

# Strategic Planning for Energy and the Environment

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## IN THIS ISSUE...

<i>Walter E. Johnston</i> , Guest Editorial—The Energy Gold Mine .....	5
<i>Ronald W. Gilcrease</i> , CLMC, Calculating the Energy/Environmental Benefit of a Lighting Retrofit .....	7
<i>Steven J. Clark</i> , P.E., Selecting the Optimum HVAC System .....	13
<i>Joseph A. Milam</i> , P.E., A Holistic Approach to Improving Environmental Quality .....	19
<i>Greg Powell</i> , "Engineered Maintenance"—A Strategy to Increase HVAC Efficiency .....	36
<i>Michael J. Moore</i> , Successful HVAC Retrofits .....	43
Corporate Sustaining Members—Association of Energy Engineers .....	50
<i>James J. Winebrake</i> , Federal Laws Affecting Vehicle Fleets .....	52
<i>Robert T. Baltes</i> , P.E., Estrella College Center Wins "Energy Project of 1993" Award .....	68
<i>Karl Johnson</i> , EPRI's Utility Support for Lighting Retrofits .....	72
Bright Future for Young Energy/Environmental Engineers: \$30 Trillion Worth .....	79



## Another Challenge for Energy/Environmental Strategists:

### FEDERAL LAWS AFFECTING VEHICLE FLEETS<sup>1</sup>

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**Editor's Note:** The responsibilities of the energy/environmental engineer and professional continue to expand. It is now necessary to understand the requirements of two separate federal acts involving fleet vehicles; beyond this, we must learn how these requirements can be integrated into a workable strategy. The objective—a more salubrious environment—is critical. The task of reaching it: challenging.

There are two different, and massive, federal acts that will soon affect vehicle fleets in every major urban and suburban area of the country.

1. The Clean Air Act Amendments of 1990 (CAAA) and
2. The Energy Policy Act of 1992 (EPACT).

Each of these federal requirements will change the way energy is consumed in the transportation sector. Fleet operators will now have to consider the purchase of *alternative fuel vehicles (AFVs)* under EPACT and *clean fuel vehicles (CFVs)* under the CAAA.

Although these requirements represent tremendous strides forward in developing markets for clean, alternative transportation fuels, they

<sup>1</sup>This work is largely based on two earlier reports: Sheckler, K. and J. Winebrake, *Fleets and Federal Law: Getting the Most from Vehicle Credits*, March, 1993; and, Farrell, A. and J. Winebrake, *A Simplified Guide to Mobile Source Requirements in the 1990 Clean Air Act Amendments*, DRAFT, June, 1993.

pose new challenges and demands on fleet operators.

In addition to their fleet requirements, both laws allow for credits to be acquired by fleets that initiate CFV or AFV programs sooner or more stringently than necessary. These credit programs offer opportunities for fleet owners to meet both laws in the most cost-effective manner.

**However, the credit programs also add another level of complexity to an already confusing landscape.**

This article attempts to eliminate some of this confusion. The first part explains the requirements of both acts, including the credit programs available for each. The second section provides a comparison of the two laws and discusses the decision variables that a fleet operator must consider in order to meet both acts' requirements.

## PART 1 LEGAL REQUIREMENTS, CREDIT PROGRAMS

### CLEAN FUEL VEHICLES (CLEAN AIR ACT AMENDMENT)<sup>2</sup>

#### Clean Fuel Fleet Requirements

Part C of Title II of the CAAA requires that public and private fleets begin to purchase Clean Fuel Vehicles (CFVs). These requirements place more stringent emissions standards on fleets vehicles within (1) serious, severe, or extreme ozone non-attainment areas and/or (2) carbon monoxide (CO) non-attainment areas with CO levels greater than 16 parts per million. These areas are identified in Table 1.

Under the Clean Fuel Fleet program, owners of fleets (defined as 10 or more vehicles that can be centrally fueled) must purchase vehicles meeting Clean Fuel Fleet Standards beginning in model year 1998.<sup>3</sup> Owners must gradually phase in the purchase of vehicles meeting these stan-

<sup>2</sup>Note that the following information is extracted from Federal guidance. States have the opportunity to implement their own programs through their State Implementation Plans.

<sup>3</sup>These standards and other information on the Clean Fuel Fleet Requirements can be found in the following *Federal Registers*: March 1, 1993 (Clean Fuel Fleet Credit Program); June 10, 1993 (Clean Fuel Fleet Emissions Standards); December 9, 1993 (Clean Fuel Fleet Emissions Standards—Definitions and General Provisions).

dards from 30% of new purchases in 1998 to 70% of new purchases by the year 1001.

The clean fuel vehicle standards and purchase requirements are identified in Tables 2 and 3, respectively.<sup>4</sup> Table 2 gives the actual emissions standards for these Clean Fuel Fleet vehicles and compares them with the national standards that will be in effect for the country as a whole (i.e., the Tier I or manufacturers' standards). Table 3 gives the percentage of a fleet owner's new purchases that must meet the applicable standards.

**Table 1:**  
**Areas Affected by CAAA Clean Fuel Fleet Requirements**

Atlanta
Baltimore
Baton Rouge
Beaumont-Port Arthur
Boston-Lawrence-Worcester
Chicago-Gary-Lake County
Denver-Boulder
El Paso
Greater Connecticut
Houston-Galveston-Brazoria
Los Angeles-South Coast Air Basin
Milwaukee-Racine
New York-Northern New Jersey-Long Island
Philadelphia-Wilmington-Trenton
Providence (entire state of Rhode Island)
Sacramento, CA
San Diego, CA
San Joaquin Valley
Southeast Desert Modified AQMA
Springfield (Western Maryland)
Ventura County CA
Washington, DC

<sup>4</sup>This article only discusses requirements on light-duty vehicles (LDVs) and light-duty trucks (LDTs). Other restrictions on heavy-duty trucks (HDVs) can be found in Title II of the Clean Air Act Amendments of 1990.

**Table 2:**  
**Clean Fuel Fleet Requirements for Light Duty Vehicles and Light Duty Trucks < 6000 lbs. Gross Vehicle Weight<sup>1</sup> (gm/mi)**

	LDVs and LDTs < 3750 LVW			LDTs 3751-5750 LVW		
	NMHC	CO	NO <sub>x</sub>	NMHC	CO	NO <sub>x</sub>
Tier I <sup>2</sup>	0.25	3.4	0.4	0.32	4.4	0.7
Clean Fuel Fleet Vehicle Standards	0.075	3.4	0.2	0.10	4.4	0.4

LVW = Loaded Vehicle Weight (empty vehicle weight plus 300 lbs.)

NMHC = Non-Methane Hydro-Carbons

CO = Carbon Monoxide

NO<sub>x</sub> = Nitrogen Oxides

<sup>1</sup>Based on five year or 50,000 mile certification

<sup>2</sup>Tier I standards go into full effect by 1996; these are manufacturers' standards and will be met by all vehicles sold throughout the U.S.

**Table 3:**  
**Phase-In Schedule for Clean Fuel Fleet Requirements for LDVs and LDTs < 6000 lbs. Gross Vehicle Weight (percent of new vehicle purchases)**

	Percent of New Vehicle Purchases
1998	30%
1999	50%
2000	70%

#### Clean Fuel Fleet Credits

Section 246(f) of Title II provides fleet owners transferrable CFV purchase credits if a fleet owner purchases CFVs earlier, in greater numbers, or which meet more stringent emissions standards than those estab-

lished by EPA.<sup>5</sup> Credits can also be obtained for CFV purchases in vehicle categories that are not covered by the requirements (e.g., exempted vehicles, such as emergency vehicles or police cars). Credits can be bought/sold among parties *within the same non-attainment area* and within the same vehicle class/weight. Credits can also be "banked," or held for future use, without depreciation.

The purpose of establishing a credit program as part of the Clean Fuel Fleet program is to provide purchasing flexibility and implementation incentives for regulated fleet operators. The general concept is that fleet operators with low compliance costs might find it attractive to buy more CFVs than required, obtaining credits that can then be held for future use or sold to fleet operators with higher compliance costs. Such a plan can help meet the overall requirements at the lowest total cost. The final rule covering the credit program was published in the *Federal Register* on March 1, 1993. This rule goes into further detail about requirements for the credit program.

## ALTERNATIVE FUEL VEHICLES (ENERGY POLICY ACT)

### Fleet Requirements

Titles III, IV, and V of EPACT require fleets to begin purchasing AFVs. Here, a "fleet" is defined as a group of 20 or more light duty vehicles, used primarily in a standard metropolitan statistical area (SMSA) with a 1980 population of more than 250,000, that can be centrally fueled and are controlled by an entity who also controls 50 or more such vehicles nationwide. There are 126 SMSAs in the country that meet these specifications. These are shown in Table 4.

In EPACT, AFVs are defined as vehicles that are fueled by substantially nonpetroleum based fuels (e.g., natural gas, methanol, ethanol, propane, electricity, and hydrogen). Reformulated gasoline is not considered an "alternative fuel" in EPACT. EPACT begins imposing purchase requirements in 1993 for federal fleets, 1996 for state and alternative fuel provider fleets, and 1999 for private/municipal fleets (based on "early rulemaking"). The Secretary of Energy may also use a "late rulemaking"

<sup>5</sup>Another type of credit, emissions reduction credits (ERCs), can also be obtained depending on the level of emissions reductions that are achieved by the new CFV (a formula is applied that compares the CFV emissions to conventional vehicle emissions). These emission reduction credits will be useful in inter-source credit trading schemes, but will not be discussed here.

decision that would postpone the first year of private/municipal requirements to 2002.

The purchase requirements for EPACT are shown in Table 5. (The CAAA/CFV requirements for Phase I and Phase II vehicles are also included for comparison.)

Table 4.  
SMSAs with 1980 Populations Greater than 250,000

Albany-Schenectady-Troy, NY	Eugene-Springfield, OR
Albuquerque, NM	Evansville, IN-KY
Allentown-Bethlehem, PA-NJ	Flint, MI
Appleton-Oshkosh-Neenah, WI	Fort Wayne, IN
Atlanta, GA	Fresno, CA
Atlantic City, NJ	Grand Rapids, MI
Augusta, GA-SC	Greensboro-Winston Salem, NC
Austin, TX	Greenville-Spartanburg, SC
Bakersfield, CA	Harrisburg-Lebanon-Carlisle, PA
Baltimore, MD	Hartford-New Britain, CT
Baton Rouge, LA	Honolulu, HI
Beaumont-Port Arthur, TX	Houston-Galveston-Brazoria, TX
Binghamton, NY	Huntington-Ashland, WV-KY-OH
Birmingham, AL	Indianapolis, IN
Boston-Lawrence-Salem, MA-NH	Jackson, MS
Buffalo-Niagara Falls, NY	Jacksonville, FL
Canton, OH	Johnson City-Kingsport, TN-VA
Charleston, SC	Johnstown, PA
Charleston, WV	Kansas City, MO-KS
Charlotte-Gastonia, NC-SC	Knoxville, TN
Chattanooga, TN-GA	Lakeland-Winter Haven, FL
Chicago-Gary, IL-IN-WI	Lancaster, PA
Cincinnati-Hamilton, OH-KY-IN	Lansing-East Lansing, MI
Cleveland-Akron-Lorain, OH	Las Vegas, MN
Colorado Springs, CO	Lexington-Fayette, KY
Columbus, OH	Little Rock-N. Little Rock, AR
Corpus Cristi, TX	Los Angeles-Anaheim, CA
Dallas Worth, TX	Louisville, KY-IN
Davenport-Rock Island, IA-IL	Macon-Warner Robins, GA
Dayton-Springfield, OH	Madison, WI
Daytona Beach, FL	McAllen-Edinburg-Mission, TX
Denver-Boulder, CO	Melbourne-Titusville, FL
Des Moines, IA	Memphis, TN-AR-MS
Detroit-Ann Arbor, MI	Miami-Fort Lauderdale, FL
Duluth, MN-WI	Milwaukee-Racine, WI
El Paso, TX	Minneapolis-St. Paul, MN-WI
Erie, PA	Mobile, AL

Table 4 (Continued)

Modesto, CA	St. Louis, MO-IL
Montgomery, AL	Salinas-Seaside-Monterey, CA
Nashville, TN	Salt Lake City-Ogden, UT
New Haven-Meriden, CT	San Antonio, TX
New London-Norwich, CT-RI	San Diego, CA
New Orleans, LA	San Francisco-Oakland-San Jose, CA
New York-N. New Jersey-Long Island, NY-NJ-CT	Santa Barbara-Santa Maria-Lompoc, CA
Norfolk-Virginia Beach-Newport News, VA	Scranton-Wilkes Barre, PA
Oklahoma City, OK	Seattle-Tacoma, WA
Omaha, NE-IA	Shreveport, LA
Orlando, FL	Spokane, WA
Pensacola, FL	Springfield, MA
Peoria, IL	Stockton, CA
Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD	Syracuse, NY
Phoenix, AZ	Tampa-St. Petersburg, Clearwater, FL
Pittsburgh-Beaver Valley, PA	Toledo, OH
Portland-Vancouver, OR-WA	Tucson, AZ
Providence-Pawtucket-Fall River, RI-MA	Tulsa, OK
Raleigh-Durham, NC	Utica-Rome, NY
Reading, PA	Washington, DC-MD-VA
Richmond-Petersburg, VA	West Palm Beach-Boca Raton-Delray Beach, FL
Rochester, NY	Wichita, KS
Rockford, IL	Worcester, MA
Sacramento, CA	York, PA
Saginaw-Bay City-Midland, MI	Youngstown-Warren, OH

#### Alternative Fuel Vehicles Credits

Section 508 of Title V of EPACT provides credits for fleet owners who acquire AFVs earlier or in excess of the number required in the act.<sup>6</sup> One credit is obtained for each AFV that a fleet owner acquires beyond the requirements. Credits are transferrable and there are no restrictions on where or to whom credits can be traded. As with the CAAA's CFV credit program, the AFV program allows fleet operators with low-compliance costs to obtain credits that can be sold to fleet operators with higher compliance costs. This reduces costs for both participants and helps meet the requirements at the least total cost.

<sup>6</sup>The regulations for Section 508 are not yet written at this time. This section is based on assumptions for one possible credit program scenario.

Table 5.  
A Comparison of New Purchase Requirements for  
Light-duty Vehicle Fleets

YEAR	CAAA (% CFVs for Clean Fuel Fleet Prog.)	EPACT Federal (% AFVs)	EPACT State (% AFVs)	EPACT Fuel Provider (% AFVs)	EPACT Muni/Priv (early rule) (% AFVs)	EPACT Muni/Priv (late rule) (% AFVs)
1993		7500 AFVs+				
1994		11250 AFVs+				
1995		15000 AFVs+				
1996		25 %	10 %	30 %		
1997		33%	15 %	50%		
1998	30 %	50 %	25 %	70 %		
1999	50 %	75 %	50 %	90 %	20%	
2000	70%	75%	75 %	90 %	20%	
2001	100 %	75%	75 %	90%	20%	
2002	100 %	75%	75%	90%	30%	20%
2003	100%	75 %	75 %	90 %	40 %	40%
2004	100%	75 %	75 %	90 %	50 %	60 %
2005	100%	75 %	75 %	90 %	60%	70 %
2006	100%	75 %	75%	90%	70%	70%

+These numbers reflect increases due to Executive Order 12844.

CFV = Clean Fuel Vehicle

AFV = Alternative Fuel Vehicle

## PART 2

DIFFERENCES BETWEEN EPACT AND CAAA  
THAT MUST BE CONSIDERED

There are several major differences between EPACT and CAAA that fleet owners must be aware of in order to meet both requirements cost effectively. These differences arise primarily from the distinct goals of each act the CAAA was passed to curb air pollution, while EPACT was passed to reduce the nation's dependence on petroleum. The major differences are discussed below and summarized in Table 6.

## Vehicle/Fuel Type Differences

The first major difference of the CFV/AFV programs regards covered vehicle types. The CAAA allows any vehicle that is certified as a CFV in the CAAA (i.e. meeting vehicle emission standards) to count towards Clean Fuel Fleet requirements, while EPACT allows any vehicle that can operate on substantially non-petroleum based fuels to count towards AFV requirements. Depending on the emissions characteristics of a vehicle, it may meet the CAAA CFV standards using reformulated gasoline, but not the EPACT AFV requirements. On the other hand, a vehicle may meet the EPACT AFV requirements, yet fail to qualify as a CFV. Also, EPACT does not cover vehicles above 8,500 pounds, while the CAAA fleet program applies to vehicles less than 26,000 pounds. (Note, only the LDV and LDT standards of the CAAA are offered in this article).

## Fleet Definition Differences

The second major difference of the CFV/AFV program regards fleet definitions. In the CAAA a fleet is defined as 10 or more vehicles that can be centrally fueled. These vehicles must also be operating in an ozone non-attainment area classified as serious, severe, or extreme with a 1980 population of 250,00 or greater, or a carbon monoxide (CO) non-attainment area with a design value of 16 parts per million (ppm) or greater.

EPACT, however, defines a fleet as a group of 20 or more vehicles, used primarily in a standard metropolitan statistical area (SMSA) with a 1980 population of more than 250,000, that can be centrally fueled and are controlled by an entity who also controls 50 or more such vehicles nationwide.

In terms of vehicle numbers, the CAAA is more restrictive, since it applies to fleets of 10 or more vehicles. However, CAAA only applies to

Table 6.  
Major Differences of CAAA/EPACT Fleet Programs

	CAAA of 1990	EPACT of 1992
Covered Vehicle/Fuel Types	Vehicles must meet vehicle emission standards in CAAA (may include reformulated gasoline). Covers vehicles under 26,000 lbs.	Vehicles must be able to operate on any substantially non-petroleum based fuel. Covers vehicles under 8,500 lbs.
Covered Fleets	10 or more vehicles that can be centrally fueled and used in either (1) ozone non-attainment areas with 1980 populations of 250,000, or (2) CO non-attainment areas w/design values > 16 ppm.	20 or more vehicles that can be centrally fueled, used primarily in a standard metropolitan statistical area with a 1980 population of more than 250,000, and controlled by an entity who also controls 50 or more vehicles nationwide.
Phase-in for Fleets	See Table 2 and 3.	See Table 5.
Credit Acquisition	Based on formula that compares CFV emissions with conventional vehicles.	Based on number of AFVs acquired above and beyond regulations, i.e. one AFV equals one credit.
Credit Trading Restrictions	Credits can only be traded within non-attainment areas and same vehicle class/weight	Credits can be traded anywhere in the U.S.

those fleets in non-attainment areas. EPACT, on the other hand, applies to larger numbered fleets, but in more areas (both non-attainment *and* attainment areas).

#### Fleet Phase-in Differences

The third major difference in the fleet requirements of the acts is the phase-in schedules for these regulations. The CAAA begins its phase-in requirements for LDV/LDTs in 1998, while EPACT starts in 1993 for federal fleets, 1996 for state and alternative fuel provider fleets, and 1999 for municipal and private fleets (given early rulemaking).

Table 5 above offers a phase-in comparison for these fleets. Note that the EPACT requirements for municipal and private fleets only apply after rulemaking decisions by DOE determine the need for such measures.

#### Credit Acquisition Differences

The fourth major difference of the acts is the way fleet owners obtain credits. In the CAAA, a fleet owner obtains credits by implementing CFVs earlier, in greater numbers, or which meet more stringent standards than those established by EPA. Credits can also be obtained for CFV purchases in vehicle categories that are exempted in the act (e.g. emergency vehicles). Credits are awarded based on a formula that compares the CFV emissions with conventional vehicle emissions.

Similarly, EPACT awards credits to fleet owners that acquire AFVs earlier or in greater numbers than required; however, one credit is offered for each AFV acquired above and beyond the regulations.

#### Credit Trading Restriction Differences

Lastly, the acts differ in where they allow credits to trade. In the CAAA, credit trading is only allowable within the same non-attainment area and among the same vehicle types. For example, LDV fleet operators in the Philadelphia-Wilmington-Trenton non-attainment area can only buy, sell, or trade credits with other LDV fleet operators in this area.

This stems from the air quality goals of the CAAA. It would not make sense for non-attainment areas to purchase CAAA credits from other areas, because the air quality in the buying area would not be improved.

On the other hand, EPACT credits can be traded anywhere in the U.S. Because the goals of EPACT are to reduce petroleum dependence, it makes no difference if this reduction takes place in non-attainment areas or not.

## FLEET OPERATOR STRATEGIES

Given the differences and overlap of these two acts, what should a fleet owner or transportation planner do to optimize AFV/CFV purchase strategies? (Here, the optimal strategy includes finding the least cost way to meet both acts requirements). A fleet operator should not address the acts in isolation. There are advantages to looking at them jointly, since meeting CAAA requirements can contribute to meeting EPACT requirements and vice versa. Some of the decisions that fleet operators must make are discussed below.<sup>7</sup>

#### Am I Regulated?

The first question a fleet operator should ask is: **Am I regulated?** The answer will depend on several factors. The important considerations are the total number of vehicles owned nation-wide; the total number of vehicles operating in a serious, severe, or extreme non-attainment area; and, the total number of vehicles operating in SMSAs of greater than 250,000 population.

Table 7 shows a list of some possible types of fleet "categories" under CAAA and EPACT that will help answer this question. Here, the applicable fleet regulations are shown based on the number of vehicles operated in specific areas.

Table 7.  
Applicable Requirements for Some Fleet Characteristics\*

Total Number of Vehicles Owned Nationally	Total Number Operating in Non-attainment Area	Total Number Operating in SMSA > 250,000	Applicable Fleet Regulations
< 50	< 10	< 20	None
< 50	> 10	< 20	CAAA
> 50	< 10	> 20	EPACT
> 50	> 10	> 20	Both

\*Assumes that all vehicles in local areas are capable of being centrally fueled. If this is not the case, fleet requirements do not apply.

<sup>7</sup>As of publication, the latest set of criteria for Clean Fuel Fleet Program applicability is contained in the *Federal Register*, December 9, 1993. Rulemaking for EPACT's Alternative Fuel Vehicle Fleet Program is expected for public comment in the Summer of 1994.

**What Are My Options?**

The fleet operator that finds his/her fleet affected by EPACT or CAAA regulations has a number of decisions to make. The first and foremost concern of the fleet operator should be compliance, and so at a minimum the fleet operator must ensure that he/she meets the respective requirements. In addition, fleet operators may choose to purchase vehicles above and beyond the requirements, thereby generating credits for trading or future use.

The purchasing fleet operator can buy four "types" of vehicles. These vehicles will meet the requirements of either one law, both laws, or no laws. The possibilities are identified in Table 8.

**Table 8.**  
**Vehicles Types Under EPACT/CAAA**

Classification	Description
AFV/NO CFV	Meets AFV requirements in EPACT, but does not meet the CFV standards under CAAA
CFV/NO AFV	Meets CFV standards under CAAA, but does not meet AFV requirements in EPACT
AFV/CFV	Meets AFV requirements in EPACT and also meets CFV standards under CAAA
NO AFV/NO CFV	Does not meet AFV requirements in EPACT nor CFV standards under CAAA

Fleet operators will choose the vehicles that allow them to meet their requirements at least cost. This decision process should include the potential generation of credits that can be used in the future or sold to other fleet operators under compliance.

Table 9 shows some credit generation possibilities, given a fleet operator's requirements and actual purchases.

As seen from the above options, the decisions facing fleet operators are numerous. Although this can be perceived as an added level of confusion by the fleet operator, it also means added flexibility in meeting federal requirements. Fleet operators can not only minimize their costs,

**Table 9.**  
**Example Credit Generation (Requirement) Possibilities**

Required Mandate(s)	Vehicles Purchased	Credit Generation (Requirement) Possibilities
EPACT only	AFV/NO CFV	Meets EPACT with AFV purchases.
EPACT only	AFV/CFV	Meets EPACT with AFV purchases; generates CFV credits under CAAA if in non-attainment area.
EPACT only	None	Does not meet EPACT; need to purchase AFV credits.
CAAA only	CFV/NO AFV	Meets CAAA with CFV purchases.
CAAA only	AFV/CFV	Meets CAAA with CFV purchases; generates AFV credits under EPACT.
CAAA only	None	Does not meet CAAA; need to purchase CFV credits.
CAAA/EPACT	AFV/NO CFV	Meets EPACT with AFV purchases; need to purchase CFV credits.
CAAA/EPACT	CFV/NO AFV	Meets CAAA with CFV purchases; need to purchase AFV credits.
CAAA/EPACT	AFV/CFV	Meets EPACT with AFV purchases; meets CAAA with CFV purchases.
None	AFV/CFV	Generates AFV credits under EPACT; generates CFV credits under CAAA if in non-attainment area.



but possibly even profit from creative fleet purchase schemes.

For example, if a fleet is required to meet CAAA CFV standards, but is not required to meet EPACT AFV standards, the purchase of an AFV/CFV will generate an AFV credit that can be sold.<sup>8</sup> The profits from this sale reduces the overall cost of the purchased vehicle.

As another example, suppose the fleet operator owns two large fleets in different locations—one regulated under EPACT and another under the CAAA. Instead of trying to meet both laws separately the operator can take an integrated approach.

One option is to purchase AFV/CFVs. These AFV/CFVs could be placed in the CAAA regulated area. In this way, they would generate AFV credits that would offset the AFV requirements for the fleet in the EPACT regulated areas.

Furthermore, because the AFVs are also CFVs, the fleet operator's CFV requirements will be addressed. (Of course, fleet characteristics and demographics [and the availability of fuels and vehicles] will also have a major affect on the strategy chosen).

## CONCLUSION

The purpose of this article is to provide a concise description and outline of the requirements and possible compliance options that fleet operators will have to face in upcoming years. The requirements and strategies discussed in this paper are largely dependent on the development of regulatory procedures for the two credit programs.

As mentioned above, the Clean Fuel Fleet requirements of the CAAA are state-operated programs and may differ from state to state. This will especially cause problems when non-attainment areas cross state boundaries. Moreover, the EPACT AFV credit program has yet to be submitted for public comment.

Because of these uncertainties, it seems wise to improve coordination now among fleet operators, state regulators and federal decision makers. The concerns of fleet operators need to be addressed in the beginning stages of regulatory development; likewise, the needs of government agencies to carry out their respective missions must be met.

This can be accomplished through coordinated outreach by the public sector. The U.S. Department of Energy (DOE), in cooperation with

<sup>8</sup>Note that this assumes the CFV meets the requirements exactly. If, for instance, a CFV is purchased that is cleaner than required, CFV credits may also be generated.

other federal agencies and initiatives, has begun to undertake this task.

First, DOE has been working with the U.S. General Services Administration (GSA), the purchasing arm of the federal government, in its acquisition and placement of federal AFVs. The purpose is to coordinate federal vehicle placement with local infrastructure development so that AFV markets can be expanded and/or enhanced. These efforts have also been tied into the work of the Federal Fleet Conversion Task Force, a group established by the President to develop recommendations for federal AFV placement.

Second, DOE has been working with the U.S. Environmental Protection Agency (EPA) to coordinate rule-making for AFV and CFV requirements. As demonstrated above, there is significant overlap between the CAAA and EPACT. Working together, DOE and EPA can reduce some of the confusion that may emerge from this overlap.

For example, both acts define fleets in terms of their capacity to be "centrally fueled." DOE and EPA are working together to develop a consistent definition for this term and others.

Third, DOE provides numerous information resources for the public. In particular, the DOE AFV Hotline (1-800-423-1DOE), the Alternative Fuels Database Center, and a number of annual, DOE sponsored workshops are important services for public education and outreach.

Lastly, the DOE *Clean Cities* program and the *Clean Cities* Hotline (1-800-CCITIES) are available instruments that local groups can use to further the development of AFV markets and infrastructure in urban areas. *Clean Cities* helps local groups establish partnerships among key AFV stakeholders in order to, *inter alia*, carry out joint projects, coordinate AFV purchases, and meet regulatory requirements cost effectively.

These activities all contribute to the open and communicative environment that is needed to make the journey towards a new transportation future successful. Such cooperation is imperative for a smooth transition to a cleaner, more energy independent future.

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## ABOUT THE AUTHOR

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