

Final Draft Final Report on

# Cost Comparison of Alternative Fleet Vehicle Provision Methods

for the

Iowa Department of  
Administrative Services



**DAS**

February 2012

MERCURY ASSOCIATES, INC.

**MERCURY**



February 24, 2012

Mr. Tim Ryburn, Administrator  
Iowa Department of Administrative Services  
General Services, Enterprise  
109 S.E. 13<sup>th</sup> Street  
Des Moines, IA 50319

Dear Mr. Ryburn:

Mercury Associates, Inc. is pleased to submit this draft report on the results of our analysis of the costs of the Department of Administrative Services (DAS) furnishing light-duty vehicles to State agencies versus outsourcing the provision of this service to Enterprise Fleet Management.

We appreciate being given the opportunity to work with you and your staff on this important project, and hope that you will not hesitate to call on our firm in the future should the need for additional consulting assistance in this or others areas of fleet management arise.

Very truly yours,

Paul T. Lauria  
President



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## **INTRODUCTION**

This report presents the results of Mercury Associates' comparative analysis of fleet vehicle provision options for a defined group of vehicles in the State of Iowa's fleet. Mercury is a fleet management consulting firm whose primary mission is to assist organizations in improving the management and operation of such fleets. Our firm has extensive experience working with state government jurisdictions and in analyzing in-house and outsourced fleet service delivery methods for a wide array of organizations.

The State Legislature instructed the Department of Administrative Services Fleet and Mail Services Division (DAS/FM) to develop and issue a request for proposals (RFP) from suitable commercial enterprises for the provision of vehicle rental services. To the extent that the Department determines that outsourcing the provision of certain vehicles would be economically feasible and financially advantageous, an award for a vehicle rental or leasing contract is to be issued by March 1, 2012.

DAS/FM sought the assistance of a qualified consulting firm to conduct a comparative cost analysis and make a recommendation as to whether DAS/FM should outsource the vehicle rental services it currently provides to State agencies to a "preferred supplier" that was identified by DAS/FM through a formal proposal solicitation process. Mercury was selected to perform this cost analysis.

## **APPROACH AND METHODOLOGY**

Our approach to the analysis focused on identifying the *avoidable* costs of DAS/FM furnishing vehicles to State agencies and comparing them to the prices quoted by the preferred supplier of vehicle rental services – Enterprise Fleet Management – to determine the circumstances under which the supplier could provide vehicles more economically to State agencies than can DAS/FM.

We developed cost estimates and compared them to the rental rates quoted by Enterprise only for those vehicles and vehicle usage scenarios 1) for which quotes were actually received; and 2) that are consistent with the short-term and long-term vehicle provision methods employed by DAS/FM. The vehicles currently furnished by DAS/FM that are eligible for replacement with Enterprise-furnished vehicles are referred to hereinafter as the "study group" of vehicles.

The basic steps and associated methodology we used to develop and compare the costs of in-house versus outsourced provision of vehicles is detailed below.

## **DATA COLLECTION**

We collected from DAS/FM vehicle-specific cost and utilization data for both motor pool and agency assigned vehicles. The pieces of information we requested for each vehicle



were assignment type (i.e., assigned or pool), vehicle type, model year, original purchase price, in-service date, utilization in days and/or miles for a recent year, and maintenance, repair, and fuel costs for that year. We also gathered information on the State's current vehicle replacement cycle guidelines, and annual operating costs for the Fleet Management, Garage, and Motor Pool functions of DAS/FM, including risk insurance costs. When an ideal data set for completing our analysis was not available, such as in-house maintenance and repair labor hours by vehicle for a given time period, we employed alternative cost estimating methods using data elements we were able to secure.

## **COST DATA REVIEW AND ORGANIZATION**

The cost data were organized using DAS/FM's current budget and expenditure allocation methodology. Specifically, all of the Fiscal Year 2011 actual costs associated with furnishing, managing, maintaining, and operating the fleet were compiled using reports from the State's financial management system. These costs are shown in a Microsoft *Excel*<sup>®</sup> workbook developed for the purpose of conducting this study, which has been furnished to DAS/FM under separate cover. These costs are organized into the following subgroups.

- Fleet Management
- Garage
- Motor Pool
- Operational Costs – Commercial Repairs
- Operational Costs – Fuel
- Operational Costs – Risk Management

We allocated these costs into three distinct functional areas corresponding to the major service delivery activities in which DAS/FM engages, namely the acquisition and disposal of both assigned and motor pool vehicles, vehicle maintenance and repair, and motor pool management and operation. Adjustments were made for known changes in DAS/FM staffing levels and assignments that were not reflected in the FY 2011 budget information. Figure 1 summarizes the results of this categorization of costs.



**Figure 1  
Allocations of DAS/FM Operating Costs**

<b>Allocated Operating Costs</b>	
<b>Category</b>	<b>Cost</b>
Fleet & Vehicle Management	\$ 9,632,382
Garage	\$ 1,028,318
Motor Pool	\$ 379,898
<b>Total</b>	<b>\$ 11,040,598</b>

### **DEFINITION OF VEHICLE PROVISION SCENARIOS**

The State’s rental vehicle request for proposals asked respondents to furnish rental rates for 13 different types of vehicles, ranging from passenger sedans to pickup trucks, under 7 different usage time scenarios, ranging from 1 hour to 161 or more days in duration. Thus, there theoretically could have been 91 different rental scenarios under which we would have had to quantify and compare the cost of in-house versus outsourced provision of vehicles. As noted above, however, we conducted cost comparisons only for those scenarios that would be consistent with the long and short-term vehicle provision services currently offered by DAS/FM.

In accordance with legislative directives, DAS/FM identified a subset of all State-owned vehicles that were candidates for outsourcing. These included cars, sport utility vehicles and minivans. Types of vehicles excluded from consideration at this time included law enforcement units, trucks, and specialty/maintenance units. As noted earlier the group of vehicles to be considered for possible outsourcing is referred to as the “study group” throughout this report.

To conduct the comparative cost analysis, Mercury had to determine which classes of vehicles and which time scenarios were represented by current DAS/FM services to the study group. We also had to determine which vehicles would remain in active service in the State fleet (i.e., those whose provision would not be outsourced under any circumstances at this time). Figure 2 details these fleet inventory components.

**Figure 2  
Fleet Inventory**

<b>Fleet Inventory</b>	
Total Active Fleet Managed by DAS/FM	3,332
Motor Pool Units in Study Group	237
Assigned Units in Study Group	970
<b>Study Group Total</b>	<b>1,207</b>
Vehicles not Considered for Outsourcing	2,125

The usage of vehicles in the study group by type of vehicle, assignment (i.e., agency assigned or motor pool), and period of use classification was required in order to calculate both the State's costs and the preferred provider's fees under alternative outsourcing scenarios. Requisition data on each agency-assigned vehicle revealed which vehicles are assigned continuously (i.e., 365 days a year) to State agencies. Monthly Motor Pool usage data for a 12-month period was reviewed and average rental periods in days were calculated. The result of these reviews is detailed in Figure 3 below.

**Figure 3  
Distribution of Study Group Vehicles by Period of Use Segments**

<b>Vehicle Type</b>	<b>Assigned &gt; 160 Days Increments</b>	<b>Motor Pool &gt; 160 Days Increments</b>	<b>Motor Pool &lt; 30 Day Increments</b>	<b>Total</b>
Compact Sedan	271	26	92	389
Intermediate Sedan	361	24	81	466
Full Size Sedan	9		1	10
Minivan	191		13	204
Small SUV	112			112
Large SUV	19			19
Cargo Van	7			7
<b>Totals</b>	<b>970</b>	<b>50</b>	<b>187</b>	<b>1,207</b>



The last step in developing the rental scenarios was to further detail the study group units' usage by days and weeks in accordance with the preferred provider's pricing structure. Figure 4 below depicts the final rental scenario volumes.

**Figure 4  
Study Vehicle Usage by Vehicle Type and Usage Duration**

Vehicle Type	Motor Pool Trip Days		Assigned Vehicle Usage Days
	# Days < 7 Days	# Weeks	# Days
Compact	8,628	1,716	108,185
Intermediate	6,388	1,619	140,345
Full Size	83	36	3,285
Mini Van	1,334	30	69,715
Small SUV			40,880
Large SUV			6,935
Cargo Van			2,555
<b>Totals</b>	<b>16,433</b>	<b>3,401</b>	<b>371,900</b>

In our review of Motor Pool vehicle usage data, we found relatively low usage of many of the 187 units. Specifically, on average, only 45 percent of the vehicles in the pool were rented out for 80 percent of the available rental days in each month. Based on this finding, we factored into the capital cost component of our review a reduction in the size of the Motor Pool of 40 vehicles, which we believe is easily attainable. To effectively rightsize the Motor Pool (above and beyond this 40-unit reduction), detailed daily vehicle utilization data are required. Once collected, these data can be utilized to conduct a more in-depth review of Motor Pool vehicle utilization and final rightsizing and vehicle sourcing decisions can then effectively be made.

**DETERMINATION OF AVOIDABLE COSTS**

Avoidable costs are those that the State would no longer incur if DAS/FM were to stop providing a given product or service. They would include direct costs such as the capital cost associated with purchasing a vehicle and the maintenance, repair, and fuel costs associated with operating vehicle.





There are a series of costs in the DAS/FM budget that could not be eliminated in their entirety (and therefore could not be avoided) if DAS/FM no longer furnished some or all of the study group vehicles. These include items such as charges paid to other State agencies for services DAS/FM consumes (e.g., for IT support services) and depreciation costs for capital equipment that would remain in the DAS/FM garage facility.

To provide for an accurate comparison of in-house and outsourced vehicle provision costs, DAS/FM's avoidable costs associated with providing the specific services to the study group vehicles that could be outsourced to Enterprise had to be quantified. To do this, we began by identifying three basic segments of the fleet whose provision could be outsourced:

- A. Assigned and long-term rental vehicles (i.e., all vehicles in the study group);
- B. Short-term rental vehicles only; and
- C. Assigned vehicles only.

Since the costs of furnishing the vehicles in Segment C would be obvious once the costs of those in Segments A and B were determined, we began by quantifying the avoidable costs associated with the latter two segments. Specifically our task was to

1. Determine the amount of avoidable and unavoidable costs for each line item cost in the DAS/FM budget;
2. Quantify the capital cost of the vehicles in study group Segments A and B; and
3. Quantify the one-time revenue available to the State from the sale of vehicles if outsourcing were implemented.

A fully functional fleet management information system that captures all vehicle capital and operating costs at the vehicle level and allows for ad hoc queries and report writing would be the ideal tool with which to estimate avoidable costs. Since DAS/FM does not have this type of system, however, we developed a set of cost estimating methods that were feasible to use with the data that are available. Figure 5 identifies the core methodologies used to quantify the DAS/FM costs associated with furnishing the vehicles in the study group segments. These costs are detailed in the next section of this report.

**Figure 5  
Cost Estimating Methodologies**

Cost Category	Basic Estimating Methodology
Staffing - Fleet Management	Potential avoidable cost based on percentage of study group vehicles in a particular outsourcing segment; avoidable cost based on potential to eliminate specific positions
Staffing - Garage	Potential avoidable cost based on study segment percentage of garage repair billing volume; avoidable cost based on potential to eliminate specific positions
Fleet Management General Expenses	Avoidable cost based on adjusted percentage of study group vehicles in a particular outsourcing segment
Garage General Expenses	Avoidable cost based on adjusted percentage of study group vehicles in a particular outsourcing segment
Motor Pool	Avoidable cost based on all expenses associated with direct operation of Motor Pool vehicles; Motor Pool vehicles on long-term assignment would be managed out of the garage/fleet management office if only the short term “trip” vehicles are outsourced.
Commercial Repairs	Avoidable cost based on commercial repair expenditures for study group segment
Fuel	No avoidable cost as the State will continue to be responsible for fuel cost if they outsource rentals; excluded from all analyses
Risk Management	Avoidable cost based on the per-unit fees for agency assigned vehicles and on reported charges for Motor Pool vehicles
Capital Cost	Vehicle purchase price (based on 2012 contract prices) minus estimated residual value divided by service life in years.
Vehicle Sale Proceeds	Calculated based on Mercury developed residual value regression equation, less estimated remarketing costs.

## FINDINGS

As explained previously, when exploring the feasibility of outsourcing the provision of a fleet management service, it is more appropriate to do so on the basis of the *avoidable* costs of performing the service in-house than on the *total* cost, as reflected, for example, in the fleet management organization’s budget or cost charge-back rates.



To specifically identify the avoidable costs of DAS/FM providing State agencies with light-duty vehicles, we began by identifying cost items in its budget that we believe to be unavoidable under any outsourcing scenario. These include \$730,658 in annual inter-agency transfers and reimbursements and capital costs of fixed assets (primarily Garage equipment) that are unlikely to be eliminated if vehicle rental services are outsourced. These are budgeted costs associated with object codes 411 through 704 on the budget tab in the *Excel* cost analysis workbook we have furnished to DAS under separate cover.

The reason the allocated costs are unlikely to go away is that the marginal reduction in resource requirements and costs in the various State agencies from whence these allocated overhead costs come that would result from DAS/FM outsourcing the provision of up to 1,207 vehicles would be, in our opinion, negligible. While we believe these costs are unavoidable, we included in our investigation of outsourcing costs a sensitivity analysis aimed at determining the sensitivity of these costs and of cost savings that might realized by outsourcing to the assumption that allocated overhead costs are entirely avoidable (our conclusions did not change).

For all other line-item costs in the DAS/FM budget we applied the estimating methods outlined in Figure 5 to determine avoidable cost amounts. A summary of the FY 2011 total and avoidable cost by functional area appears in Figure 6 below. Readers should bear in mind that the budgeted costs shown in the Fleet Management Budget Allocation column include costs associated with all the vehicles DAS/FM supplies to State agencies, the provision of 2,125 of which is not a candidate for outsourcing to a third-party supplier.

**Figure 6  
Study Group FY 2011 Avoidable Cost**

Study Group Avoidable Cost							
Cost Category	Fleet Management (FM) Budget Allocation	FM Avoidable	Garage Budget Allocation	Garage Avoidable	Motor Pool Budget Allocation	MP Avoidable	Total Study Group Avoidable
Salaries and Benefits	\$ 74,670	\$ -	\$ 559,706	\$200,974	\$110,864	\$ 83,005	<b>\$ 283,980</b>
General Expenses	\$ 47,711	\$ 9,542	\$ 359,537	\$167,185	\$ 12,771	\$ 12,771	<b>\$ 189,498</b>
Commercial Repairs	\$2,083,092	\$486,325	\$ -		\$ 62,082	\$ 62,082	<b>\$ 548,407</b>
Fuel: Internal Tanks	\$ 376,350						
Fuel: Commercial	\$5,674,306						
Transfers & Reimb.	\$ 516,770		\$ 109,042		\$104,846		
Risk/Insurance	\$ 859,484	\$276,217	\$ -	\$ -	\$ 89,337		<b>\$ 276,217</b>
<b>Total Operating Costs</b>	<b>\$9,632,382</b>	<b>\$772,085</b>	<b>\$1,028,318</b>	<b>\$368,174</b>	<b>\$379,898</b>	<b>\$157,858</b>	<b>\$ 1,298,116</b>
<b>Total Capital Cost</b>							<b>\$ 1,426,672</b>
<b>Total Avoidable Cost</b>							<b>\$ 2,724,788</b>



Detailed calculations supporting the avoidable costs shown in Figure 6 appear in the *Excel* workbook that accompanies this report. The avoidable salaries and fringe benefit costs reflect a decrease of 6.5 full-time positions if all 1,207 vehicles are outsourced. Currently there are the 12.9 full time positions that service the entire 3,332-unit fleet.

### OUTSOURCING THE PROVISION OF ALL STUDY GROUP VEHICLES

Having quantified the potential savings of outsourcing the provision of all the vehicles in study group, we next quantified the fees associated with having Enterprise supply these vehicles to the State. Using Enterprise’s proposed rental rates we calculated the costs of its services for each of the three outsourcing scenarios described earlier. The total cost of having Enterprise furnish all of the vehicles in the study group is \$9.3 million per year, as detailed in Figure 7 below. It should be noted that these are the base costs and do not include any of the additional fees that may be incurred by the State, such as charges of \$61 fee for lost key replacement or flat tire assistance.

**Figure 7  
Enterprise Fees for Furnishing all Study Group Vehicles**

Annual Usage of and Enterprise Rental Fees for Study Group Vehicles										
Vehicle Type	Motor Pool Vehicle Usage		Assigned Vehicle Usage # Days of Rentals >160 Days' Duration	Enterprise Rental Rates			Annual Enterprise Fees			
	# Days of Rentals < 7 Days' Durations	# Weeks of Weekly Rentals		Per Day for Daily Rental	Per Week for Weekly Rentals	Per Day for Long-Term Rentals (> 160 Days)	Daily Rental Charges	Weekly Rental Charges	Long-Term Rental Charges	Total Rental Charges
Compact	8,628	1,716	108,185	\$ 28.00	\$140.00	\$ 17.08	\$ 241,584	\$ 240,240	\$ 1,847,800	\$ 2,329,624
Intermediate	6,388	1,619	140,345	\$ 31.00	\$155.00	\$ 18.91	\$ 198,028	\$ 250,945	\$ 2,653,924	\$ 3,102,897
Full Size	83	36	3,285	\$ 33.00	\$165.00	\$ 20.13	\$ 2,739	\$ 5,940	\$ 66,127	\$ 74,806
Mini Van	1,334	30	69,715	\$ 50.00	\$250.00	\$ 30.50	\$ 66,700	\$ 7,500	\$ 2,126,308	\$ 2,200,508
Small SUV			40,880			\$ 30.50	\$ -	\$ -	\$ 1,246,840	\$ 1,246,840
Large SUV			6,935			\$ 45.14	\$ -	\$ -	\$ 313,046	\$ 313,046
Cargo Van			2,555			\$ 24.40	\$ -	\$ -	\$ 62,342	\$ 62,342
<b>Totals</b>							<b>\$ 509,051</b>	<b>\$ 504,625</b>	<b>\$ 8,316,386</b>	<b>\$ 9,330,062</b>

As shown in Figure 8, comparing the cost of renting all 1,207 study group vehicles from Enterprise to the avoidable cost of DAS/FM continuing to supply these vehicles reveals that outsourcing to Enterprise would cost the State \$6.6 million more annually. Even if we increase our avoidable cost estimates of in-house vehicle provision to include an appropriate portion of DAS/FM’s allocated overhead costs, *and* we increase our vehicle capital cost estimates associated with in-house provision of vehicles to reflect the



State's 2012 contract vehicle purchase prices, Enterprise is still substantially more expensive than is DAS/FM.<sup>1</sup>

**Figure 8  
Comparison of In-house-Provided and Rented Vehicle Costs**

Study Group Cost Provision Comparison		Adjusted Study Group Cost Provision Comparison	
# of Vehicles	1,207	# of Vehicles	1,207
Annual Avoidable Operating Cost	\$ 1,298,116	Annual Avoidable Operating Cost	\$ 1,557,021
Annual Avoidable Capital Cost-Original Vehicle Purchase Price Basis	\$ 1,426,672	Annual Avoidable Capital Cost-2012 Vehicle Purchase Price Basis	\$ 1,723,500
Annual Total Avoidable Cost	\$ 2,724,788	Annual Total Avoidable Cost	\$ 3,280,521
Annual Enterprise Fees	\$ 9,330,062	Annual Enterprise Fees	\$ 9,330,062
<b>Savings (Loss) with Enterprise</b>	<b>\$ (6,605,274)</b>	<b>Savings (Loss) with Enterprise</b>	<b>\$ (6,049,542)</b>

Since State-owned vehicles could be sold if vehicles were rented from Enterprise, we also analyzed the impact on the outsourcing decision of the one-time proceeds that would be realized from the sale of these vehicles. We estimate these proceeds to be \$4.2 million. If this revenue is applied to the study group cost comparison above, the cost of using Enterprise is still \$2.4 million more than the State's avoidable costs.

Given the one-time windfall that the State could realize by selling 1,207 vehicles if it were to outsource the provision of all study group vehicles to Enterprise, a more appropriate way to compare the costs of the two vehicle provision methods is to do so over some reasonable future period of time. To this end, we estimated the costs associated with the two provision methods over a 10-year period, adjusting future costs for inflation and incorporating the one-time proceeds from the sale of State vehicles in the first year under the total outsourcing approach. The 10-year costs in both nominal dollars and net present value (NPV) terms of the approaches are shown in Figure 9.

<sup>1</sup> Our FY 2011 capital cost estimates for the vehicles in the study group reflect the amounts the State originally paid to acquire these vehicles. If we assume that Enterprise would supply the State with 1,207 brand new vehicles, using current rather than original vehicle purchase prices in quantifying the costs of the in-house vehicle provision scenarios provides for more of an "apples-to-apples" cost comparison.

**Figure 9  
Comparison of Long-Term In-house-Provided and Rented Vehicle Costs**

Study Group 10-Year Cost	Nominal	NPV
DAS/FM Provision	\$ 31,236,642	\$ 22,666,978
Rent from Enterprise (inc. vehicle sale proceeds)	\$ 92,663,268	\$ 66,933,219
Savings (Costs) Associated with Renting	\$ (61,426,626)	\$ (44,266,241)

### OUTSOURCING THE PROVISION OF MOTOR POOL VEHICLES

Having determined that outsourcing the provision of all 1,207 vehicles in the study group clearly is *not* in the best interests of the State, we next turned our attention to evaluating whether or not outsourcing certain subgroups of vehicles might save the State money. The first scenario we explored was outsourcing the provision of short-term rental vehicles such as those that currently comprise the DAS/FM Motor or “Trip” Pool. There are 187 vehicles in this pool.

Following the same logic and methodology for this subgroup of vehicles as we did for the full study group, we calculated the DAS/FM avoidable costs and the Enterprise rental fees associated with each entity furnishing these vehicles. As Figure 10 shows, while Enterprise’s annual fees would be more than \$0.5 million more than DAS/FM’s costs, the cost differential between the two vehicle provision methods is much narrower than that for the study group as a whole. We believe this is driven by a number of

**Figure 10  
Comparison of In-house and Enterprise-Provided Pool Vehicle Costs**

Trip Pool Cost Comparison	
# of Vehicles	187
Annual Avoidable Operating Cost	\$ 303,078
Annual Avoidable Capital Cost - 2012 Vehicle Purchase Price Basis	\$ 176,547
Annual Total Avoidable Cost	\$ 479,625
Annual Enterprise Fees	\$ 1,013,676
<b>Savings (Cost) Associated with Renting</b>	<b>\$ (534,051)</b>



factors, including the fact that a greater share of the DAS/FM’s Motor Pool costs are avoidable if it closes and the current level of use of Motor Pool vehicles is low on average. In addition, short-term rentals are Enterprise’s core business and we would expect their pricing to be more competitive in this arena.

We estimate that the one-time revenue the State could realize from selling all of the vehicles in the Motor Pool would be \$310,005. Incorporating the impact of this revenue and making adjustments for inflation, a 10-year estimate of Motor Pool costs under each provision method was modeled. As shown in Figure 11, outsourcing the provision of the vehicles that currently comprise the DAS/FM Trip Pool to Enterprise would be considerably more costly than continuing to operate the Pool in house, in both nominal and net present value (NPV) terms.

**Figure 11  
Comparison of Long-Term In-house and Enterprise-Provided Pool Vehicle Costs**

Motor Pool 10-Year Cost	Nominal	NPV
DAS/FM Provision	\$ 5,498,365	\$ 3,989,907
Rent from Enterprise (inc. vehicle sale proceeds)	\$ 12,214,003	\$ 8,575,937
Savings (Costs) Associated with Renting	\$ (6,715,638)	\$ (4,586,029)

**OUTSOURCING THE PROVISION OF ASSIGNED VEHICLES**

The third major outsourcing scenario we examined was the provision of long-term rental or “assigned” vehicles. The costs associated with this scenario are simply the difference between those of outsourcing the provision of the entire study group and of the Motor Pool vehicles only. Since our analysis of both of these other scenarios showed that the State can supply vehicles more cheaply, it follows that in-house provision also is cheaper for assigned vehicles.

**OTHER OUTSOURCING POSSIBILITIES**

Having addressed the potential benefits of outsourcing the provision of the entire study group of vehicles and either one of its two components, we next turned our attention to ascertaining whether or not there are other sets of circumstances in which renting vehicles from Enterprise may be beneficial to the State. It is an industry best practice to minimize the number of vehicles in a trip pool, sizing it so as to maximize their use without having to turn away an excessive number of would-be customers on any given day. Many organizations with such pools accomplish this by utilizing a third-party vehicle rental company such as Enterprise to supplement its in-house inventory of vehicles so as to effectively meet peak demands.

This same principle applies to seasonal vehicle needs which are common in state government and are generally three to four months in duration. To determine if renting vehicles from Enterprise might make sense for meeting such needs in Iowa, we analyzed the comparative costs of DAS/FM versus Enterprise provision of a vehicle over a range of possible days of use. Specifically, we compared the costs of DAS/FM and Enterprise furnishing a vehicle for periods ranging in duration from 1 to 365 days. As shown in Figure 12 below, the average annual avoidable cost of DAS/FM supplying a State agency with an “average” vehicle is \$2,257.2. Therefore, a State-owned vehicle that is used only one day a year has a daily cost of \$2,257, whereas a vehicle used 50 days a year has a daily cost of \$45.14, one used 100 days a year has a daily cost of \$22.57, and so forth.

We compared these daily costs to the fees associated with renting the cheapest vehicle available from Enterprise, a compact sedan. Since Enterprise’s effective daily rental rates vary depending on the number of consecutive days that a vehicle is rented, we calculated the costs of renting a compact sedan from Enterprise based on both the lowest possible fee the State could pay, which is by renting a vehicle for several days in succession, and the maximum fee it would pay, which would occur if a State agency never rented an Enterprise vehicle for more than 7 days at a time. We then compared the average daily cost of a State-provided vehicle to both the minimum and maximum daily cost of an Enterprise-provided compact sedan to identify the breakeven point (the number of days of use in a year) where Enterprise’s rental fees would be less than the cost of using a State vehicle.

We found that, for a compact sedan used 80 or fewer days per year *and* never for more than 6 days in succession, it would be cheaper to rent from Enterprise. For compact sedans used continuously for 128 days or less in a year, renting from Enterprise also is cheaper than having DAS/FM supply a vehicle. This latter set of conditions probably would apply to the seasonal-use vehicle needs of many State agencies. Needless to say, the break-even number of days would be different for other types of vehicles that cost more for DAS/FM and Enterprise to supply. The main point is, however, that renting from Enterprise clearly merits consideration.

While we realize that the marginal cost of supplying a State vehicle for a day may be more or less than the of the average daily cost, it is reasonable to assume that purchasing a vehicle for use only 128 days a year is not a good use of State funds. Moreover, retaining old vehicles in the fleet to meet seasonal needs is often found to be very costly.

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<sup>2</sup> The cost amount shown is the weighted average annual cost of all 1,207 vehicles in the study group, only one-third of which are compact sedans. This results in “best case” break-even scenarios for Enterprise in that we are comparing the costs of the cheapest Enterprise vehicle against those of an average (i.e., more expensive) State vehicle to determine at what point using an Enterprise vehicle becomes cheaper. As the cost of using an Enterprise vehicle increases, the total number of days of vehicle use in a year below which renting from Enterprise does not make sense (that is, the break-even point) also increases.



**Figure 12**  
**Range of Days of Vehicle Use in a Year Below Which Renting a Compact Sedan from Enterprise is Cheaper than Using an “Average” State-Provided Vehicle**

<b>Study Group Cost Comparison</b>	
DAS/FM Annual Total Avoidable Cost	\$ 2,724,788
Study Group Vehicles	1,207
Annual Cost per Vehicle	\$ 2,257
Breakeven Days (Enterprise Compact Minimum)	128
Breakeven Days (Enterprise Compact Maximum)	80

## CONCLUSIONS AND RECOMMENDATIONS

Our comparison of the costs of DAS/FM and Enterprise providing vehicles to State agencies clearly indicates that wholesale outsourcing to Enterprise would not only not save the State money but would be considerably more costly than the current vehicle provision approach. However, there are specific situations in which agencies vehicle needs can be met more cost effectively by renting from Enterprise. Therefore we recommend the following:

1. The State should enter into a contract with Enterprise for vehicle rental services of an unspecified number of days and vehicles. That is, there should be no guarantee of volume as the number of desirable rental situations is unknown.
2. DAS/FM should move immediately to decrease the size of its Trip Pool (by as many as 40 vehicles) and work toward minimizing the number of vehicles required for effective operation. At the same time, DAS/FM should develop a contract with Enterprise that enables it to augment its supply of Pool vehicles using Enterprise vehicles during periods of high customer demand.
3. DAS/FM should advise its customers to consider renting from Enterprise when they have vehicle rental needs that they anticipate will not exceed 130 or so days in a given year. Additional analyses aimed at determining the break-even number of days associated with renting versus owning vehicles for State agency also should be performed for the specific types of vehicles supplied by DAS/FM and the corresponding rates associated with renting these vehicles from Enterprise.
4. At the end of each year, DAS/FM should evaluate actual Enterprise vehicle rental transaction volumes, durations, seasonality, and costs so as to determine if modifications to either the contract with Enterprise or vehicle assignment policy and guidance to State agencies is warranted.
5. DAS/FM should establish a process for capturing data on the days and hours of use of all assigned vehicles that is supplies to its customers so as to better



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enable the State to identify specific vehicle users who could save money by renting from Enterprise.