Quality and Productivity Commission

28th Annual Productivity and Quality Awards Program

"Los Angeles County: Ahead of the Curve"

2014 APPLICATION

Title of Project (Limited to 50 characters, including spaces, using Arial 12 point font):

NAME OF PROJECT:

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT BUSES

DATE OF IMPLEMENTATION/ADOPTION: JUNE 12, 2013
(Must have been implemented at least one year - on or before June 30, 2013)

PROJECT STATUS: X Ongoing ____ One-time only

HAS YOUR DEPARTMENT PREVIOUSLY SUBMITTED THIS PROJECT? ____ Yes X No

EXECUTIVE SUMMARY: Describe the project in 15 lines or less using Arial 12 point font. Summarize the problem, solution, and benefits of the project in a clear and direct manner.

The Los Angeles County Sheriff's Department operates a fleet of 82 prisoner transportation coach-style buses that together were driven more than 2.4 million miles per year. Based upon industry standards, these buses should be replaced after 12 years or 500,000 miles. The Department had 37 buses that met or exceeded the replacement criteria. The age and condition of these buses resulted in higher operating costs and untimely breakdowns.

In 2012, the Department submitted and was awarded a grant from the South Coast Air Quality Management District through the Carl Moyer Program to partially fund the replacement of 37 of the Department's aging prisoner transportation buses. The following year, a second grant was awarded. The two grants received by the Department totaled approximately $7 million dollars. Presently, sixteen buses have been replaced. With the new buses in service, the risk of breakdowns has been reduced, fuel consumption has decreased, and these buses have reduced the Nitrogen Oxide (NOx) and Particulate Matter (PM) emissions, which contribute to serious public health problems, including asthma and lung cancer.

(1) ACTUAL/ESTIMATED **ANNUAL** COST AVOIDANCE	(2) ACTUAL/ESTIMATED **ANNUAL** COST SAVINGS	(3) ACTUAL/ESTIMATED **ANNUAL** REVENUE	(1) + (2) + (3) = TOTAL **ANNUAL** ACTUAL/ESTIMATED BENEFIT	SERVICE ENHANCEMENT PROJECT
$ 583,000	$ 585,836	$	$ 1,168,836	☐

ANNUAL = 12 MONTHS ONLY

SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS Los Angeles County Sheriff's Department – Court Services Transportation Bureau	TELEPHONE NUMBER (213) 974-4561
PROGRAM MANAGER'S NAME Robert J. Tubbs, Captain	TELEPHONE NUMBER (213) 974-4561 EMAIL RJTubbs@lasd.org
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE (PLEASE CALL (213) 893-0322 IF YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER'S NAME) Glen Joe, Director DATE 7/15/2014	TELEPHONE NUMBER (323) 526-5205 EMAIL GCJoe@lasd.org
DEPARTMENT HEAD'S NAME AND SIGNATURE JOHN L. SCOTT, SHERIFF DATE 7/15/2014	TELEPHONE NUMBER (626) 526-5000

We Support Plain Language

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1st FACT SHEET – LIMITED TO 3 PAGES ONLY: Describe the **Challenge, Solution, and Benefits** of the project.

CHALLENGE

The California Air Resources Board (CARB) has numerous emissions regulations governing both on and off road vehicles and pieces of equipment. However, emergency vehicles (Vehicle Code 165) such as police and fire vehicles are exempt from California regulations, but must comply with federal regulations. The South Coast Air Quality Management District (AQMD) has additional rules governing public agencies vehicles, again excluding emergency vehicles as defined by VC 165.

The Los Angeles County Sheriff's Department operates 82 Prisoner Transportation Buses, the largest such fleet in the country. In addition to providing services for its own jail system and the courts, the Sheriff's Department provides contract transportation services for most of the counties in California. These specialized buses are very expensive, currently about $550,000 each. Because of their high replacement cost, a typical bus has a service life of 25 to 30 years, much longer than a conventional bus. In a typical fiscal year, three buses are replaced. Until 1999, almost all diesel engines in trucks and buses were virtually unregulated – they lacked any significant emissions controls. Thirty-seven of the 82 (45%) Prisoner Transportation Buses were 1996 models and older. Each of the older buses traveled an average of 20,000 miles and consumed more than 5,000 gallons of diesel a year.

For many years, the Sheriff's Department, the CARB, the AQMD, and its Mobile Source Air Pollution Reduction Review Committee (MSRC) had tried in vain to find a solution for the Sheriff's Department's older buses. The AQMD and its MSRC worked with the buses' service point to find a lower emission engine replacement. But the cost – more than $100,000 per bus – was high. The newer cleaner engines were much larger and required a larger radiator. These engines would have taken at least 20% of the interior space of each bus, reducing the number of prisoners that could be transported. That was a non-starter for the Sheriff's Department, because the Department would then need more buses and more deputies to transport the same number of prisoners.

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SOLUTION

In 2010, CARB adopted a new chapter for its Carl Moyer Grant Program. The chapter was written specifically for Fire Apparatus and other emergency vehicles. Technically, the Sheriff's Prisoner Transportation Buses met the definition of "other emergency vehicles" as defined in the Vehicle Code 165. In 2012, the Sheriff's Department applied for the AQMD's Carl Moyer Grant for funding to replace 24 of its buses and was awarded $4.4 million. The following year, the Sheriff's Department applied for funding to replace the remaining 13 buses with virtually unregulated engines and was awarded and additional $2.5 million – for a total of almost $7 million of the total $20 million vehicle replacement program.

To date, 16 of the new buses are in service. Eight more have been ordered and are due in June 2014. The remaining 13 buses will be ordered in FY 2014-15. The sixteen new buses will travel more than 432,000 miles in their first full year of service. They are averaging 27,000 miles a year (a 35% increase) and are averaging more than 4.5 miles per gallon – a 12.5% increase in fuel economy.

BENEFITS

In the first full year of use, these 16 buses will have reduced fuel consumption by more than 8,896 gallons and avoided almost 90 metric tons of CO_2; reduced emissions 98% per bus; improved usage 35%; reduced fuel consumption 12.5%; and obtained 1/3 of replacement costs from grant funds. When all 37 buses are in service, the Sheriff's Department will reduce its fuel usage by more than 20,000 gallons a year and avoid 500 metric tons of CO_2 from going into the atmosphere.

This program will retire 37 buses ten years early and dramatically reduce the emissions from the Sheriff's oldest and dirtiest buses. A quick look at the highways traveled by these transportation buses illustrates that they regularly pass through Environmental Justice areas – those areas disproportionately impacted by dirty trucks and buses. Reducing emissions and fuel consumption reduces Climate Change impacts from Green House Gases (GHGs) and Dark Carbon (soot). (Each gallon of diesel used in the older buses consumed produces 22.4 pounds of CO_2.)

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LINKAGE TO THE COUNTY STRATEGIC PLAN (DETAIL IS REQUIRED FOR COUNTY DEPARTMENTS):

The Sheriff's Department has worked with the AQMD and CARB to help get the word out to other agencies and to encourage those agencies to apply for Moyer funding. The Sheriff's Department has spoken with the State's Department of Corrections (the second largest prisoner transportation fleet in California), the Orange County Sheriff's Department, and the San Bernardino County Sheriff's Department about the Moyer program and process. During its annual vehicle performance evaluations at the Fontana Speedway, the Sheriff's Department provided one of its new buses and provided space for the AQMD to help educate other jurisdictions about the available funding to replace their oldest diesel-powered vehicles. The AQMD and the Sheriff's Department are continuing conversations with the Department of Corrections.

The new buses are significantly more fuel efficient. They are far more reliable and they are under their manufacturer's warranty, further reducing the Sheriff's Department's downtime and repair expense. Within three years, almost half of the Sheriff's Prisoner transport fleet will be less than three years old, dramatically enhancing reliability and lowering the operating costs of the Prisoner Transportation Fleet. When the new buses are in service, all 37 combined will produce less NOx emissions and less toxic PM than just one of the old buses which they replace thus creating a healthier environment.

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COST AVOIDANCE, COST SAVINGS, AND REVENUE GENERATED (ESTIMATED BENEFIT): If you are claiming cost benefits, include a calculation on this page. You must include an explanation of the County cost savings, cost avoidance or new revenue that matches the numbers in the box. Remember to keep your supporting documentation.

Cost Avoidance: Costs that are eliminated or not incurred as a result of program outcomes.

Cost Savings: A reduction or lessening of expenditures as a result of program outcomes.

Revenue: Increases in existing revenue streams or new revenue sources to the County as a result of program outcomes.

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Cost Avoidance

Buses: Replacement of 37 buses – Average of 3 buses replaced per year; $7,000,000 grant / 12 years = Approximately $583,000 annual

Cost Savings

Fuel Usage: 8,896 gallons – Reduced Fuel Consumption @ $3.50 gallon = $31,136 annually for 16 buses.

Mechanical Repair: A sample of four old buses was compared to four new buses (annualized numbers were multiplied x 4 for each sample) in the following categories: miles driven; repair cost; cost per mile; number of repair orders; and days down during repair for annual savings of $554,700.

In addition, the deployment of these buses will prevent 500 metric tons of CO_2 from entering the atmosphere.