

Preliminary Draft Survey for Review and Comment
June 28th, 2017



**Draft Part 1 Survey:
Airport Shuttle Bus Survey
Sample for Comment, 2017**

THIS IS A SAMPLE SURVEY FOR REVIEW AND COMMENT. PLEASE PROVIDE COMMENTS ON THE PROPOSED TEXT AND QUESTIONS TO Mr. Anthony Poggi at anthony.poggi@arb.ca.gov BY JULY 21st, 2017

Introduction

Promoting the development and use of zero-emission airport shuttle buses will help the California Air Resources (CARB) achieve the emission reduction strategies outlined in the Mobile Source Strategy, State Implementation Plan and the Sustainable Freight Action Plan. Vehicles like airport shuttle buses that operate on fixed routes, have stop-and-go operations, maintain low average speeds, and are centrally maintained and fueled are ideal candidates for targeting zero-emission electric technologies.

The purpose of this survey is to gather detailed information about everyday operations of airport shuttle bus fleets and to better understand variations among different types of fleet operations. This survey will help CARB to better estimate individual fleet costs (including vehicles and infrastructure) and understand potential opportunities and challenges associated with incorporating airport shuttles with zero-emission operating capabilities into the fleet. Accuracy and completeness of fleet data, including data collected in this survey, will be vital to CARB's efforts in developing a measure that integrates efficiently with airports and other businesses involved with airport shuttle bus operation and achieves the desired emission reductions.

Directions

This survey is designed to be completed by airport personnel (or third party entity) operating airport shuttle buses. If your airport has more than one third party entity operating shuttle buses, please deliver one survey to each company. If you are writing your responses by hand and need extra space, you can add extra pages at the end of this survey with the airport/company name, your contact information and the question number to which the answer refers.

Surveys should be returned directly to the California Air Resources Board upon completion. CARB will work closely with Airport Shuttle Bus Workgroup to interpret the results. Please submit any inquiries, along with the completed survey by XXXXX to Mr. Anthony Poggi at anthony.poggi@arb.ca.gov. You can either submit the electronic version via email or you can print the survey and mail it to the following address:

California Air Resources Board
Incentives and Technology Advancement Branch, 5th Floor
Attn. Anthony Poggi
P.O. Box 2815
Sacramento, CA 95812-2815

Thank you for your assistance in completing this important survey. We appreciate your efforts.

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1. Company/Contact Information

| | |
|--|--|
| Airport Name | |
| Mailing Address | |
| City | |
| State/Province | |
| Zip | |
| Primary Airport Contact Name | |
| Primary Airport Contact Email | |
| Primary Airport Contact Phone Number | |
| Shuttle Bus Operation Entity (if different from airport) | |
| Primary Shuttle Bus Contact Name | |
| Primary Shuttle Bus Contact Phone Number | |
| Primary Shuttle Bus Contact Email | |

2. What is the total number of shuttle buses in your fleet? Include any/all on-airport buses servicing terminals, rental car facilities, parking facilities, and airside operations at this airport. *If there are no airport shuttle buses operating at your airport, please disregard the rest of this survey.*

3. Have you reduced or expanded the number of shuttle buses in your fleet over the last 5 years? Do you have plans to do so over the next 5 years? If yes, please describe the reason(s) for the expansion/contraction and the number of vehicles involved.

4. What are the NAICS codes for your business?

5. Is your shuttle bus fleet maintained by a third part entity?

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6. The proposed regulation may require in-use diesel and CNG shuttles buses be replaced with zero-emission vehicles. Will your business be disproportionately impacted by such a proposed regulation due to your size/scale/service type etc.? If yes, please explain and provide information below.

7. Please fill in the blank spaces below to provide information about your shuttle bus purchase cycle.

- Average vehicle lifespan: years.
- Average turnover: vehicles per year.
- Average number of vehicles purchased simultaneously:
- Percentage of shuttle purchases involving used vehicles: %

8. Please rank the following factors in order of importance when evaluating shuttle purchases: total cost of ownership, capital cost, payback return, cost-sharing opportunities, fuel economy, performance, safety, capacity, reliability.

9. Do you currently have or are you in the process of purchasing any zero-emission vehicles in your shuttle bus fleet? If yes, how many?

10. Do you consider the purchase of zero-emission shuttle buses or other zero-emission technology in your annual vehicle purchases? If not, what are the issues that prevent the purchase of zero-emission shuttle buses?

11. Who do you contact when beginning a new vehicle purchase? (e.g., dealer, chassis manufacturer, body manufacturer, co-op, or internal purchasing agent)

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12. Have you signed up for the Low Carbon Fuel Standard (LCFS) Program (e.g. utilizing the reporting tool, credit banking & transfer system)? Yes No

13. Are you using any low carbon fuels in your airport shuttle buses in California? If yes, please select the fuel type(s) below. If no, please select the box next to "None".

- CNG Renewable CNG Battery Electric Hydrogen None

14. Describe how you typically purchase fuels by fuel type. (e.g., annual contracts, spot market, utility, off-site, etc.)

15. Shuttle Bus Route Information: Please fill in the table below with information about your shuttle bus fleet's route(s). Use a different line for each unique route traveled by vehicles in your fleet. Please begin with the routes that are most commonly traveled.

| Route # | Round Trip Distance (miles) | Number of Stops | Maximum Speed (mph) | Average Speed (mph) | Round Trips per Day | Locations/Purpose (e.g. parking facilities, rental car facilities, employee transport, tarmac/airside) |
|---------|-----------------------------|-----------------|---------------------|---------------------|---------------------|--|
| 1 | Ex: 1 | 3 | 25 | 20 | 20 | parking, rental car |
| 2 | 3 | 2 | 30 | 25 | 6 | employee transport |
| 1 | | | | | | |
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16. Airport Shuttle Bus Information: Please fill in the table below with information about each shuttle bus operating at your airport. For your convenience, please group similar/identical vehicles together. Do not include vehicle information from transit agencies or from other fleets that delivery passengers to airports. There is no need to repeat identical information for consecutive vehicles (see example below).

| | Last Six Digits of VIN # | License Plate # | Body Type (e.g. Transit, Cutaway) | Length (feet) | GVWR | Engine Model Year | Fuel Type | Capacity | | Operation | | | | |
|----|--------------------------|-----------------|-----------------------------------|---------------|--------|-------------------|-----------|----------|-------|------------|-------|--------------------------|--------------------------------------|-----------------------------------|
| | | | | | | | | Seated | Total | Avg. Miles | | Daily Hours of Operation | Estimated Daily Idle Time (minutes)* | Mid-Day Refueling Required? (Y/N) |
| | | | | | | | | | | Annual | Daily | | | |
| 1 | Ex: 63490 | 9X4XXXX | Transit | 35 | 32,320 | 2010 | CNG | 25 | 40 | 45,000 | 125 | 15 | 60 | N |
| 2 | 225320 | 3C2XXXX | “ “ | “ “ | “ “ | “ “ | “ “ | “ “ | “ “ | “ “ | “ “ | “ “ | “ “ | N |
| 3 | 109754 | 8Z3XXXX | Cutaway | 30 | 23,350 | 2013 | Diesel | 20 | 30 | 60,000 | 175 | 18 | 90 | Y |
| 1 | | | | | | | | | | | | | | |
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*Daily idle time refers to the amount of time the vehicle is stopped with the engine running while on route (e.g. loading or unloading passengers). To estimate the daily idle time use the following formula: #of daily round trips x #of stops per round trip x #of minutes idling at each stop.

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|----|--------------------------|-----------------|-----------------------------------|---------------|------|-------------------|-----------|----------|-------|------------|-------|--------------------------|--------------------------------------|-----------------------------------|
| | | | | | | | | Seated | Total | Avg. Miles | | Daily Hours of Operation | Estimated Daily Idle Time (minutes)* | Mid-Day Refueling Required? (Y/N) |
| | | | | | | | | | | Annual | Daily | | | |
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|----|--------------------------|-----------------|-----------------------------------|---------------|------|-------------------|-----------|----------|-------|------------|-------|--------------------------|--------------------------------------|-----------------------------------|
| | | | | | | | | Seated | Total | Avg. Miles | | Daily Hours of Operation | Estimated Daily Idle Time (minutes)* | Mid-Day Refueling Required? (Y/N) |
| | | | | | | | | | | Annual | Daily | | | |
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|----|--------------------------|-----------------|-----------------------------------|---------------|------|-------------------|-----------|----------|-------|------------|-------|--------------------------|--------------------------------------|-----------------------------------|
| | | | | | | | | Seated | Total | Avg. Miles | | Daily Hours of Operation | Estimated Daily Idle Time (minutes)* | Mid-Day Refueling Required? (Y/N) |
| | | | | | | | | | | Annual | Daily | | | |
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Thank you for completing this survey!