congress expressly provided for fuel usage requirements in one case (fuel providers), and then chose not to impose such a requirement on the other fleet types, would make it difficult to impose a fuel use requirement on local government and private fleets.

Option 3 - The Fleet Rewards Program

Based upon its experience with the existing fleet program, DOE believes that replacement fuel goals will most likely not be achieved without allowing local government and private fleets to use alternative fuel to meet, in part, their compliance obligations. Although the local government and private fleet market is very large, placing alternative fueled vehicle acquisition requirements on these fleets does not necessarily result in the expansion of alternative fuel use, nor the required complimentary expansion of the alternative fuel infrastructure. Section 507(g) gives DOE the authority to impose alternative fueled vehicle acquisition requirements on local government and private fleets, but it does *not* require the fleets to use alternative fuel in the alternative fueled vehicles they acquire. The language of section 507(g) only requires that these fleets acquire alternative fueled vehicles.

To enable fleets to use alternative fuel as a method of compliance, DOE has developed the optional Fleet Rewards Program. The Fleet Rewards Program is designed to offer a high degree of flexibility for those fleets that opt into the program. Under this option, fleets could meet the requirements of 507(g) directly (through AFV acquisitions), or opt-into the Fleet Rewards Program, under which they could meet their requirements through a combination of AFV acquisitions and alternative fuel use.

As currently conceptualized, the Fleet Rewards Program would use the number of light-duty vehicles acquired by a fleet in a model year as the basis for determining a fleet's requirements. A fleet's requirement would still be based on acquiring a specific percentage of its light-duty vehicles as AFVs. However, the Fleet Rewards Program

would differ by allowing fleets to take specific actions, called AFV-Equivalency actions, to achieve compliance with its AFV acquisition requirements and to encourage the use of alternative fuel. Those actions that would be allowable under the Fleet Rewards Program, and would receive AFV-Equivalency Credits, would be the acquisition of **any** size and class of alternative fueled vehicle, and the **consumption** of each 500 gasoline gallon equivalent of alternative fuel. Each AFV acquired, regardless of size and/or class, would earn an AFV-Equivalency Credit for a fleet. Each discrete use of 500 gasoline gallon equivalents of alternative fuel would earn an AFV-Equivalency Credit for a fleet. Two AFV-Equivalency credits would be allocated for the acquisition of dedicated alternative fueled vehicles. The operation of an existing dedicated alternative fueled vehicle in a fleet would also be eligible for AFV-Equivalency Credit.

Because past experience has shown that fleets will opt to use gasoline and diesel over alternative fuels, DOE sought ways to require or incentivize the use of alternative fuels by local government and private fleets. In trying to identify what DOE could do to encourage and incentivize the use of alternative fuels, the agency turned to the public comments it received on the ANOPR and on the proposed rule for the Alternative Fuel Transportation Program. Commenters suggested a variety of ideas to DOE in these forums, some of which formed the basis for the Fleet Rewards Program.

DOE also investigated what legal authority it had to create additional programs that encouraged the use of replacement fuels and could be used to craft a program that resulted in actual alternative and replacement fuel use by local government and private fleets. Section 504(c) provides DOE the authority to issue additional regulations if the achievement of the replacement fuel goals will not result in the establishment of a program to promote the use of domestic replacement fuels in light duty motor vehicles. It was determined that section 502(a) directs DOE to establish a replacement fuel program that shall promote the use of domestic replacement fuels to the maximum extent practicable. Section 502(a) also stated that this replacement fuel program shall, to the maximum extent practicable, ensure the availability of those replacement fuels that will have the greatest impact on reducing oil imports, improving the health of our Nation's economy and reducing greenhouse gas emissions.

Because the vast bulk of the alternative fuel that is likely to be used by local government and private fleets are domestic replacement fuels and because there was no mechanism provided by section 507(g) to get these fleets to actually use alternative fuels, DOE decided that designing a program under the authority of sections 502(a) and 504(c) was the best method to ensure the maximum practicable usage of domestic replacement fuels by these fleets. DOE also determined that one way to get these fleets to want to participate in this new program, was to provide it as a voluntary option for those fleets that may be covered under the section 507(g) requirements.

Option 4 -- The Replacement Fuel Program

As indicated above, sections 502(a) and 504(e) provide DOE with authority to develop programs to promote domestic replacement fuels and the displacement of petroleum. Under such authority, DOE could design a program different from the 507(g) AFV acquisition requirements, more tailored to achieving the overall goals focused on displacement of petroleum through use of replacement fuels. This increase in latitude might therefore avoid the shortcomings of EPACT's existing approach toward fleets which solely focuses on acquiring AFVs, but not on the use of alternative fuel. By focusing specifically on requiring an increasing percentage of fleets' light-duty fuel use to be replacement fuel, alternative fuel would have to be utilized. Of course, in order to use this fuel, fleets would eventually need to acquire AFVs, though AFV acquisitions themselves would not be specifically required.

The actual operation of this program would be relatively simple. The Replacement Fuel Program concept is based upon requiring fleets to reduce their light-duty vehicle petroleum usage by increasing the percentage of their light-duty vehicle's fuel use that must consist of replacement fuels. The current definition of fleet used under the EPACT AFV acquisition programs – Metropolitan Statistical Area (MSA) of more than 250,000 people, 50 vehicles total, 20 vehicles in a single MSA – would apply for determining which local government and private fleets may be covered by the program.

One possible compliance schedule envisioned the following percentages representing the portion of a fleet's light-duty fuel use that had to consist of replacement fuels:

Model Year 2002;	5%
Model Year 2003;	10%
Model Year 2004;	20%
Model Year 2005;	30%
Model Year 2006;	40%
Model Year 2007, and thereafter.	50%

These percentages would apply for a program where the replacement fuel portion of a fleet's light duty vehicle fuel use was capped at 50%. Another schedule could be set up to rise to a maximum of 70%, which is the cap for AFV acquisitions under 507(g). A fleet would calculate the total gasoline gallon equivalents (GGE) used by the fleet's light duty vehicles' and then multiply that number by the applicable percentage required for that model year. Therefore, every gallon of replacement fuel used in excess of the required number of GGE would generate a credit. In addition, fleets would be allowed to count fuel use from medium and heavy duty vehicles and excluded vehicles (law enforcement, medium and heavy-duty vehicles, etc.) toward the required number of GGE of replacement fuel that they had to use.

This approach, therefore, would allow fleets the *maximum flexibility* to determine how best to meet their requirements. Along with this flexibility would be opportunities which

are currently precluded by the extremely restrictive wording within several parts of EPACT relating to the existing fleet programs. For example, since it would not matter how fleets generated their alternative fuel use contributions, *additional vehicle types, like low-speed or neighborhood electric vehicles could be used*. Only fuel used in non-road vehicles would be prohibited from being counted.

As with all other fleet programs, a credit program would be developed, allowing fleets to bank or trade credits, but since the Replacement Fuel Program is not restricted to the credit program currently in place for State and Alternative Fuel Provider fleets, the Program could be designed to *provide fuel providers with replacement fuel credits for installation of refueling stations*, which they could then sell to organizations with requirements under the Replacement Fuel Program. Under this approach, there would also be a *new opportunity for fuel blends to have a key role*, since blends of alternative fuels with conventional fuels would greatly assist fleets in meeting their requirements, while also providing opportunities for greater replacement fuel use by the general public. Another new opportunity might be to extend credit generation to non-covered fleets, or even the general public.

The Replacement Fuel Program would also *minimize the reporting and record keeping requirements for fleets and DOE*, since fleets would only need to report their total light-duty fuel use and their amount of replacement fuel used. Reporting of individual vehicle acquisitions would **not** be required. Conversion factors (to gallon gasoline equivalents) for all major fuel types would be provided in the rule. In short, *this program could truly be developed in a manner to better promote the keys to success for alternative fuels than any other program to date.* If desired, it might also be possible to provide fleets with some credit toward requirements for efforts based upon displacing petroleum, such as through use of advanced technologies or even activities like replacing vehicles with electric bicycles. To ensure that replacement/alternative fuels efforts still remain at the forefront of this program, however, this credit might be capped at something like 25% of requirements.

Option 5 – Extension of Flexible Options to Other Fleets

Throughout the discussions with stakeholder groups, DOE was repeatedly asked whether any of the optional program concepts (such as the Fleet Rewards Program) could be extended to fleets currently operating under the Alternative Fuel Transportation Program. The two types of fleets currently covered by this program are State government and alternative fuel provider fleets.

Section 507(o) of EPACT required that DOE promulgate a rule covering State fleets, and provided specific regulatory mechanisms to be included in that rule. The AFV acquisition program specified under section 507(o), is constructed almost exactly like the section 507(g) program proposed within this proposed rule. The State program

included acquisition requirements starting in model year 1996 (which was ultimately modified to 1997) with percentages increasing through model year 2000 (modified to 2001) to a maximum of 75 percent. In the Act, section 507(o) is entitled, MANDATORY STATE FLEET PROGRAMS. Because the program is mandatory and has its requirements provided by law, DOE is doubtful that the Fleet Rewards Program could be extended to State fleets.

Likewise, section 501 of EPACT required that DOE promulgate a rule covering alternative fuel provider fleets. Again, the language in this section made it clear this was a mandatory program, without the allowance for discretion. Section 501 specifies an AFV acquisition program, with requirements starting in model year 1996 (modified to 1997) and increasing to 90% or more of new acquisitions in model year 1999 (modified to 2000) and thereafter. Congress also provided one additional requirement on alternative fuel providers which it did not impose on any other fleet type: that their alternative fueled vehicles *must* operate on alternative fuels wherever the fuels are available. This additional requirement appears to make it clear that allowing alternative fuel provider fleets to opt into a program where they would receive additional credit for using alternative fuels would be inappropriate, since they are already *required* to use alternative fuels.

As currently developed, the Fleet Rewards Program provides that credits may be generated only by covered fleets. (The current version of the Replacement Fuels Program does envision such expansion.) In order to increase flexibility, provide a potential financial incentive to additional users, expand utilization of alternative fuels to different users, and increase overall use of alternative fuels, DOE believes it could be appropriate to allow other vehicle operators to generate credits. These credits could be earned by either acquisition of alternative fueled vehicles or by use of alternative fuels.

Several groups are currently prohibited from earning credits under the “Fleet Rewards” program as currently developed. These include:
1) smaller fleets, which do not meet the size requirements for coverage;
2) fleets which consist of predominantly medium or heavy-duty vehicles, that possess insufficient numbers of light-duty vehicles to be covered;
3) fleets which operate outside of the 125 subject Metropolitan Statistical Areas (MSAs);
4) fleets made up primarily of excluded classes of vehicles (such as emergency vehicles, vehicles normally taken home at night, etc.); and
5) private individuals (general public).

Several scenarios for credit expansion might be possible. First, the generation of credits might be made “wide open,” allowing any vehicle operator (even a member of the general public) to generate a credit. Or, there might be a restricted class of organizations that could generate credits (such as those only in urban areas over a certain size or under a certain air quality non-attainment status). Another possibility is

that fleets which meet one or perhaps two of the three criteria for coverage (the operation of 50 light duty vehicles in the U.S., or the operation of 20 light duty vehicles within a single MSA, or being located within an MSA) could be eligible.

Because the language of the section 508 credits program is so specific, DOE doubts that AFV credits could be earned by non-covered fleets and individuals under the section 507(g) alternative fueled vehicle acquisition requirements. However, an expansion may be possible under the Fleet Rewards Program, and certainly under a Replacement Fuels Program.

Option 6 – An Alternative Fueled Urban Transit Bus Acquisition Program as Provided by Section 507(k) of EPACT

Section 507(k) of the Energy Policy Act provides DOE with the authority to include urban buses within the fleet requirement program if this inclusion would *"contribute to achieving the goal described in section 502(b)(2)(B), as modified under section 504."* DOE must also determine if such an action would be consistent with energy security goals and the objective of encouraging greater use of urban buses by the public. Inclusion of requirements for urban buses under the fleet program must be accomplished through a rulemaking separate from the one for private and local government fleets.

A possible option for a potential urban transit bus program would be one under which transit operators would be required to acquire alternative fuel buses as a portion of their new urban transit bus acquisitions, such as under a 507(g) fleet program. The percentages for acquisition, however, might be somewhat lower than for light-duty fleets, rising to perhaps a maximum of 50 percent.

Another possible option would be allowing urban transit bus operators the opportunity to "opt into" the Fleet Rewards Program as an optional compliance path. Under this program, urban transit bus operators might receive credit both for acquisitions of alternative fuel vehicles and for alternative fuel use. As with the light-duty vehicle program, an AFV-Equivalency would have to be established, which would have to be a fair and appropriate AFV-Equivalency for an urban transit bus.

A third possible option is a Replacement Fuel Program for urban transit bus fleets. DOE is requesting comments on whether urban transit bus operators should have a separate Fleet Rewards or Replacement Fuel Program, or whether it should be a subset of a possible Fleet Rewards or Replacement Fuels Program for local government and private fleets.

DOE also is considering what might be the appropriate minimum fleet size required for

an urban transit bus operator to be covered by a section 507(k) requirement. One approach might be to cover fleets which operate at least 20 buses in any one of the MSAs with a 1980 population greater than 250,000, eliminating the requirement for operating 50 buses nationwide. Another approach might be to reduce the number of buses operating in a single MSA to ten. DOE could also set the minimum at 50 urban transit buses. Because EPACT does not explicitly provide guidance on this issue, DOE will be seeking comments as to what the appropriate minimum fleet size could be.

DOE believes that one potential difference between a potential urban transit bus program and a light-duty program would encompass the trade-ability of credits. Because of the significantly higher levels of fuel use by urban transit buses, credits generated by urban transit buses would probably only be tradeable to other urban transit bus fleets, and not to light-duty fleets.

According to recent statistics from the American Public Transit Association (APTA), there were approximately 53,000 urban transit buses operating in the U.S. as of the end of 1999. Approximately 4,800 new urban transit buses were delivered in 1999, ranging from vans and minibuses up to articulated and double-decker buses, with the largest segment being buses in the 40-foot (37'6'' to 45') range.

The urban transit bus sector has been one of the most successful transportation sectors for alternative fuels with 7.9 percent of the urban transit buses operating on alternative fuels. These alternative fuels include compressed natural gas, electricity, ethanol, liquefied natural gas, propane, and biodiesel blends. During 1999, 16.4 percent of the urban transit buses built were alternative fueled (a total of 713 buses), and 23.2 percent of the buses on order in January 2000 were alternative fueled (another 1,874 buses). APTA further projects that potential orders for alternative fuel buses may comprise an even higher percentage of orders during the 2000-2004 time period, rising to 29.4 percent or 4,214 buses.

Current use of alternative fuels by the urban transit bus sector continues to grow, with non-petroleum fossil fuel use rising from 5,282,000 gallons in 1992, to 42,921,000 gallons in 1999. (The alternative fuels included within this quantity are compressed natural gas, liquefied natural gas, methanol, propane. Ethanol, biodiesel, and electricity are not included within this data.)

In addressing urban transit buses, any possible fleet requirement program needs to acknowledge the unique advantages of the sector, as well as the overall operational issues involved. Urban transit buses typically “come home at night,” and return to a central garage or parking facility, making central refueling less of an issue. At the same time, they tend to use relatively large amounts of fuel on an annual basis, which means that fuels which are cheaper than diesel may see opportunities for favorable economics. In addition, because of high fuel use levels, operation on alternative fuels

by urban transit buses can be a key in establishing and supporting the development of an alternative fuel refueling infrastructure.