DERM
DEPARTMENT OF ENVIRONMENTAL RESOURCES MANAGEMENT

Directors Office — Memo

Date: July 25, 2002

To: Steve Shiver, County Manager

Through: Pete Hernandez, Assistant County Manager

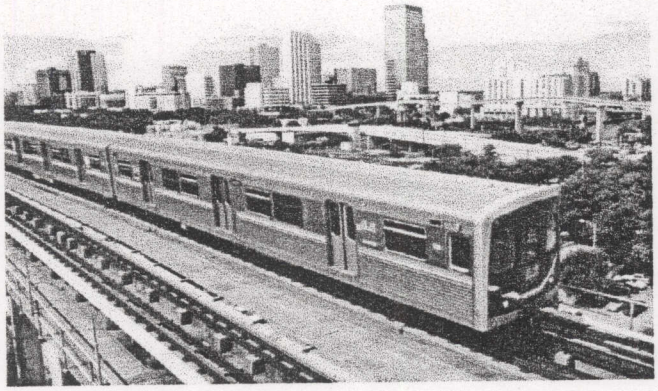
From: Douglas Yoder, Assistant Director
Department of Environmental Resources Management
Chair, Alternative Fuels Advisory Committee

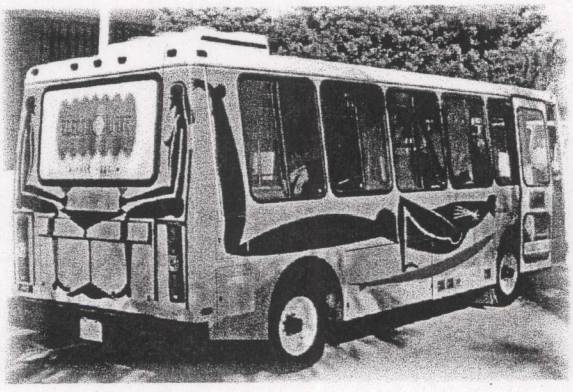
Re: Report and Recommendations

Pursuant to your direction and the requirements of Resolution # R-378-01, the Alternative Fuels Advisory Committee has prepared the attached report and recommendations comprising a plan to begin integrating alternative fuels and technologies into the County fleet and operations. The Committee is prepared to monitor and evaluate implementation of the recommendations once the appropriate approvals are provided.

Cc: Alternative Fuels Advisory Committee

Alternative Fuels Advisory Committee Report and Recommendations





Alternative Fuels Advisory Committee
Report and Recommendations

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ALTERNATIVE FUELS ADVISORY COMMITTEE

REPORT AND RECOMMENDATIONS

The Alternative Fuels Advisory Committee was appointed by the County Manager on January 18, 2002, pursuant to Board of County Commissioners' (BCC) Resolution No. R-378-01. The Committee's mission, as stated in the Manager's appointment memo, is "to develop and implement a program to enhance the utilization of alternative fuels in Miami-Dade County." The Committee is comprised of staff representatives of the departments operating significant fleets (GSA, Transit, Aviation) and those having environmental and transportation planning responsibilities (DERM, MPO). The timeline for completing a Committee report and recommendations is July 31, 2002.

The Committee membership includes Doug Yoder, DERM, chair; Mayra Flagler, DERM; Roosevelt Bradley, MDTA; Mario Garcia, MDTA; Mark Glaiber, GSA; Hector Paredes, GSA; Pedro Hernandez, Aviation; Phil Gangi, Aviation; Carlos Roa, MPO; Susan Schreiber, MPO. Additional technical assistance has been provided by Olga Diaz, and Mark Hamilton, GSA; Fred Shields and Daniel Mondesir, MDT; Carlos Andres González, SFRPC; Patricia Gomez, DERM; Arturo Sosa, Aviation.

SUMMARY

After reviewing the available information regarding performance, environmental impacts, and costs of alternative fuels and transportation technologies, the Committee recommends a series of pilot projects to include testing of hybrid (gasoline/electric) cars and hybrid (diesel/electric) buses, electric tugs at the airport, use of biodiesel fuel at the airport, and monitoring of the experience of other transit agencies using a biodiesel fuel blend in their bus fleets. These recommendations recognize the potential efficiencies inherent in the emerging hybrid propulsion systems, but they also recognize that the substantially greater capital cost of hybrid vehicles are unlikely to be recovered through fuel savings over the life of the vehicle. As the market develops, the hybrid vehicles are likely to become less expensive relative to conventional vehicles so that savings in the cost of fuel will be a more significant factor. By using time now to determine the functionality, efficiency, reliability, maintenance costs, and potential resale value of hybrid vehicles, an experiential base will be created upon which to inform future decisions regarding the composition of the County fleet.

Another principal advantage of the hybrid technology is that the current County investment in fueling infrastructure can be utilized without modification. This fact was an important consideration with regard to the use of other alternative fuels such as compressed natural gas. The Committee also recommends that it remain in existence to monitor the implementation of the recommendations and the evaluation of the pilot projects over at least a one-year timeframe. The evaluation should result in another report to establish goals for systematic replacement of the fleet as warranted based upon the pilot projects and upon any other emerging technologies or fuels that may be ripe for practical application.

BACKGROUND

The standard vehicle fuels for many years have been gasoline and diesel oil. Vehicle technologies have been specifically designed for these fuels, as have the supply infrastructures. Several national issues have arisen over the past forty years to generate interest in alternative fuels. Among these issues are localized air pollution resulting in large measure from vehicle emissions; the potential insecurity of depending on foreign oil as a primary energy source (highlighted by fuel shortages such as those of the early 1970's); unpredictable price spikes for conventional fuels that have affected the economy in general and the cost of local government operations in particular; climate change resulting from greenhouse gas emissions, primarily from the combustion of fossil fuels; and, the long term imperative of developing sustainable alternatives to fossil fuels before those limited supplies are depleted. In partial response to these issues, national standards have been established that have decreased the emission of pollutants while increasing the efficiency of conventional gasoline and diesel engines, several types of alternative fuels have been developed to replace or supplement gasoline or diesel in internal combustion engines, electric and combination internal combustion/electric (hybrid) vehicles have been developed, and the adaptation of fuel cells from the space program to become a feasible source of "zero emission" electricity for use in electric vehicles is progressing.

No legal mandates currently exist requiring local governments in Florida to utilize alternative fuels in their operations. Such mandates have been considered in federal statutes and executive orders, and some states, such as California, have imposed their own requirements for alternatively fueled vehicles to address particularly difficult air pollution issues. Miami-Dade County currently meets all national ambient air quality standards and is predicted to continue to meet those standards as current transportation plans are implemented over the next several years. Miami-Dade County has developed and adopted by resolution a "Carbon Dioxide Emission Reduction Plan" (1993) to address the issue of climate change by undertaking a variety of actions to reduce greenhouse gas emissions resulting directly from County operations and by pursuing policies that will encourage sustainable development and encourage other levels of government and residents to make choices that are environmentally sustainable over the long term. Acting now to make County fleet operations more sustainable is completely consistent with those policies.

ALTERNATIVE FUELS

The current list of choices for alternative fuels include Compressed Natural Gas (CNG), Liquified Petroleum Gas (made from natural gas), Liquified Natural Gas (LNG), Ethanol (made from grain or biomass), Methanol (made from petroleum), electricity (produced at power plants and stored in batteries or produced by fuel cells that can operate on hydrogen or petroleum based fuels), and biodiesel (made from soybeans or recycled cooking oils). These fuels vary in comparison with gasoline and diesel in terms of their energy content, emissions from combustion, energy and emissions associated with production, performance and maintenance, engine modification requirements, availability, cost, and infrastructure required for use. As an example, compressed natural gas requires special fueling facilities that can

cost in the range of $750,000 each. The current lack of such facilities would require a very significant infrastructure investment, and the potential resale value of CNG vehicles is very low due to the lack of fueling facilities available to potential buyers. Fuel cells are still in the experimental stage with respect to vehicle applications. Electric vehicles have performance limitations based upon current battery technology.

EXISTING CONDITIONS

Miami-Dade County operates a fleet comprised of approximately 8645 light duty vehicles (cars and trucks typically operating on gasoline; approximately 700 vehicles are "dual fuel" vehicles that can run either on conventional gasoline or an 85% ethanol blend) and 3544 heavy-duty vehicles (including 706 buses (588 full size and 118 Bluebirds), 150 garbage trucks, and other vehicles typically operating on diesel fuel). GSA typically purchases about 1400 new vehicles per year to replace or expand the fleet. During the last fiscal year, the County used about 8.9 million gallons of gasoline and 12.5 million gallons of diesel fuel at a total cost of $20.4 million at current cost to the County ($1.03 per gallon of unleaded gasoline and $.90 per gallon of diesel fuel). Greenhouse gas emissions resulting from the combustion of these fuels are approximately 226,639 tons of CO_2 per year (Table 1 and Figure 1). The capital replacement value of the County fleet is in excess of $500 million. The County operates more than 30 conventional fueling facilities to service the fleet (and the fleets of some municipalities).

Table 1. Fleet Summary

Fleet Vehicles	Fuel Consumption/year	Cost (dollars/year)
8,645 light-duty	8.9 million gallons of gasoline	9.2 million
3,544 heavy-duty	12.5 million gallons of diesel	11.2 million

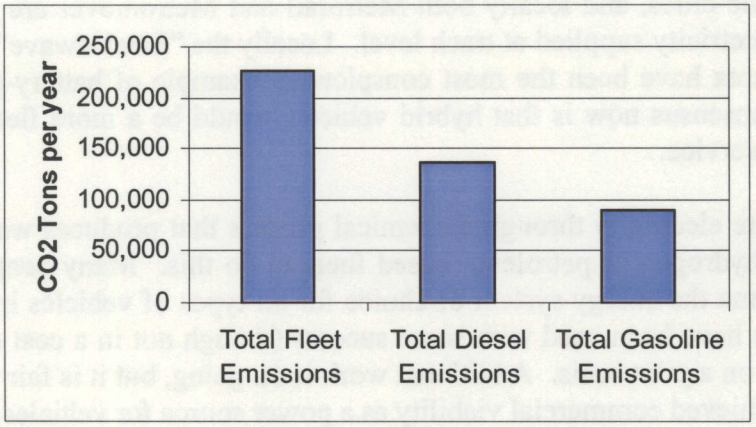

Figure 1. CO_2 Fleet Emissions

Over the years Miami-Dade County has tested a number of alternatively fueled vehicles and analyzed the experiences of other fleet operators to determine the feasibility of moving to other fuels or other types of vehicles. In particular the Miami Dade Transit Agency (MDTA) conducted controlled experiments with buses from 1992 to 1996. In that study similar buses were used to compare the results of using compressed natural gas (CNG), methanol, diesel with a special trap device to reduce particulate (smoke) emissions, dual fuel (CNG and diesel), and conventional diesel as the control. The study demonstrated that the alternatively fueled buses were both less efficient and more expensive to operate than conventional diesel buses. The methanol-fueled buses cost more than twice as much to operate as their diesel counterpart, and the CNG-fueled buses were about 175% more costly to operate. Since the study was completed, "clean diesel" technologies have been introduced that further reduce emissions from standard diesel buses.

THE CURRENT STATE OF TECHNOLOGY

While both gasoline and diesel engines continue to dominate the transportation sector, a variety of technologies are being developed that some day may replace the conventional internal combustion engine. "Hybrid" vehicles are now available that combine electric drives with internal combustion engines, thereby substantially increasing miles per gallon. Light duty vehicles such as the Toyota Prius and the Honda Civic hybrids perform very well and achieve efficiencies of 50 miles per gallon or more. Regenerative braking is used on these vehicles to capture the energy from braking that would otherwise escape as heat. This energy is used to recharge the batteries that operate the electric drive. Similar designs are being applied to buses, which should become commercially available in the next year or two. Hybrid buses have the capacity to double fuel efficiencies from 3.5 miles per gallon to the 6 or 7 miles per gallon range. New York City Transit has an on-going pilot test with 10 hybrid buses, which started in 1998. Also, they have ordered an additional 125 buses for their fleet.

Straight electric vehicles that operate on batteries requiring charging from the electric grid are currently available but require special charging stations and have historically had limited range. There are also electric buses that operate from overhead lines provided for that purpose in some cities, and locally both Metrorail and Metromover are powered by electric motors with electricity supplied at track level. Locally the "Electrowave" shuttle buses in the South Beach area have been the most conspicuous example of battery-powered vehicles in use, but the consensus now is that hybrid vehicles would be a more flexible choice for this type of trolley service.

Fuel cells create electricity through a chemical process that produces water as a by-product. They can use hydrogen or petroleum based fuels to do this. Many people believe that fuel cells will become the energy system of choice for all types of vehicles in the future. At this point fuel cells have been used with some success (though not in a cost competitive way) in buses and cars on a pilot basis. Additional work is on going, but it is fair to say that fuel cells have not yet achieved commercial viability as a power source for vehicles.

Compressed Natural Gas, Liquified Petroleum Gas, and ethanol or methanol blends all require some specialized dispensing equipment that requires substantial long-term investment, although "gasohol" (ethanol or methanol blends) utilizes the same basic equipment as gasoline. As other more sustainable alternatives are developed, particularly those alternatives that can utilize existing infrastructure, they will have a financial advantage over fuels that require construction of special storage and fueling infrastructure (as is the case of CNG and LPG and, to a lesser extent, M85 or E85 (alcohol/gasoline blends that are 85% alcohol and 15% gasoline).

CRITERIA FOR EVALUATING ALTERNATIVE FUELS AND TECHNOLOGIES

Alternative fuels and technologies need to be cost-effective, provide satisfactory performance, reduce harmful emissions to the environment, and be as sustainable as possible. Life cycle cost analysis that takes into consideration infrastructure needs, maintenance, performance, and equipment re-sale value is appropriate. Similarly, environmental emissions associated with the complete fuel cycle, including extraction of raw materials, processing, transport, storage, and combustion should be compared for each alternative fuel. Regard must be given to the probability that new and more efficient technologies will continue to be developed, so today's decisions may no longer be appropriate in tomorrow's world. This type of analytical review incorporating the most efficient, effective, and sustainable technologies and materials should recur as capital investments are made for the indefinite future.

CONCLUSIONS AND RECOMMENDATIONS

1. Alternative fuels requiring specialized fueling infrastructure should not be considered at this time. This includes Compressed Natural Gas, Liquified Natural Gas, and Liquified Petroleum Gas. The infrastructure costs associated with these fuels would be substantial, up to $750,000 per fueling station. Light duty vehicles designed to run on these fuels carry a purchase premium of approximately $4000 to $6000 per vehicle. CNG buses cost $30,000 or more than diesel buses. The resale value of such vehicles is diminished due to the general lack of fueling facilities. While there is some pollutant emission reduction in comparison with gasoline, those benefits are not present when diesel or biodiesel fuels are compared. The lack of fueling facilities could be a serious impediment to County operations in times of emergency, such as hurricane events.

2. Electric vehicles operating on batteries charged from the electric grid should be considered for specialized (generally off-street) uses. As noted below, the Aviation Department is undertaking a project that will replace the gasoline or diesel powered tugs used to haul luggage carts and other equipment with electric tugs.

3. A pilot project to evaluate the effectiveness and efficiency of hybrid electric light duty vehicles should be initiated. Presently the initial cost of a hybrid vehicle such as the Toyota Prius is approximately $21,000. This vehicle is functionally equivalent to the

Dodge Stratus that is currently purchased at $12,500 as the standard light duty car. Assuming similar maintenance requirements and an operating life of 75,000 miles with the Prius achieving 48.5 miles per gallon (the average of the EPA city and highway driving averages) and the Stratus achieving 24.5 miles per gallon (again, the average of the EPA city and highway driving averages), gasoline would have to reach a cost of $5.61 per gallon before the life cycle cost of the Prius would be equal to that of the Stratus (not including re-sale values) Figure 2. Presently the County purchases gasoline for about $1.03 per gallon. At that rate, the total cost of gasoline for the Stratus over a 75,000 mile lifetime would be about $3150, while the total cost for gasoline for the Prius would be about $1590. The fuel savings of the Prius would be $1560 over the life of the car, making it still $6940 more expensive than the Stratus due to the higher capital cost. Assuming that both cars would last for 100,000 miles (about 8 years of service), the lifecycle cost of the hybrid would still exceed that of the conventional vehicle by $6420 at today's gasoline prices. It is likely that gasoline prices will increase over time, but forecasting such a volatile market is very difficult.

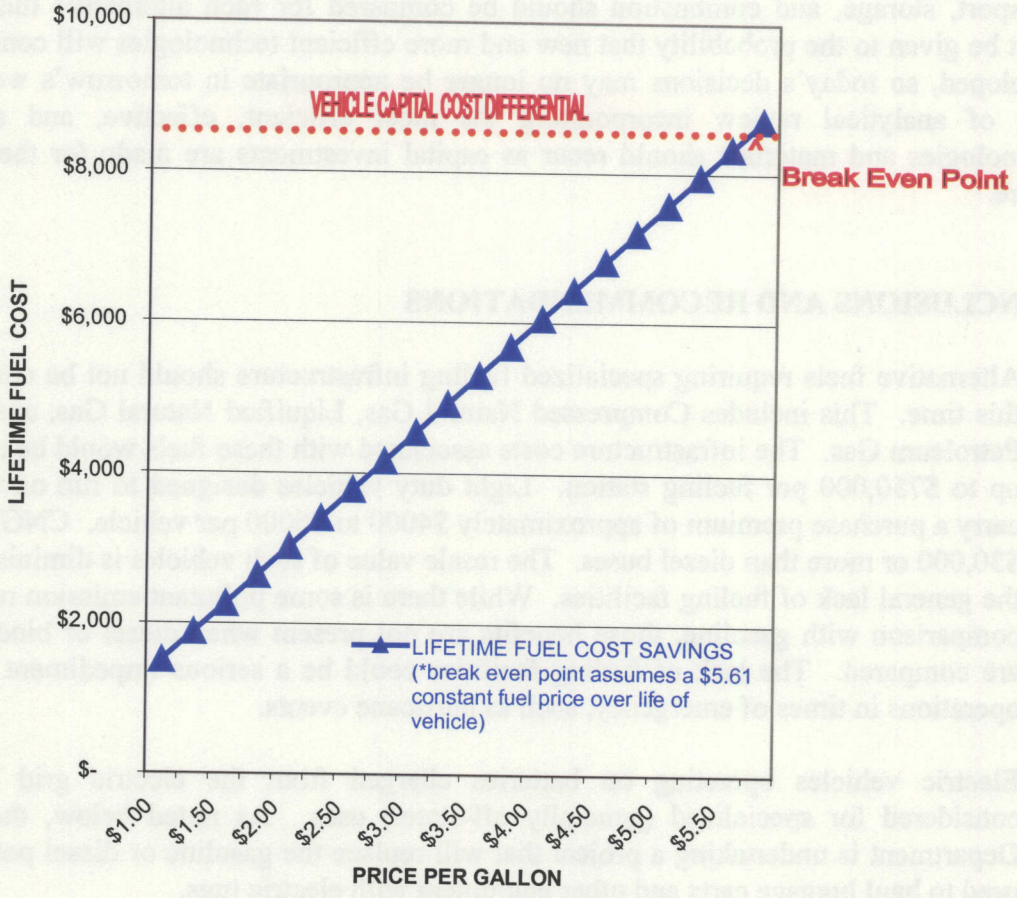

Figure 2. Life Cycle Cost Analysis for Hybrid Vehicles

A life cycle cost analysis prepared by a Toyota dealer for a five-year lifespan concludes that the Prius would actually save about $2317 over that five-year period. They assumed that gasoline would cost $1.35 per gallon and that the Prius would retain 35% of its value at the end of five years while the Stratus would retain 24% of its value. They also assumed that the base price of the Stratus would be about $15,600 (including an extended warranty) rather than the $12,500 price currently available to the County. This price is based upon pricing through the Florida Sheriff's Association and Florida Association of Counties contract. One unknown factor concerning the resale value of hybrid vehicles is the longevity of the battery for the electric drive. In the Prius, the battery (and the electric drive system) carries an 8-year/100,000 mile warranty, but the cost of battery replacement is estimated at $5000. As a Prius approaches the end of the warranty period, the relatively high cost of battery replacement may become a significant factor in the marketability of the vehicle. Actual experience with the re-sale of hybrids will be very helpful in improving the accuracy of the lifecycle cost analysis.

The Prius would, however, reduce greenhouse gas emissions by more than 50% and contribute directly to energy independence and sustainability by virtue of its greater efficiency. Unfortunately, there is at this time no reliable market for avoided greenhouse gas emissions, in part because the United States has declined to be part of the Kyoto Protocol, the worldwide effort to reduce greenhouse gas emissions. There are efforts underway through the Kyoto Protocol to establish a greenhouse gas emissions trading system which would give avoided emissions a monetary value. Greenhouse gas emission trades that have occurred to date place the value of a metric ton of CO2 between $.60 and $3.50. This value would have to approach $350 per ton to offset the capital cost differential between a hybrid vehicle and a conventional vehicle (including the fuel cost savings over the life of the car). As a more viable worldwide greenhouse gas emissions trading system develops in the future, the resulting value of avoided greenhouse gas emissions will further support the acquisition of hybrid vehicles.

The federal government has also failed to require more stringent vehicle efficiency standards (known as Corporate Average Fuel Efficiency or CAFE standards). The requirement for more efficient cars would almost certainly improve the demand for hybrid vehicles, thereby creating more competition and lower prices. As part of the County's adopted plan to reduce greenhouse gas emissions, the Board of County Commissioners and Mayor have recommended to Congress and the President the adoption of more stringent CAFE standards. The State of California has recently enacted its own efficiency standards that will require significantly more efficient vehicles to be sold in California beginning in 2009. Because of the size of the California market, this action may have the effect of a national standard, thereby further improving the market for hybrid vehicles.

It is also possible that hybrid vehicles will have lower maintenance costs or a longer usable lifetime, thereby improving the comparative lifecycle cost. Alachua County has been utilizing a small number of hybrid vehicles for two years. They plan to keep the vehicles for 8 years or 100,000 miles, and they report actual fuel consumption rates averaging 50 miles per gallon. Assuming the longer anticipated life, lower-cost

maintenance, and greater fuel efficiency, the Alachua County life cycle cost projection is approximately equal for the hybrid and a comparable conventional vehicle. It is also probable over time that the cost of hybrid vehicles will decline in comparison with conventional vehicles as more manufacturers enter the market and a greater market share shifts to hybrid vehicles. Currently about 45,000 hybrids are being purchased annually in the world market, but projections indicate sales increasing to about 500,000 vehicles in the next two years as more models become available.

Fleet Management should procure 5 to 10 hybrid vehicles over the next year, including 2 hybrids that have already been delivered. The mix of vehicles should reflect a range of vehicle types (as manufacturers make them available) so that the performance required of the County fleet can be evaluated. Over time these vehicles should be evaluated in terms of lifecycle cost, performance (including emission reductions), and maintenance. Each hybrid vehicle should have special signage to serve as an educational tool for the general public concerning the increased efficiency and reduced emissions associated with these vehicles. Given that the County typically purchases about 1400 new vehicles per year, this test of hybrid vehicles should have minimal budgetary impact while producing important data upon which to base future procurement decisions. Procuring greater numbers of hybrid vehicles at this time could have a significant budgetary impact due to the differential cost of standard and hybrid vehicles. It is prudent to use this time to evaluate the technology in anticipation of a smaller price differential between hybrids and conventional vehicles in the future.

4. The Transit Agency should carefully monitor the development of hybrid buses and, at the appropriate time, procure on a pilot project basis, a small number of diesel electric hybrid buses to test under normal use conditions. Existing data for hybrid buses suggests improved efficiency of up to 60%, improved brake life from regeneration and resulting savings from reduced number of brake relines over the life of the bus, reduction of soot particulates and hydrocarbon emissions by up to 90%, and reduction in greenhouse gas emissions corresponding with increased fuel efficiency. The Transit Agency is already working on a procurement of one hybrid bus. Consistent with funding capacity, up to 5 hybrids should be procured for testing purposes. Conventional buses now cost about $290,000 apiece, and hybrids presently cost up to $450,000 apiece. Again, this significant difference in capital cost is not realistically recoverable through fuel savings.

   A conventional bus gets about 3.5 miles per gallon. Our buses average about 42,000 miles per year. At the current price of $.90 per gallon for diesel fuel, the yearly cost of fuel for one bus is about $10,800. If we assume that a hybrid will double the fuel efficiency, the annual fuel cost per bus would be reduced to $5,400. At that rate, it would take 30 years of service to recover the initial capital cost difference of $160,000 per bus for a hybrid. At current prices, no significant replacement of the bus fleet is financially justifiable. However, the pilot project makes sense in terms of testing functionality and establishing a sound basis for future decisions. Our transit agency will have one of the newest bus fleet in the country as it continues its bus replacement program this fall, so time is available during which to test hybrids and to allow hybrid prices to become more competitive before a decision on systematic fleet replacement is made (Figure 3).

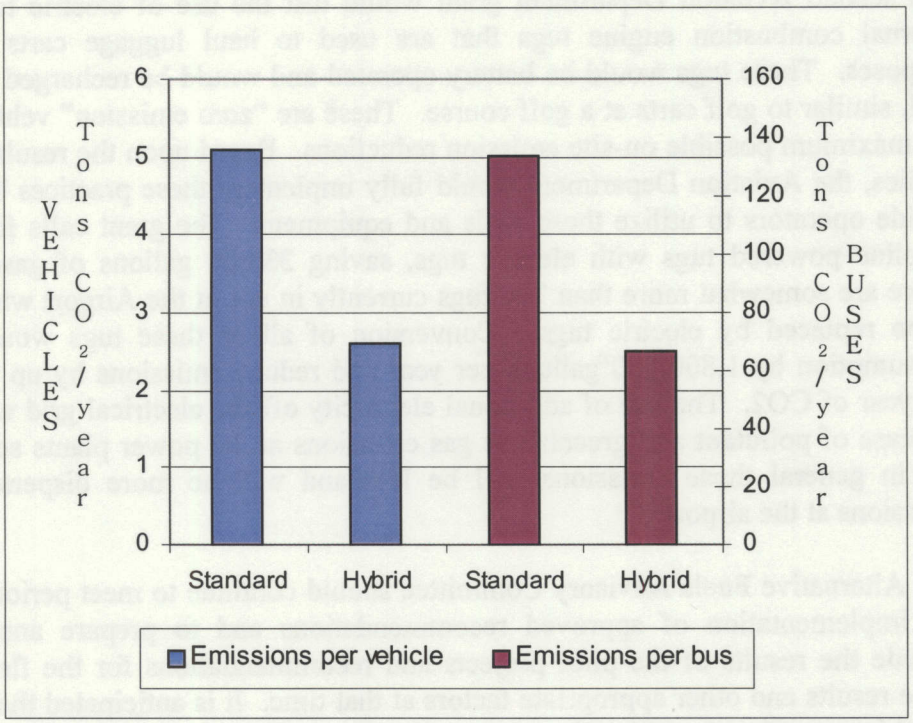

Figure 3. CO_2 Emissions reductions for hybrid vehicles and buses

5. The Transit Agency should monitor the experience of other transit agencies with respect to the use of biodiesel fuel blends as a substitute for conventional diesel fuels. "B20" is a blend of 20% biodiesel, typically made from soybeans, and 80% diesel fuel. There are some concerns that B20 accelerates the deterioration of gaskets and seals in the engine and that engine manufacturers may not be inclined to support warranties if there is a failure that may be caused by the use of B20 instead of regular diesel fuel. Favorable reports have been received from agencies using B20 in heavy-duty vehicles other than buses, but the experience with bus fleets appears to be more limited at this time. Presently the cost of B20 is $1.09 per gallon as compared with $.90 per gallon for conventional diesel. At current consumption rates, the annual cost to the County of replacing conventional diesel with B20 would be approximately $1.8 million with respect to the bus fleet. There may be a time in the future when biodiesel fuels become more competitive as world markets fluctuate and petroleum becomes scarce.

6. The Aviation Department has made application for two grants to support pilot projects in two areas of airside operations. One grant would evaluate the use of biodiesel fuel in the power equipment used to service planes, such as generators. This would reduce substantially the emissions from this equipment. Approximately 277,000 gallons of diesel fuel were used by the Aviation Department last year. The additional cost of using B20 biodiesel would be about $52,000 per year. The use of B20 would reduce greenhouse gas emissions by about 500 tons per year. As a facility where people, equipment, and cars congregate in large numbers, there has historically been a concern about air quality at the airport. The lower emissions of B20 could have particular value in consideration of these facts.

The second Aviation Department grant would test the use of electric tugs in place of internal combustion engine tugs that are used to haul luggage carts and for other purposes. These tugs would be battery operated and would be recharged off the electric grid, similar to golf carts at a golf course. These are "zero emission" vehicles, achieving the maximum possible on-site emission reductions. Based upon the results of these pilot studies, the Aviation Department would fully implement these practices by requiring all airside operators to utilize these fuels and equipment. The grant calls for replacing 13 gasoline powered tugs with electric tugs, saving 33,000 gallons of gasoline per year. There are somewhat more than 700 tugs currently in use at the Airport with the potential to be replaced by electric tugs. Conversion of all of these tugs would reduce fuel consumption by 1,800,000 gallons per year and reduce emissions by up to 18,000 tons per year of CO2. The use of additional electricity off the electrical grid will cause some increase of pollutant and greenhouse gas emissions at the power plants serving the grid, but in general those emissions will be less and will be more dispersed than direct emissions at the airport.

7. The Alternative Fuels Advisory Committee should continue to meet periodically to track the implementation of approved recommendations and to prepare another report to include the results of the pilot projects and recommendations for the fleet based upon those results and other appropriate factors at that time. It is anticipated that such a report could be completed within 18 months, allowing sufficient time to generate and analyze data from the pilot studies.

REFERENCES

- www.fueleconomy.gov
- www.tri-met.org/hybridbus.htm
- www.doe.gov
- www.nrel.gov
- www.biodiesel.org
- www.ccities.doe.gov
- www.eren.doe.gov/EE/transportation.html

MEMORANDUM

TO: Those Listed Below

DATE: January 18, 2002

SUBJECT: Alternative Fuels Advisory Committee Appointments

FROM: Steve Shiver
County Manager

On April 10, 2001 the Board of County Commissioners approved Resolution No.R-378-01 directing me to execute a Memorandum of Understanding with the U.S. Department of Energy redesignating Miami-Dade County as member of the Gold Coast Clean Cities Coalition. This reaffirmed the County's commitment to the coalition and its goals.

The Clean Cities Program, sponsored by the U.S. Department of Energy, supports public-private partnerships that deploy alternative fuel vehicles (AFVs) and build supporting infrastructure. By encouraging AFV use, the Clean Cities Program helps enhance energy security and environmental quality at both the national and local levels. In 1993 the Florida Gold Coast Clean Cities Coalition was created by Executive Order of the Governor and our subsequent Clean Cities designation by the U.S. Department of Energy.

The Florida Gold Coast Clean Cities Coalition is a public/private advisory board composed of state legislators, local government representatives, federal and state agencies, and private sector representatives concerned with alternative fuel programs. The role of the Coalition is to provide a fuel neutral policy direction to maximize the use of vehicles operating on clean alternative fuels throughout the five county area. This area includes Broward, Martin, Miami-Dade, Monroe and Palm Beach counties. The Department of Environmental Resources Management (DERM) and General Services Administration (GSA) staff represents Miami-Dade County in the Coalition.

The resolution approved by the Board of County Commissioners specifically directs the formulation of a plan that expands the use of alternative fuel transportation in the County. In order to accomplish this task, I am appointing a committee comprised of representatives from different County agencies that deal with fleets or transportation issues. In utilizing this approach, we can bring together valuable talent resulting in a plan addressing both short term and long-term recommendations and actions regarding alternative fuel use. The Committee's mission shall be to develop and implement a program to enhance the utilization of alternative fuels in Miami-Dade County.

The Alternative Fuels Advisory Committee membership is as follows:

Dr. Douglas Yoder, Committee Chair and Assistant Director, DERM

Hector Paredes, Assistant Facilities Supervisor, General Services Administration

Roosevelt Bradley, Asst. Director of Bus Operations, Transit Agency

Mario Garcia, Chief of Transit Planning, Transit Agency

Pedro Hernandez, Manager of Environmental Engineering, Aviation Department

Phil Gangi, Fleet Management Facilities, Aviation Department

Carlos Roa and Susan Schreiber, Transportation System Analysts, Metropolitan Planning Organization

Mayra Flagler, Urban CO2 Reduction Program Manager, DERM

The Committee shall meet as necessary and prepare a status report on is progress within four months of its appointment. The final report and recommended plan shall be completed by July 31, 2002.

cc:
Pedro G. Hernandez, Asst. County Manager
Bernard McGriff, Director, GSA
Danny Alvarez, Director, Transit Agency
Angela Gittens, Director, Aviation Department
Jose Luis Mesa, Director, MPO
John W. Renfrow, Director, DERM
Douglas Yoder, Asst. Director, DERM
Roosevelt Bradley, MDTA
Hector Paredes, GSA
Mario Garcia, Transit
Pedro Hernandez, Aviation
Phil Gangi, Aviation
Carlos Roa, MPO
Susan Schreiber, MPO
Mayra Flagler, DERM

Stephen P. Clark
Government Center
111 N.W. 1st Street
Miami, FL 33128

MASTER REPORT

File Number: 010880

File Number: 010880	**File Type:** Resolution	**Status:** Adopted
Version: 0	**Resolution:** R-378-01	**Control:** County Commission
File Name: MOU US DEPT OF ENERGY REDESIGN MDC AS CLEAN CITY		**Introduced:** 4/6/01
Requester:	**Cost:**	**Final Action:** 4/10/01
Ag. Date: 4/10/2001		**Ag. Item:** 9A4SUBSTITUTE

Notes:

Title: RESOLUTION DIRECTING THE COUNTY MANAGER TO EXECUTE A MEMORANDUM OF UNDERSTANDING (MOU) WITH THE UNITED STATES DEPARTMENT OF ENERGY REDESIGNATING MIAMI-DADE COUNTY AS A CLEAN CITY; DIRECTING THE COUNTY MANAGER TO DEVELOP AND IMPLEMENT A PROGRAM TO ENHANCE THE UTILIZATION OF ALTERNATIVE FUEL IN MIAMI-DADE COUNTY; AND URGING THE PARTICIPATION OF THE U.S. DEPARTMENT OF ENERGY IN PLACING ALTERNATIVE FUEL VEHICLES IN THE GOLD COAST

Indexes: UNITED STATES DEPARTMENT OF ENERGY
MEMORANDUM OF UNDERSTANDING

Sponsors: Katy Sorenson

Sunset Provision: No

Effective Date:

Expiration Date:

History of Legislative File 010880

Ver	Acting Body	Date	Action	Sent To	Due Date	Returned	Pass/Fail
0	County Attorney	4/6/01	Assigned	Joni Coffey			
0	Board of County Commissioners	4/10/01	Adopted				P

Body:

WHEREAS, the counties of Martin, Palm Beach, Broward, Miami-Dade and Monroe have been designated by the United States Department of Energy as the Florida Gold Coast Clean Cities Coalition; and

WHEREAS, in 1994 these Gold Coast counties received a Clean Cities designation and subsequently were redesignated in 2000; and

WHEREAS, the Clean Cities Coalition is a public/private advisory board whose role is to provide a fuel neutral policy direction to maximize the use of vehicles operating on clean alternative fuels throughout the five-county area; and

WHEREAS, the regional policy plans for both the South Florida and Treasure Coast Regional Planning Councils include the goal of improving air quality in their respective geographic areas which encompass the Gold Coast; and

WHEREAS, Miami-Dade County membership in the Clean Cities Coalition from 1994-1999 resulted in multiple grant and rebate opportunities; and

WHEREAS, Miami-Dade County wishes to reaffirm its commitment to the coalition,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY

COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:

Section 1. The County Manager is hereby directed to execute the Addendum to the Memorandum of Understanding (MOU) for the Clean Cities Program, in substantially the form attached hereto.

Section 2. The County Manager is further directed to develop and present to this Board a Clean Cities plan for Miami-Dade County, which will contain at a minimum the following goals:

a. to expand the use of alternative fuel transportation in Miami-Dade County;

b. to develop new infrastructure to allow and encourage the utilization of alternative fuel, and/or to increase the utilization of existing infrastructure by alternative fuel transportation;

c. to contribute to economic development through the support of alternative fuel industry;

d. to promote the benefits of using alternative fuel vehicles;

e. to support and expand public access to information on alternative fuels and technology; and

f. to gain legislative support and funding for alternative fuel vehicle programs.

Section 3. The County Manager is further directed to promote Miami-Dade County's activities and achievements under the Clean Cities Program through the local and national media. The County Manager is further directed to educate other local governments regarding alternative fuel vehicles, both independently and in cooperation with the U.S. Department of Energy.

Section 4. This Board hereby approves and urges the participation of the U.S. Department of Energy in its efforts to place alternative fuel vehicles in the Gold Coast.