Appendix I
Advanced Clean Local Trucks Fleet Operations Survey
February 16, 2018

TO: Fleet Managers

SUBJECT: CALIFORNIA FLEET OPERATIONS SURVEY 2018

Dear Fleet Manager,

Several truck manufacturers have announced plans for the production of battery electric and fuel cell electric trucks for sale in California and throughout the United States. The California Air Resources Board would like to get information from companies that own and operate fleet vehicles to better understand where the early market opportunities may be for medium- and heavy-duty electric trucks.

Enclosed is a copy of a two page California Fleet Operations Survey 2018 that will provide us with information to help improve our understanding of current fleet operations in California and where electric trucks may be suitable. This survey is voluntary and should be completed to the best of your knowledge from memory. We anticipate it may take about 15 minutes to complete. Please return the survey within the next 30 days, if possible.

We appreciate your promptness in responding to this survey request. If you have any questions regarding the completion of the survey, please contact Mr. Paul Arneja, Air Resources Engineer, at (916) 322-5616, or via e-mail at Paul.Arneja@arb.ca.gov.

Enclosure

cc: Paul Arneja
Air Resources Engineer
Mobile Source Control Division
California Fleet Operations Survey 2018

Introduction

The introduction and arrival of zero-emission trucks for a variety of applications, a market is starting to emerge for the cleanest possible vehicles on the road today. Battery-electric and fuel-cell electric trucks offer opportunities for fuel savings and maintenance reductions that can generate savings over the life of the vehicle when placed into the right operations. The purpose of this survey is to better understand what applications these vehicles may be deployed in and how many vehicles present good opportunities for electrification. This survey is focused on Class 2B-8 vehicles (GVWR greater than 8,501 lb.). The results of this survey will be used to better understand potential barriers in heavy-duty electrification as well as inform manufacturers and utility companies what markets offer the best opportunities for electrification.

Because this survey has been sent to your address based on current DMV registration information, your company may have received more than one copy if your vehicles are registered to more than one address. We ask that you fill out only one survey for each facility/terminal where trucks are operated and/or dispatched.

Note: for this survey, a “truck” is any vehicle with a GVWR greater than 8,501 lb. A “terminal” is any location from which trucks are parked or dispatched. Please complete and return the survey even if you believe zero-emission trucks are not applicable to your operation.

Directions

This survey consists of three parts. Part A helps identify what your company does and some basic information about your fleet. Part B helps identify where your business operates and whether there may be issues with infrastructure. Part C asks for information about the most common truck types in your fleet as well as data on individual truck operations if available.

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 division’s name, your contact information and the question number to which the answer refers.

Please submit any inquiries or comments to Mr. Paul Arneja at Paul.Arneja@arb.ca.gov. You may submit an electronic version, located here: https://arb.ca.gov/msprog/actruck/docs/aclsurvey18.docx, via email, or you may mail a printed survey to the following address:

California Air Resources Board
In-Use Control Measures Section, 5th floor
Attn. Paul Arneja
P.O. Box 2815
Sacramento, CA 95812-2815

Thank you for your assistance in completing this important survey. We appreciate your efforts and look forward to your quick response.
### Survey Part A – Company Information

1. **Company/Contact Information**

<table>
<thead>
<tr>
<th>Company Name</th>
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<tbody>
<tr>
<td>Mailing Address</td>
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<tr>
<td>City</td>
<td></td>
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<tr>
<td>State/Province</td>
<td></td>
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<tr>
<td>Zip</td>
<td></td>
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<tr>
<td>Phone Number</td>
<td></td>
</tr>
<tr>
<td>Primary Contact Name</td>
<td></td>
</tr>
<tr>
<td>Primary Contact Email</td>
<td></td>
</tr>
<tr>
<td>Primary Purpose of Business*</td>
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</tr>
</tbody>
</table>

*Pickup and delivery, refuse, utility services, construction, other transportation, retail sales, etc.

2. **What fuel types are used for your trucks in California? (Check all that apply)**

- [ ] Diesel
- [ ] Gasoline
- [ ] Natural Gas
- [ ] Propane
- [ ] Electricity
- [ ] Other

3. **How do you acquire your trucks? (Check all that apply)**

- [ ] Rent
- [ ] Lease
- [ ] Buy

4. **Does your company have a sustainability plan to reduce your carbon footprint?**

- [ ] Yes
- [ ] No

5. **Have you considered electric trucks for your fleet?**

- [ ] Yes
- [ ] No

6. **Are you interested in learning about electric trucks?**

- [ ] Yes
- [ ] No

7. **When making purchasing decisions, what is your preferred payback period? (years)**

### Survey Part B – Terminal Information

1. **How many California terminals are included in this survey?**

2. **List the general location for each terminal in California. (zip code, city, or county)***

   *If more than five, please send list electronically to Paul.Arneja@arb.ca.gov

3. **How many California vehicles are included in this survey per weight class?**

<table>
<thead>
<tr>
<th>Class 2B-3</th>
<th>Class 4-7</th>
<th>Class 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,501-14,000 lb. GVWR</td>
<td>14,001-33,000 lb. GVWR</td>
<td>33,001+ lb. GVWR</td>
</tr>
</tbody>
</table>

| Use this illustration as a guide to help fill in the information requested in the above table |

4. **What portion of your fleet has space for EV chargers where they are normally parked? (Charger: 1’x2’)**

- [ ] None
- [ ] 25%
- [ ] 50%
- [ ] 75%
- [ ] All
- [ ] Uncertain

5. **How many terminals have space for a hydrogen refueling station?**

   (Hydrogen fueling station: 50’x60’, but can vary significantly)
Survey Part C – Truck Fleet Information
1. Please answer the following questions to the best of your ability for the three most common types of trucks in your fleet. Each column corresponds to the most common, second most common, and third most common truck type in your fleet. (Example: Step Van, Cargo Van, Box Van, Service Truck, Boom Truck, Yard Tractor, Vocational, Refuse, Day Cab Tractor, Bus, etc.)

<table>
<thead>
<tr>
<th>Truck Type</th>
<th>Most common</th>
<th>2nd most common</th>
<th>3rd most common</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. What is the primary commodity transported? (Ex. none, fuel, gravel, manufactured goods, waste, etc.)</td>
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<tr>
<td>b. What is this vehicle’s weight class? (2B-3, 4-7, 8)</td>
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<td>c. How many are in your fleet?</td>
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<td>d. Primary fueling method? (On-site, off-site, both)</td>
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<td>e. Parked overnight at terminal? (Y/N)</td>
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<td>f. Is routine maintenance typically done at the facility? (Y/N)</td>
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<tr>
<td>g. What is the typical daily mileage of these vehicles?</td>
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<tr>
<td>h. What is the typical annual mileage of these vehicles?</td>
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<tr>
<td>i. What is the typical service radius from the terminal? (mi.)</td>
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<tr>
<td>j. Is the payload limited by weight? (Y/N)</td>
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<tr>
<td>k. Is the payload limited by volume? (Y/N)</td>
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<tr>
<td>l. Hours of PTO use on a typical day? (0 if none)</td>
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<tr>
<td>m. How long is this truck type typically kept in the fleet?</td>
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<td>n. Does this truck type return to terminal daily? (Y/N)</td>
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<td>o. How many operate on a fixed/predictable route? (None, few, some, many, etc.)</td>
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<tr>
<td>p. Is this truck type commonly used for towing?</td>
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</table>

Thank you for completing our survey. We are also interested in a data set of your vehicles if you are willing to provide a spreadsheet with truck-specific individual information as requested below to be included with your survey. Please email Paul.Arneja@arb.ca.gov with the requested data. Electronic spreadsheets that include more detailed information are welcomed.

**Data Requested**
- Vehicle Make/Model Year
- Vehicle Body Type
  (Ex. Step Van, Dump Truck, Box Van, Service Truck, Boom Truck, Yard Truck, Refuse, Day Cab, Bus, etc.)
- Truck Terminal Location (zip code, city, or county)
- GVWR
- Fuel Type (diesel, gasoline, natural gas, etc.)
- Equipped with PTO (Y/N)
- Average Daily Miles Travelled (if available)
- Average Annual Miles Traveled (if available)
- Typical Service Radius from Terminal (miles)
- Odometer Reading