



City of Placerville

Public Works Department
3101 Center Street, Placerville, CA 95667
(530) 642-5250 phone – (530) 642-5568 fax

December 9, 2013

Michele Weimer
Environmental Management
2850 Fairlane Court
Placerville, CA 95667

Dave Johnston, APCO
EDC Air Quality Management District
330 Fair Lane
Placerville, CA 95667

Subject: AB 2766 2014 & 2015 Motor Vehicle Emission Reduction Project

Dear Michele & Dave,

Attached please find two copies of the City's proposal to utilize \$20,000 of AB 2766 funds for the purpose of purchasing a replacement low-emissions vehicle. Although running well and with only 97,000 miles on it, the 1991 Ford F150 light-duty truck currently used by the Engineering Division is a good candidate for replacement under this program.

The City greatly appreciates your consideration. If you have any questions or require additional information please don't hesitate to contact me at 642-5526.

Sincerely,

Nathan Stong
City Engineer

PROJECT SUMMARY

Applicant: City of Placerville
Contact Person: Nathan Stong, City Engineer
Address: 3101 Center Street, Placerville, CA 95667
Telephone: (530) 642-5250 **Fax:** (530) 642-5568
Email: nstong@cityofplacerville.org

Project Description:

Replace 1991 Ford Truck with 2014 Subaru Forester (PZEV).

Estimated Emission Reductions/Cost-Effectiveness	<u>AB 2766</u>
Useful Life of Project (years)	15
Total Lifetime Emissions Reduced (lbs. of ROG, Nox, PM-10)	265 lbs
Cost-Effectiveness (total project costs)	\$118.85
Annualized Cost-Effectiveness (AQMD Funded project costs)	\$95.08

Project Budget	AB2766 Funds	\$ Matching Funds	In-Kind Match	Total Project Costs
<i>Materials</i>	\$20,000	\$5,000		\$25,000
<i>Personnel</i>				
<i>Other</i>				
TOTAL	\$20,000	\$5,000		\$25,000

BUDGET ITEMIZATION

LINE ITEM	TITLE/ CLASSIFICATION	NO. HOURS	SALARY RATE	BENEFIT %	TOTAL	TOTAL COSTS (approx.)
Personnel	None			- -		0
Contracts (removal, transportation, disposal)						0
Materials & Supplies						25,000
Equipment Rental						0
Other Costs						0

Project Grand Total \$ 25,000

CONTENTS CHECKLIST

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- RFP Contents Checklist — Page 3
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- Project Background / Organization — Page 5
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- Schedule of Deliveries / Self-Monitoring Program — Page 11
- Matching Funds Letter of Commitment — Page 12
- TRPA Review — N/A
- 2 Copies of Proposal Enclosed

RESOLUTION NO. 8152

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PLACERVILLE
AUTHORIZING THE SUBMITTAL OF PROPOSALS FOR ASSEMBLY BILL (AB) 2766
MOTOR VEHICLE EMISSIONS REDUCTION GRANT FUNDS**

WHEREAS, the California Clean Air Act requires local air pollution control districts to reduce emissions from motor vehicles; and

WHEREAS, AB 2766, codified in California Health and Safety Code §44223, authorizes districts to impose a fee of up to four dollars upon certain registered motor vehicles within the district, and the Governing Board of the El Dorado County Air Quality Management District (AQMD) has imposed said fee; and

WHEREAS, said legislation requires the El Dorado County Air Quality Management District to use said funds for activities related to reducing air pollution from motor vehicles and for related planning, monitoring, enforcement, and technical studies necessary for the implementation of the California Clean Air Act of 1988; and

WHEREAS, the El Dorado County Air Quality Management District has published a request for proposals for AB 2766 funding; and

WHEREAS, the City of Placerville is an eligible applicant for AB 2766 projects.

NOW THEREFORE, BE IT RESOLVED, that the City Council of the City of Placerville does hereby authorize the submittal of proposals to the El Dorado County Air Quality Management District for Assembly Bill (AB) 2766 motor vehicle emissions reduction grant funds.

The foregoing Resolution was introduced at a regular meeting of the City Council of the City of Placerville held on November 26, 2013, by Councilmember Patton who moved its adoption. The motion was seconded by Councilmember Borelli. The motion was passed by the following vote:

AYES: Borelli, Hagen, Patton, Wilkins

NOES: None

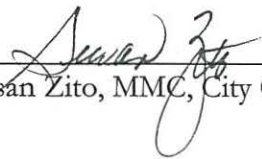
ABSENT: Thomas

ABSTAIN: None



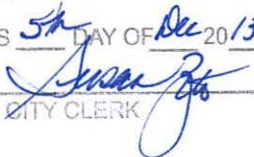
Vice-Mayor Carl Hagen

ATTEST:



Susan Zito, MMC, City Clerk

THE FOREGOING IS A FULL TRUE AND
CORRECT COPY OF THE ORIGINAL
RECORD IN THE OFFICE OF THE CITY
CLERK OF THE CITY OF PLACERVILLE
COUNTY OF EL DORADO, STATE OF
CALIFORNIA.

DATED THIS 5th DAY OF Dec 2013


CITY CLERK

PROJECT DESCRIPTION

The purpose of the project proposed herein is to replace the 1991 Ford F150 light-duty pickup truck utilized by the Engineering Division of the City of Placerville.

The replacement vehicle is proposed to be a 2014 Subaru Forester, which is a Partial Zero Emissions Vehicle (PZEV) and has utility as a 4-wheel drive and good ground clearance for accessing undeveloped lands proposed for development, and ample cargo room for tools and equipment. The project life of the replacement vehicle is assumed to be 15 years.

The truck to be replaced currently has 97,000 miles and is running well with routine maintenance. It is estimated that the truck could continue to run well and perform its function for the Division well beyond the 100,000 mile mark and it isn't unrealistic to assume it would reach 200,000 miles. Using its average historical usage rate of 4,545 miles per year, the truck could conceivably run for another 20 years. We're assuming only 5 years of additional serviceability as a conservative estimate.

For the emissions reduction calculations in this proposal, the first 5 years of the replacement vehicle's project life are compared against the estimated remaining 5 years of the truck's useful life. For the following 10 years the replacement vehicle is compared against an "average" light-duty vehicle.

PROJECT ORGANIZATION AND BACKGROUND

The project will be undertaken by the City of Placerville, the seat of the County of El Dorado, California. The City maintains numerous fleet vehicles including vehicles for the Police Department, Public Works Department, Parks and Recreation, and Development Services.

COST EFFECTIVENESS CALCULATIONS

Assumed remaining life of 1991 Ford F150 with 97,000 miles = 5 years

Assumed life of new PZEV vehicle (Project Life) = 15 years

<u>Emission Reductions</u> ¹ (2013 Emission Factors)	Years 1-5 (lbs)	Years 6-15 (lbs)
ROG	21	1
NOx	19	1
PM ₁₀	7	0
Annual Total	47	3
Total for each period	5x47 = 235	10x3 = 30
Project Life Total (15 yrs) = 235 + 30 =		265 lbs
Annual Average = 265/15 yrs =		17.67 lbs/year

¹See pages 7 and 8 for calculation summary sheets from CARB automated method Access database

Cost Recovery Factor (CRF)

Discount Rate (i) = 3%
Project Life (n) = 15 years

$$CRF = (1+i)^n(i)/[(1+i)^n-1] = 0.084$$

Cost-Effectiveness (CRF = 0.084)

	Cost (\$)	Cost per lb $\left[\frac{.084(cost)}{17.67} \right]$
AB 2766	20,000 =	95.08
<u>Local Match</u>	<u>5,000 =</u>	<u>23.77</u>
Total Cost	\$25,000 =	\$118.85 /lb

ON-ROAD PROJECTS

Subcategory: (1a) Alternative Fuel Vehicle Purchases

Air District Name: El Dorado County APCD

Local Government Name: Not Applicable

Project Name: Replacement PZEV Vehicle for Engineering Division

Description: Replace one 1991 Ford Light Duty truck with a Subaru Forester PZEV. Comparison to remaining
(Issues/Comments) useful life of 1991 truck estimated at 5 years.

Implementing Agency: City of Placerville

Private Agency: No

FUNDING:

MVFees Funding: \$25,000

MSRC Funding: \$0

Moyer Funding: \$0

CMAQ Funding: \$0

Other CoFunding: \$0

Capital Recovery Factor: 0.22

Project Analysis Period: 5 years

Vehicle Miles Traveled (VMT): 4,545 annual miles

NOTE: This worksheet used solely to calculate emissions reductions. Cost-effectiveness calculations are performed separately due to the two time-periods and different comparison vehicles.

EMISSION FACTORS:

Baseline Vehicle Emission Factors	Cleaner Vehicle Emission Factors
ROG : 2.10 grams per mile	0.01 grams per mile
NOx : 1.95	0.02
PM10 : 0.77	0.05

EMISSION REDUCTIONS:

Pounds per Year	Tons per Year
ROG: 21	0.01
NOx: 19	0.01
PM10: 7	0.00
Total: 47	0.02

COST-EFFECTIVENESS OF:

Motor Vehicle Fees and/or Moyer Funds:	\$115.11 per pound	\$230,224 per ton
CMAQ Funds:	\$0.00 per pound	\$0 per ton
All Funding Sources:	\$115.11 per pound	\$230,224 per ton

ON-ROAD PROJECTS

Subcategory: (1a) Alternative Fuel Vehicle Purchases

Air District Name: El Dorado County APCD

Local Government Name: Not Applicable

Project Name: Replacement PZEV Vehicle for Engineering Division

Description: Replace one 1991 Ford Light Duty truck with a Subaru Forester PZEV. Comparison of remaining useful life of new PZEV to average vehicle beyond first five years (where it was compared to remaining useful life of 1991 truck).

Implementing Agency: City of Placerville

Private Agency: No

FUNDING:

MVFees Funding: \$25,000

MSRC Funding: \$0

Moyer Funding: \$0

CMAQ Funding: \$0

Other CoFunding: \$0

Capital Recovery Factor: 0.12

Project Analysis Period: 10 years

Vehicle Miles Traveled (VMT): 4,545 annual miles

NOTE: This worksheet used solely to calculate emissions reductions. Cost-effectiveness calculations are performed separately due to the two time-periods and different comparison vehicles.

EMISSION FACTORS:

Baseline Vehicle Emission Factors

ROG : 0.14 grams per mile

NOx : 0.16

PM10 : 0.09

Cleaner Vehicle Emission Factors

0.01 grams per mile

0.02

0.05

EMISSION REDUCTIONS:

	Pounds per Year	Tons per Year
ROG:	1	0.00
NOx:	1	0.00
PM10:	0	0.00
Total:	3	0.00

COST-EFFECTIVENESS OF:

Motor Vehicle Fees and/or Moyer Funds: \$941.33 per pound ,882,661 per ton

CMAQ Funds: \$0.00 per pound \$0 per ton

All Funding Sources: \$941.33 per pound ,882,661 per ton

H-59
TABLE 2.1A.1
NONTAMPED EXHAUST EMISSION RATES FOR
LOW ALTITUDE
LIGHT DUTY GASOLINE POWERED TRUCKS I

* BER = ZML + (DR1 * M), for mileage up to 50K miles (M <= 5)
= ZML + DR1*5.0 + DR2*(M - 5.0), for mileage greater than 50K miles (M > 5)

Pol	Model Years	Zero Mile Emission Level	Det. Rate 1	Det. Rate 2	50,000 Mile Emission Level	100,000 Mile Emission Level
HC	Pre-1968	7.250	0.180	0.180	8.150	9.050
	1968-1969	4.430	0.250	0.250	5.680	6.930
	1970-1971	3.000	0.370	0.370	4.850	6.700
	1972-1974	3.360	0.170	0.170	4.210	5.060
	1975-1978	1.800	0.270	0.270	3.150	4.500
	1979-1980	0.870	0.280	0.280	2.270	3.670
	1981-1983	0.820	0.150	0.150	1.570	2.320
	1984	0.700	0.150	0.150	1.450	2.200
	1985	0.408	0.077	0.284	0.793	2.213
	1986	0.392	0.071	0.282	0.747	2.157
	1987	0.377	0.070	0.271	0.727	2.082
	1988	0.361	0.070	0.265	0.711	2.036
	1989	0.358	0.073	0.277	0.723	2.108
	1990	0.355	0.075	0.280	0.730	2.130
	1991	0.354	0.075	0.281	0.729	2.130
	1992	0.354	0.076	0.283	0.734	2.149
	1993	0.354	0.076	0.283	0.734	2.149
	1994	0.312	0.074	0.279	0.682	2.077
	1995	0.271	0.073	0.275	0.636	2.011
	1996	0.231	0.072	0.273	0.591	1.956
	1997	0.212	0.072	0.273	0.572	1.937
	1998+	0.202	0.072	0.273	0.562	1.927
CO	Pre-1968	78.270	2.250	2.250	89.520	100.770
	1968-1969	56.340	2.550	2.550	69.090	81.840
	1970-1971	42.170	3.130	3.130	57.820	73.470
	1972-1974	40.780	2.440	2.440	52.980	65.180
	1975-1978	24.550	2.590	2.590	37.500	50.450
	1979-1980	12.280	2.430	2.430	24.430	36.580
	1981-1983	12.580	1.460	1.460	19.880	27.180
	1984	9.430	1.460	1.460	16.730	24.030
	1985	5.074	1.331	3.547	11.729	29.464
	1986	4.642	1.240	3.554	10.842	28.612
	1987	4.358	1.242	3.403	10.568	27.583
	1988	4.024	1.289	3.286	10.469	26.899
	1989	3.948	1.343	3.423	10.663	27.778
	1990	3.824	1.423	3.407	10.939	27.974
	1991	3.800	1.439	3.419	10.995	28.090
	1992	3.800	1.448	3.434	11.040	28.210
	1993	3.800	1.448	3.434	11.040	28.210
	1994	3.682	1.448	3.434	10.922	28.092
	1995	3.565	1.448	3.434	10.805	27.975
	1996	3.071	1.448	3.434	10.311	27.481
	1997	2.636	1.448	3.434	9.876	27.046
	1998+	2.419	1.448	3.434	9.659	26.829
NOx	Pre-1968	3.440	0.000	0.000	3.440	3.440
	1968-1972	4.350	0.000	0.000	4.350	4.350
	1973-1974	2.870	0.040	0.040	3.070	3.270
	1975-1978	2.700	0.030	0.030	2.850	3.000
	1979-1980	1.770	0.060	0.060	2.070	2.370
	1981-1983	1.640	0.030	0.030	1.790	1.940
	1984	1.120	0.070	0.070	1.470	1.820
	1985	1.116	0.078	0.210	1.506	2.556
	1986	0.985	0.082	0.214	1.395	2.465
	1987	0.838	0.078	0.213	1.228	2.293
	1988	0.690	0.077	0.204	1.075	2.095
	1989	0.661	0.080	0.198	1.061	2.051
	1990	0.639	0.082	0.189	1.049	1.994
	1991	0.630	0.082	0.188	1.040	1.980
	1992	0.630	0.083	0.186	1.045	1.975
	1993	0.630	0.083	0.186	1.045	1.975
	1994	0.472	0.083	0.186	0.887	1.817
	1995	0.315	0.083	0.186	0.730	1.660
	1996	0.236	0.083	0.186	0.651	1.581
	1997	0.236	0.083	0.186	0.651	1.581
	1998+	0.236	0.083	0.186	0.651	1.581

* WHERE : BER = Nontampered basic exhaust emission rates in grams/mile,
ZML = Zero mile level in grams/mile,
DR1 = Deterioration rate for <= 50K miles, in grams/mile/10K miles,
DR2 = Deterioration rate for > 50K miles, in grams/mile/10K miles,
M = Cumulative mileage / 10,000 miles.

DATE : JUNE 30, 1995

WORK STATEMENT & ACKNOWLEDGMENT

TASK I: Project Initiation

- 1.1 Execute Agreement with AQMD—FY 2013/2014
- 1.2 Purchase Vehicle
- 1.3 Scrap Existing Truck

DATE:

Mar 2014
June 2014
June 2014

COMPLETED

Deliverables: Executed Agreement with AQMD

Final Report with Proof of Scrapped Vehicle and Financial Documentation

ACKNOWLEDGEMENT

A placard acknowledging AB 2766 funding for the vehicle purchase will be placed in a conspicuous location on the vehicle. The City requests whatever graphics, logos, designs etc. that AQMD has on hand for use in the preparation of the placard.

COST ESTIMATE BREAKDOWN

The City of Placerville requests \$20,000 in AB 2766 funds, with 20% of the total project cost as local match:

2014	AB 2766	LOCAL MATCH	IN-KIND	COST
PERSONNEL	0	0	0	0
CONTRACT	0	0	0	0
MATERIALS	\$20,000	\$5,000	0	\$25,000
CONSTRUCTION	0	0	0	0
TOTAL	20,000	\$5,000	0	\$25,000

MATCHING FUNDS

The \$5,000 in matching funds for this project are monetary. Attached is a letter confirming the city's commitment to provide that funding.

SCHEDULE OF DELIVERABLES / MONITORING PROGRAM

In order to comply with the quarterly monitoring requirements, the City of Placerville will prepare quarterly monitoring reports detailing the mileage driven in the quarter and calculated emissions benefits over the replaced vehicle for the first 5 years, and compared against an "average" light-duty truck for the remaining 10 years of the project life.



City of Placerville

Development Services Department
3101 Center Street, Placerville, CA 95667

Planning (530) 642-5252 · Building (530) 642-5240 · Engineering (530) 642-5250

December 9, 2013

Via First-Class Mail

Dave Johnston, Director
El Dorado County Air Quality Management District
330 Fair Lane
Placerville, CA 95667

Re: *Letter of Commitment of Matching Funds for the 2014-2015 AB 2766 Grant Cycle*

Mr. Johnston:

This letter will memorialize the City's commitment of \$5,000 in matching funds for its 2014-2015 AB 2766 grant funding application. The application proposes the replacement of an existing City fleet vehicle with a new, low-emission vehicle, for a total project cost of \$25,000.

Sincerely,

Cleve Morris
City Manger