



FINAL DRAFT

San Diego International Airport Air Quality Management Plan

Shuttle Incentive Program

Prepared By:

**C&S Companies
KB Environmental Sciences
Synergy Consultants**

Prepared For:

San Diego County Regional Airport Authority

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SHUTTLE INCENTIVE PROGRAM

A. REGULATORY BACKGROUND

The San Diego County Regional Airport Authority (Airport Authority) has agreed to a Memorandum of Understanding (MOU) with the Attorney General of the State of California to address the reduction of greenhouse gas (GHG) emissions at San Diego International Airport (SAN). The MOU outlines specific measures that the Airport Authority has committed to implement in order to limit GHG emissions generated by airport operations. Specific Measure 2b requires the airport to put in place an incentive program by January 1, 2010 to induce shuttle operators to replace existing vehicles with electric or alternative fueled shuttle vehicles at the end of their useful life.

As an alternative to the incentive-based program, the MOU provides the opportunity for the Airport Authority to impose requirements on shuttle service providers. The MOU Specific Measure 2b specifically identifies the following measure for the Airport Authority to consider:

- i. Operators that own and operate 1 to 3 shuttles shall replace all existing vehicles with electric or alternative fuel vehicles by January 1, 2015.
- ii. Operators that own and operate 4 or more shuttles must replace 25% of existing vehicles with electric or alternative fuel vehicles by January 1, 2012, 50% of existing vehicles by January 1, 2013, 75% by January 1, 2014, and 100% by January 1, 2015.

An “**alternative fuel vehicle**” is specifically defined in the MOU section 2.A.i to mean “a vehicle that runs on an energy source, fuel or blend of fuels that achieves a reduction of at least 10 percent carbon intensity relative to petroleum fuel, as contained in Governor Schwarzenegger’s Executive Order S-01-07.” Executive Order S-01-07, signed by Governor Schwarzenegger in January 2007, established the goal of developing a Low Carbon Fuel Standard (LCFS) to reduce the carbon intensity of transportation fuels by at least 10 percent by 2020. The California Environmental Protection Agency, Air Resources Board (CARB) developed proposed LCFS to satisfy the directive of the Executive Order. Carbon intensity is defined by CARB as the total greenhouse gas emissions from the production, transport, storage, dispensing and use of a fuel. Carbon intensity is expressed as grams of carbon dioxide equivalent per mega joule of fuel energy (grams CO₂e/MJ) and refers to the full lifecycle greenhouse gas emissions, or “well-to-wheels” for fossil fuels or “seed-to-wheels” for biofuels.

Implementation of these incentives is envisioned to be based upon availability of shuttle vehicles and fueling infrastructure. The MOU notes that if the Airport Authority determines that there are constraints to availability of vehicles or infrastructure, it shall provide a written statement to the Attorney General, which can be made available to the public.

In examining an inventive program, incentives were identified that were generally financial or locational (preferred location) in nature. Financial incentives would reflect preferential charges



designed to encourage the transition to alternative fuel vehicles. Locational incentives would reflect preferred operating locations based on transition to cleaner fuel vehicles.

B. ESTIMATED VEHICLE CONVERSION COSTS

The cost range varies based on the features and accessories requested by the owner. In general, CNG buses are estimated to be approximately \$60,000 more than diesel buses. The incremental cost of a smaller transit bus to convert to natural gas ranges between \$25,000 to \$40,000, while the cost differential for new vans should be under \$15,000. Any program to induce shuttle operators to convert new vehicles to alternative should recover this cost differential, at a minimum.

The MOU requires the Airport Authority to induce shuttle operators to replace existing vehicles with electric or alternative fueled shuttle vehicles at the end of their useful life. Therefore, the program, at a minimum, should address new shuttle vehicle purchases. Since the current registration fee set by the Airport Authority is minimal, an additional charge or requirement would be placed on any “new non-alternative fuel shuttle.”

C. SHUTTLE OPERATOR CONCERNS

Based on a meeting with shuttle operators on September 22, 2009, the consensus was for the Airport Authority to use an incentive program, rather than the MOU mandated conversions. However, there does not appear to be a single incentive program that would meet the concerns of the various types of shuttle operators (rental car companies, hotel, off-airport parking and door-to-door shuttles).

The following are the primary concerns expressed by each group:

- Rental car operators anticipate a transition to a consolidated rental car (CONRAC) facility by 2015. Conversion of their shuttles to an alternative fuel only to have these new vehicles become obsolete after construction of the CONRAC before would be a financial burden. Further, the geometry of the existing CNG station would produce operating difficulties for busses longer than 40 feet.
- Off-airport parking shuttle operators believe that consolidated bussing would be a competitive disadvantage.
- Limitations on the availability, fuel capacity and efficiency of alternative fuel shuttle vehicles may limit conversion.

A summary of the comments from the September 22, 2009 meeting are provided as Appendix A.

D. PROPOSED INCENTIVE PROGRAMS

A successful incentive program requires collaboration with stakeholders, available infrastructure, potential funding sources, and a cost structure that will promote the conversion to alternative



fuels. The following sections identify alternative approaches that could be pursued to provide a program to convert shuttle to cleaner fuels.

For each program, a “**non-alternative fuel shuttle**” would be defined as any shuttle vehicle that does not meet the requirements of an “alternative fuel vehicle” specified in the MOU. A non-alternative fuel shuttle registered and within it’s the specified replacement period to operate at the airport would be exempted from any fee or surcharge program.

Conversion Incentive Options

Several types of programs could be effective in having shuttle operators convert to electric or alternative fuel vehicles at the end of the useful life or designated period for replacement. The programs include:

- Standardized age replacement policy
- Mandatory replacement,
- Financial-based incentives:
 - an annual surcharge,
 - a trip charge for new non-alternative fuel vehicles,
- Locational-based incentives:
 - Closest to the door/preferred pickup locations for rental car, hotel, off-airport parking alternative fuel vehicles

The Airport Authority plans to continue to coordinate with the various types of shuttle operators to promote consolidation of services, provide funding opportunities, and discuss obstacles to new vehicle conversions. Semi-annual meetings with the shuttle operators are recommended to promote this coordination. This would also assist the Airport Authority in developing correspondence to the Attorney General if vehicles or infrastructure are not available to meet the MOU requirements. In addition, the Airport Authority could offer other incentives or services to shuttle operators, such as, incentives for consolidation, notification of available grant funding, training sessions for grant applications, educational meetings with alternative fuel suppliers.

The following describes the various proposed programs:

Standardized Age Requirement Policy

As part of any program to induce shuttle operators to convert to alternative fuel vehicles, a vehicle retirement program should be considered. Currently, taxis and door to door shuttles operating at the airport must be replaced if they are over 7 years in age. This is for safety reasons and to minimize the potential for mechanical breakdowns. A similar program should be implemented for all shuttle vehicles. The Airport Authority could prevent shuttles greater than a certain age from registering and operating at the airport. The age of the vehicle would be based on model year. For example, with a standardized age requirement of 7 years, a shuttle with a



2009 model year could only operate at the airport until 2016. Therefore, if the program applied to all shuttles operating at the airport, the entire shuttle fleet would consist of electric or alternative fuel vehicles by the end of 2016.

Mandatory Replacement

The mandatory replacement program would require that operators replace an existing shuttle operating at the airport with an electric or alternative fuel shuttle at the end of their useful life or set replacement period (7 years), whichever is sooner. Any additional shuttles (new vehicles added to an operator's fleet) would have to be electric or alternative fuel as specified in the MOU. A mandatory replacement program would allow the Airport Authority to set one annual operating charge and per trip fees for all shuttles.

A shuttle operator could petition, in writing, the Airport Authority for an exemption to mandatory replacement. A determination would then be made by the Airport Authority based commercial availability of shuttle vehicles for the application, whether adequate refueling infrastructure and/or consultation with the Attorney General of the State of California.

Environmental Surcharge Program

The environmental surcharge program would be based on a annual fee, which would increase each year. The yearly surcharge would apply to any new "non-alternative fuel shuttle", whether the shuttle replaces an existing shuttle or is new to the operator's airport fleet. Shuttles operating currently registered at the airport would be exempt from the environmental surcharge program until the vehicle exceeds the standardized age requirement. This program would allow shuttle operators to use a new non-alternative fuel shuttle for a short period of time, but make the use of non-alternative fuel vehicles cost prohibitive in the long-term. The useful life of shuttle vehicle would be set by the standardized age requirement policy or 7 years. The annual environmental surcharge would be set by the Airport Authority and would increase over time.

A shuttle operator could petition, in writing, the Airport Authority for an exemption to the surcharge program. A determination would then be made by the Airport Authority based commercial availability of shuttle vehicles for the application, whether adequate refueling infrastructure and/or consultation with the Attorney General of the State of California.

Environmental Trip Fee Program

Based on information from the Airport Authority, the Automatic Vehicle Identification (AVI) will be activated and trip charges may be incurred. To serve as an inducement for fleet vehicle conversion to alternative fuels, an environmental trip fee program could include a financial incentive/disincentive for each trip to the airport for non-alternative fuel vehicles. Shuttles operating currently registered at the airport would be exempt from the environmental trip fee program until the vehicle exceeds the standardized age requirement. Therefore, the useful life of shuttle vehicle would be set at 7 years.



For example, an environmental trip fee for a new “non-alternative fuel shuttle” could be set at a nominal fee for the first year and increase each year. Similar to the surcharge program, the trip fee program would make the use of a new “non-alternative fuel shuttle” cost prohibitive in the long-term. The disadvantage with trip fees is that shuttle operators could pass the charges onto passengers as a means for operators to recover costs without converting to electric or alternative fuel vehicles.

Based on information provided for number of shuttles and trips to the airport, the average hotel shuttle vehicle makes approximately 1,500 annual trips to the airport, the average door- to-door shuttle vehicle make 1,700 annual trips, while an average off-airport parking shuttle vehicle makes approximately 11,500 trips per year. The additional trip fee program would allow shuttle operators to keep some non-alternative fuel vehicles in their fleet but deploy the electric or alternative fuel vehicles for the majority of the trips in order to reduce operating costs.

A shuttle operator could petition, in writing, the Airport Authority for an exemption to the trip fee program. A determination would be made by the Airport Authority based commercial availability of shuttle vehicles for the application, whether adequate refueling infrastructure and/or consultation with the Attorney General of the State of California.

Closest to the Door/Preferential Passenger Pick-up Location

The preferential passenger pickup location would allow shuttle operators that have converted 100% of their fleet to electric or alternative fuels to pick up passengers at an easily accessible location (i.e. locations closest to the door). The Airport Authority would need to designate the preferential pickup locations, if feasible. This program could promote an earlier conversion to alternative fuels than required under the MOU. This program would only apply to hotels, rental car, and off-airport parking shuttles and would be used in conjunction with mandatory replacement, surcharge program or trip fee program. Based on conversations with the Airport Authority, the preferential passenger pick-up location does not appear to be feasible for the San Diego International Airport.

Consolidation Program

Any shuttle operator that consolidates services with other independent shuttle operators would receive a discounted rate to operate at the airport depending upon the numbers of participants. This would only apply to the shuttle vehicles actually serving the shuttle operations on a full time basis. An example of a discount rate structure is as follows:

2-3 operators	25% rate decrease
4-5 operators	50% rate decrease
6+ operators	75% rate decrease



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Allocation of Funds Generated by the Program

Any funds generated by the surcharge or trip fee program could be used to offset the cost of environmental and sustainable programs at the airport including additional alternative fuel infrastructure, assistance with funding opportunities, and coordination to reduce stakeholder's carbon footprint. However, the goal of these programs would be to induce shuttle operators to convert to alternative fuel vehicles when purchasing new vehicles. It would not be expected that the Airport Authority would generate a significant amount of funds through the selected program.

The following are a description of how the draft incentive programs would affect hotels, door-to-door shuttles, off-airport parking shuttle operators.



HOTEL SHUTTLE INCENTIVE PROGRAM

The following is the proposed incentive program for hotel shuttles.

1. The Airport Authority would meet with hotel operators on a regular basis to consolidate shuttle services, provide opportunities for funding, and assist in a consolidated hotel shuttle program.
2. As currently required, operators would be required to register their vehicles with the Airport Authority and pay the applicable registration fee. Shuttle vehicles older than 7 years of age based on model year would be denied registration for operation at San Diego International Airport.
3. The cost to register and operate any shuttle vehicle at the airport and any trip fee charge would be set annually by the San Diego County Regional Airport Authority.
4. Any hotel shuttle vehicle that services more than one hotel on a regular basis would receive a discounted rate to operate at the airport depending upon the numbers of participating hotels. An example of the discount rate structure is as follows:

2-3 hotels	25% rate decrease
4-5 hotels	50% rate decrease
6 or more hotels	75% rate decrease

5. To meet the MOU requirement to induce shuttle operators to replace existing vehicles with electric or alternative fueled vehicles at the end of their useful life, an environmental surcharge program, or an environmental trip fee charge would become effective, beginning in 2010. A description of each program is provided in the section, *Proposed Incentive Programs*.

The incentive program would apply to each new “non-alternative fuel shuttle.” A new “non-alternative fuel shuttle” would be defined as any shuttle vehicle that does not meet the requirements of an “alternative fuel vehicle” specified in the MOU and was not registered to serve the San Diego International Airport in 2009.



DOOR-TO-DOOR SHUTTLE INCENTIVE PROGRAM

The following is the proposed incentive program for door-to-door shuttles.

1. The Airport Authority would meet with door-to-door shuttle operators on a regular basis to provide opportunities for funding and locations of public alternative fuel refueling stations.
2. As currently required, shuttle operators would be required to register their fleet of vehicles with the Airport Authority and pay an applicable registration fee. Shuttle vehicles older than 7 years of age based on model year would be denied registration/operation at the airport.
3. The cost to operate any shuttle vehicle at the airport and trip fee charge would be set annually by the San Diego County Regional Airport Authority.
4. In order to meet the MOU requirement of a program to induce shuttle operators to replace existing vehicles with electric or alternative fueled shuttle vehicles at the end of their useful life, an environmental surcharge program or environmental trip fee charge would become effective, beginning in 2010. A description of each program is provided in the section, *Proposed Incentive Programs*.

The selected program would apply to each new “non-alternative fuel shuttle.” A new “non-alternative fuel shuttle” would be defined as any shuttle vehicle that does not meet the requirements of an “alternative fuel vehicle” specified in the MOU and was not registered to serve the San Diego International Airport in 2009.

5. Unlike other shuttle operators, door-to-door shuttles serve clients throughout San Diego and Southern California. If Door-to-Door shuttle operators believe that the availability, fuel capacity, and efficiency associated with electric or alternative fuel vehicles is not reasonably available, they could petition the Airport Authority in writing for an exemption. A determination will be made by the Airport Authority based size of the operator’s fleet, number of electric or alternative fuel vehicles, and/or consultation with the Attorney General of the State of California.



OFF-AIRPORT PARKING SHUTTLE INCENTIVE PROGRAM

The following is the proposed incentive program for off-airport parking shuttles.

1. The Airport Authority would meet with off-airport parking shuttle operators on a regular basis to discuss the progress of conversion to alternative fuels and provide opportunities for funding.
2. As currently required, shuttle vehicle operators would be required to register their fleet of vehicles with the Airport Authority and pay the applicable registration fee. Shuttle vehicles older than 7 years of age based on model year would not be allowed to register those vehicles or operate them at the airport.
3. The cost to operate any shuttle vehicle at the airport and any trip fee charge would be set annually by the San Diego County Regional Airport Authority.
4. In order to meet the MOU requirement of a program to induce shuttle operators to replace existing vehicles with electric or alternative fueled shuttle vehicles at the end of their useful life, an environmental surcharge program or environmental trip fee charge would become effective, beginning in 2010. A description of each program is provided in the section, *Proposed Incentive Programs*.
5. The selected program would apply to each new “non-alternative fuel shuttle.” A new “non-alternative fuel shuttle” would be defined as any shuttle vehicle that does not meet the requirements of an “alternative fuel vehicle” specified in the MOU and was not registered to serve the San Diego International Airport in 2009.



APPENDIX A Comments on Stakeholders in Early Meetings

The following further elaborate on early concerns of various stakeholders with the implementation of a shuttle incentive program at San Diego International Airport.

Rental Car:

Rental car agencies' primary concern with an incentive or mandatory alternative fuel shuttle program is that the Airport Authority plans to construct a Consolidated Rental Car Facility (CONRAC), located on the north side of the airport. Operators do not want to make the initial investment that is necessary to purchase new alternative fueled equipment when construction of the CONRAC may make shuttle operations by the rental car companies obsolete.

By its nature, a consolidated rental car facility would significantly reduce the amount of shuttles operating at the airport. It is anticipated that the Airport Authority would construct the CONRAC facility and manage the alternative fuel shuttles to the CONRAC. The rental car companies would pay for the facility's operations through fees and charges. Based on current plans for SAN, the CONRAC is expected to be operational by 2015. The rental car companies indicated that they do not foresee having to switch out vehicles before the construction of the CONRAC. However, should the CONRAC construction be delayed, it would be anticipated that the some rental car shuttles would need to be replaced.

An additional issue that was raised by the rental car operators included access of larger buses to alternative fuel fueling stations. Buses that are longer than 40 feet in length have trouble gaining access to the existing CNG station located on the corner of Laurel Street and Pacific Highway.

Off-Airport Parking:

There are a number of off-airport parking operators within close proximity to SAN. Each off-airport parking company operates its own shuttles, except for those lots owned and operated by the Airport Authority. The Airport Authority owns and operates three off-airport parking lots.

The off-airport parking operators do not want to consolidate their shuttle operations. They believe that their shuttle operations give them a competitive advantage. Although they would like funding to assist in the conversion to alternative fuels, the majority of operators do not have the resources to pursue available grants. There is also concern with the airport's automatic vehicle identification (AVI) system and when it will be turned on and if operators will be charged.



Hotel Shuttles:

The majority of hotels located within close proximity to the airport operate their own shuttles. Some hotels, dependent upon their ownership, have consolidated operations with other hotels. Many of the operators believe that airport shuttle operations are a perk that they offer hotel guests but are not essential to their operations. There are no fees administered to the guests or generation of revenue from shuttle operations. If the Airport Authority began charging hotel shuttle operations, hotel representatives indicated that they would likely stop the service requiring passengers to obtain alternative modes of transportation such as a taxi, limo, or private shuttle. At the present time, public transportation does not appear to be a viable option for a significant amount of passengers staying at a hotel in the area.

Hotel shuttle operators would be interested in a program that could consolidate operations with other airport hotel shuttles. The idea has been raised in the past but has not been pursued. Consolidation would reduce the number of shuttle vehicles operating at the airport and associated emissions.

Door-to-Door Shuttles

There are several door-to-door shuttle operators operating at SAN. Door-to-door means the shuttle will pick you up and drop you off at your specified location. The major concern for door-to-door shuttle operators is the availability, fuel capacity, and efficiency associated with alternative fuel vehicles. Unlike other shuttle operators, door-to-door shuttles serve clients throughout San Diego and Southern California. Available fuel is essential to their operations since they do not have the time or resources to find alternative fuel fueling stations. If an alternative fuel shuttle runs out of fuel, it may be difficult to locate a tow company that services those vehicles.

Door-to-door shuttle operators would also like the Airport Authority to initiate a program to increase ridership. Many door-to-door shuttles are currently only carrying two to three people per trip. They believe an increase in ridership could result in fewer trips to the airport. Additional issues that were raised by the door-to-door shuttle operators include the need for prepaid cards at alternative fuel stations and the lower fuel capacity of those fuels when compared to their conventional fuel counterparts.