

STATE OF CALIFORNIA

Vehicle Procurement Evaluation Methodology Passenger Car and Light Duty Vehicles

1.0 Overview:

In an attempt to reduce petroleum consumption, dependency on foreign oil, vehicle related emissions of criteria pollutants, and greenhouse gas emissions, and improved sustainability, the State of California has developed an evaluation methodology to factor in these values. In addition to a vehicle's purchase price and cost of fuel, this evaluation methodology will incorporate the following:

Air Pollution: The amount of criteria pollutants emitted by the vehicle, also referred to by a Smog Rating. This is a rating for vehicle tailpipe emissions of those pollutants that cause smog and other local air pollution.

California Green Program: Participate in one of California's Green Business Programs or in California's Green Station Program.

Green House Gas (GHG) Rating: The amount of CO₂ emitted by the vehicle, and also referred to as Global Warming Score.

Indoor Air Quality: The determination of organic substances or allergens within the interior passenger compartment. Includes the efficiency to reduce these contaminants through air filter devices.

Service Plan: Service plan per Section 5.7.4, Service plan

Window Glazing: The reflectivity of solar spectrum to reduce vehicle interior temperatures, operations and overall fuel consumption.

The Projected Total Value for each vehicle will be the sum of the points assigned to the purchase price, and the points assigned to the cost of fuel, GHG emissions, and air pollution, when calculated over the useful life of the vehicle. This Projected Total Value will be used to evaluate and select the vehicles achieving the best value to the State to own and operate over the life of the vehicle.

2.0 Evaluation Factors and Assigned Points:

The following table summarizes the Evaluation Factors and the maximum number of points assigned to each factor.

Evaluation Factor	Maximum Points
1. Administrative Requirements (Mandatory)	Pass/Fail
2. Technical Requirements (Mandatory)	Pass/Fail
3. Purchase Price less Cash Discounts (Mandatory)	600
4. Service Plan Price (Mandatory)	5
5. Cost of Fuel	200
6. GHG Rating (10 times CARB score)	100
7. SMOG Rating (10 times CARB Score)	100
8. Window Glazing (Non-Mandatory)	20
9. Indoor Air Quality (Non-Mandatory)	
a. Indoor Air Quality Tested	10
b. Allergen Tested	5
c. Air Cleaning Device	5
10. California Green Business Program or Green Station Program (Non-Mandatory)	20
Maximum Possible Projected Total Value	1065

The State of California will evaluate each vehicle bid on each line item based on the Projected Total Value of the vehicle. Awards will be made by line item to the responsible bidder meeting specifications with the highest Projected Total Value. Small business preferences will be applied after the Projected Total Value has been calculated.

3.0 Definitions:

1. **Expected Vehicle Life:** The Department of General Services, Office of Fleet Administration, has determined the average expected vehicle life to be 100,000 miles.
2. **Cost of Fuel:** Total cost of fuel over the expected vehicle life, based on fuel economy data as published by the Federal Environmental Protection Agency (EPA) using appropriate unit fuel pricing and EPA Combined MPG assuming 45% highway and 55% city driving; and reported as fuel consumption and expressed as Gallons per 100 miles.
3. **Unit Fuel Pricing:** Gasoline unit cost will be based on the price of regular unleaded gasoline as published in table, **U.S. Regular Gasoline Prices** on the website,

Petroleum and Other Liquids located at <http://www.eia.gov/petroleum/gasdiesel/> for California reflecting the most recent update. E85 unit costs will be based on the *Average E85 Price* as reported on *E85Prices.com* at <http://e85prices.com/california.html>. Compressed Natural Gas (CNG) unit cost is based on the price of CNG sold as a transportation fuel as reported in PG&E's document, *NGV2-Rate Schedule* located at: <http://www.pge.com/myhome/environment/pge/cleanair/naturalgasvehicles/rates/>. Electricity unit cost is based on prices as published in, **Table 5.6.B. Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date through July 2013 and 2012** located at: http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_b, for the most recent month available and as reported in column for *All Sectors 2012*.

4. **GHG Rating:** The GHG or Global Warming Score is a score that ranks each vehicle's CO₂-equivalent value on a scale of 1-10 (10 being the cleanest) relative to all other vehicles. Data as published by the California Air Resources Board at www.driveclean.ca.gov.
5. **Air Pollution (SMOG Rating):** The Smog Rating or Score is important because it gives car buyers the ability to determine quickly how much a vehicle pollutes compared to all other vehicles on the market as published by the California Air Resources Board at www.driveclean.ca.gov, on a scale of 1 to 10 with 10 being the best.
6. **Air Cleaning Device:** A filter that has a medium or high efficiency rating and is certified by California Air Resources Board and limits the level of allergens in interior passenger compartment. Allergens include dust mite, pollen, dander, chlorine, fungal and pollutants.
7. **Allergen Tested:** The testing of automotive interior textiles for known allergens per TUVus or cTUVus TOXPROOF standard. Testing conducted by an approved TUVus or cTUVus laboratory, resulting in compliance with TOXPROOF standard.
8. **Window Glazing.** The reflective properties of the vehicle's glass determined by ISO 13837 where windshield glass has a 50% maximum total solar transmission (Tts). Side and back window vision glass are 60% Tts and non-vision/privacy glass 40% maximum Tts.
9. **Indoor Air Quality:** The determination of organic substances as emitted from automotive interior products as measured using ASTM D5116 or VDA 276 (European ECA Report #8) performed by a facility that is ISO 17025 accredited, reported in a measure of Total VOC less than 0.2 mg/m³.
10. **California Green Business Programs:** A formal green business program or green station program that demonstrates conservation of resources and pollution prevention in both your facility (fixtures and maintenance) and your operations (purchasing and other practices) and is certified by California Green Business Program, (<http://www.greenbusinessca.org/directory/search/>) or California Green Station Program, (http://www.dtsc.ca.gov/PollutionPrevention/Find_a_green_station.cfm).

11. **Service Plan:** Dealer or factory sponsored service plan meeting requirements of Section 5.6.4, Service Plan.

12. **Decimal Place:** Points will be awarded by rounding to the second decimal place (100.00)

4.0 Evaluation Determinants:

Evaluation determinants are valid for use on current model year vehicles only. These determinants may change annually and will be readjusted for future vehicle analysis. Evaluation determinants for current model year vehicles are as follows:

Determinant	Value
Service Plan Price	Service Plan Points
\$ 499.99 or less	5
\$ 500.00 to \$ 749.99	4
\$ 750.00 to \$ 999.99	3
\$1000.00 to \$1249.99	2
\$1250.00 or higher	1
Price of Gasoline (\$/gal)	3.93*
Price of Compressed Natural Gas (CNG) (\$/gge)	1.76**
Price of E-85 (\$/gal)	3.31***
Price of Electricity (cents/kWh)	14.15****
Total Miles Driven	100,000 miles
Useful Life	7 years
Vehicle Emissions (SMOG Rating)	10 times EPA Score
Greenhouse Emissions (GHG rating)	10 times EPA Score

* *Gasoline and Diesel Fuel Update* located at <http://www.eia.gov/petroleum/gasdiesel/> for California for the most recent update.

** As reported in PG&E's document, [NGV2-Rate Schedule](http://www.pge.com/myhome/environment/pge/cleanair/naturalgasvehicles/rates/) located at: <http://www.pge.com/myhome/environment/pge/cleanair/naturalgasvehicles/rates/>

*** Average E85 Price as reported on [E85Prices.com](http://e85prices.com/california.html) at <http://e85prices.com/california.html>

**** As reported on http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_b for the most recent month available, current year prices reported in column for *All Sectors 2012*.

5.0 Example:

Following is an example illustrating the vehicle procurement evaluation methodology.

	Vehicle A	Vehicle B
Vehicle Classification	Compact Sedan	Compact Sedan
Purchase Price less Cash Discounts	\$14,000	\$15,000
Service Plan Price	\$550.00	\$450.00
Net Vehicle Price	\$15,295	\$16,325
Fuel Type	Gasoline	Gasoline
EPA Combined MPG	26	28
Calculated Cost of Fuel *	\$15,115	\$14,036
GHG Emission (1 to 10 where 10 is best)	7.0	8.0
Air Pollution Score (1 to 10 where 10 is best)	7.0	9.0
Window Glazing (Yes or No)	Yes	No
Indoor Air Quality		
a. Indoor Air Quality met (<0.20 mg/m ³) – Yes or No	No	Yes
b. Allergen Tested Completed	No	Yes
c. Air Cleaning Device offered	No	Yes
Management System (Yes/No)		
a. Green Station or Green Business	Yes	Yes

* Cost of Fuel = {100,000 miles / (EPA Combined)} X \$3.93/gal

Based on the above information, the points earned are as follows:

	Vehicle A	Vehicle B
Net Purchase Price Points	640	600
Service Plan Points	4	5
Cost of Fuel Points	185	200
GHG Emission Points	70	80
Air Pollution Points	70	90
Window Glazing	20	0

Indoor Air Quality		
a. Indoor Air Quality met (<0.20 mg/m ³ – Yes or No	0	10
b. Allergen Tested Completed	0	5
c. Air Cleaning Device offered	0	5
Management System (Yes/No)		
a. Green Station or Green Business	20	20
Total Points	1009	1015
Ranking	2	1

Calculations:

Vehicle B Price = 640 x (\$15,295/\$16,325)

Vehicle A Fuel = 200 x (\$14,036/\$15,115)

GHG Emission Points = 10 x GHG Rating

Air Pollution Points = 10 x SMOG score

Window Glazing Points = Yes : 20 points, No : 0 points

Indoor Air Quality met = Yes : 10 points, No : 0 points

Allergen Tested = Yes : 5 points, No : 0 points

Air Cleaning Device = Yes : 5 points, No : 0 points

Green Station or Green Business = Yes : 20 points, No : 0 points

Conclusion: In this example, vehicle B has a higher Projected Total Value than vehicle A.
