

March 4, 2025

Mr. Shawn Wang
Program Supervisor
Planning, Rule Development & Implementation
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

BURBANK-GLENDALE-PASADENA AIRPORT AUTHORITY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT MEMORANDUM OF UNDERSTANDING – UPDATED 2023 ANNUAL PROGRESS REPORT

Dear Mr. Wang,

Burbank-Glendale-Pasadena Airport Authority (“Authority”) is pleased to submit the Authority’s updated annual progress report. On December 17, 2019, a Memorandum of Understanding (“MOU”) was entered into between the South Coast Air Quality Management District (“South Coast AQMD”) and the Authority for the voluntary reduction of emissions from commercial non-aircraft airport mobile sources. This report details the progress achieved in Calendar Year (“CY”) 2023 and is intended to provide an overview of the Authority’s efforts to implement the MOU measures and quantify actual emission reductions. There are two measures in the Authority’s MOU related to non-aircraft commercial passenger airport mobile sources – the Ground Support Equipment Program and the Hollywood Burbank Airport Shuttle Fleet Conversion. Required information described in the Authority’s MOU for each of these measures and their associated equipment and emissions are provided in the following sections. This report does not apply to any source or operation of any source that is not specifically identified in the MOU measures.

PROGRESS ON MOU MEASURES

MOU SCHEDULE NO.1 – GROUND SUPPORT EQUIPMENT

As a key measure identified in the MOU with the South Coast AQMD, the Authority’s Ground Support Equipment (“GSE”) Program requires the Authority to reduce nitrogen oxides (“NOx”) emissions from GSE to achieve a GSE fleet average composite emissions factor (“performance level”) which is equal to or less than 1.66 grams of NOx per brake horsepower-hour (“g/hp-hr of NOx”) by January 1, 2023, and 0.74 g/hp-hr of NOx by January 1, 2031. To achieve this measure, the Authority has been working with airlines and third-party GSE operators to achieve the performance targets by specified dates through accelerated turnover to cleaner equipment.

A list of GSE subject to this measure with the required information specified in MOU Schedule No.1 Section III.B.1. *List of Ground Support Equipment* is provided in **Exhibit A, Table 1**. Information on the sale or retirement of non-zero emission GSE subject to this measure including information submitted to the California Air Resources Board DOORS database and relocation details (as applicable) as required by MOU Schedule No. 1, Section III.B.2 *List of Sold, Retired, or Relocated Equipment* is presented in **Exhibit A, Table 2**. Further, as required by MOU Schedule No. 1, Section III.B.3 *Emission Inventory*, an inventory

of GSE emissions associated with commercial operations at the Airport has been developed. Additional supporting information for the development of the GSE emissions inventory is provided in **Exhibit B**.

2023 Hollywood Burbank Airport MOU GSE Summary

Fleet Mix ¹					Fleet Emissions (tons per year; metric tons for CO ₂ e) ²						
Total	Electric	Diesel	Gas	Other	CO	ROG	NOx	PM ₁₀	PM _{2.5}	SOx	CO ₂ e
282	121	85	64	12	44.1	5.3	9.8	0.36	0.31	0.01	3,652

Notes:

1. Fleet counts include ≥25 horsepower in-use equipment used in the calculation of the NOx performance factor.
2. Fleet emissions include the operation of all reported equipment, including <25 horsepower and low-use (<200 hours per year) or emergency-use equipment.

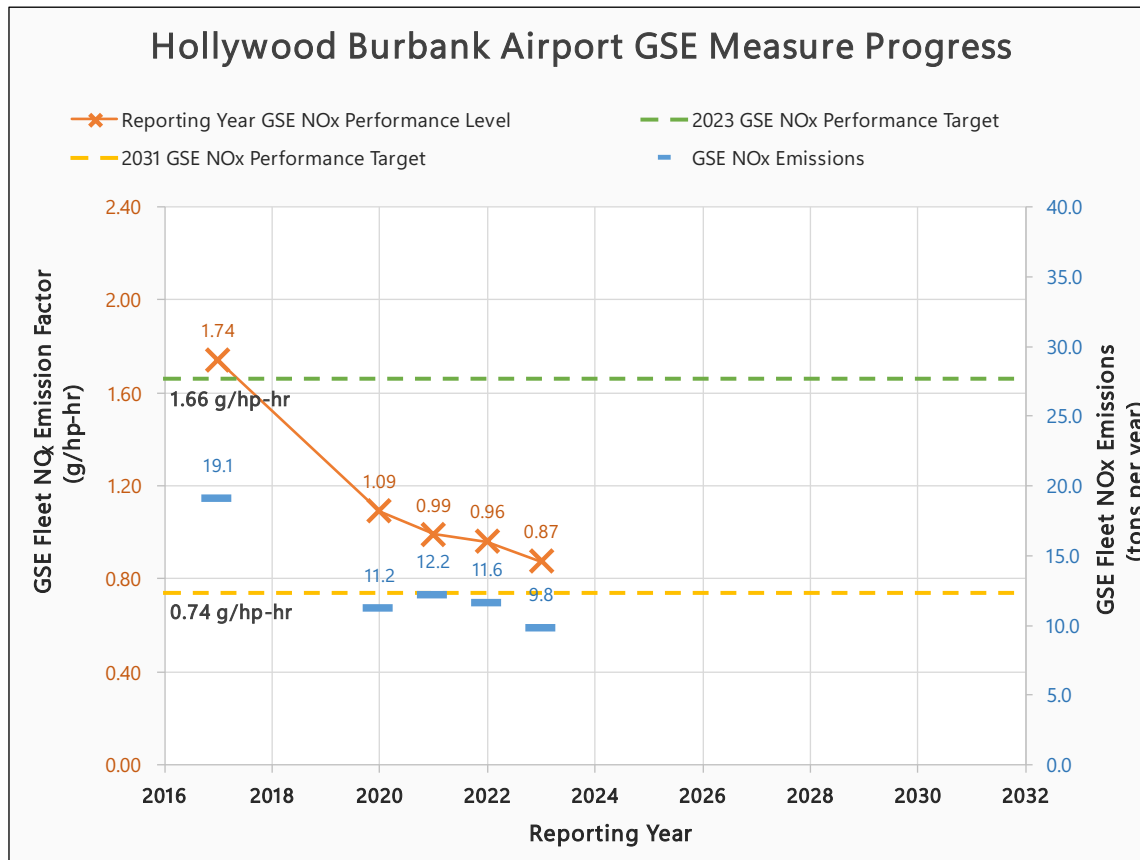
In CY 2023, there were 282 pieces of in-use, ≥25 horsepower (collectively, “reportable”) GSE operating at the Airport – a net decrease of 15 pieces of equipment relative to CY 2022. There were also 121 reportable electric ground support equipment (“eGSE”) representing no net change, 85 diesel-powered GSE representing a net decrease of 11 units, 64 gasoline-powered GSE representing a net decrease of 3 units, and 12 liquefied petroleum gas- or propane-powered GSE representing a net decrease of 1 unit relative to CY 2022. The percentage of reportable eGSE at Hollywood Burbank Airport is 42.9%, increasing by 2.0 percentage points over CY 2022.

In CY 2023, the Airport achieved a performance level of 0.87 g/hp-hr of NOx, demonstrating the Airport’s continued achievement of the MOU’s January 1, 2023 performance level target and significant progress towards achieving the MOU’s January 1, 2031 performance level target. This factor represents a decrease relative to the CY 2022 factor of 0.96 g/hp-hr of NOx¹. The decrease was the result of substantial removal of pre-Tier 4 Final diesel and pre-2010 model year non-diesel (collectively, “legacy”) GSE from the combined Airport fleet. The Authority anticipates the fleet composite performance factor to continue to decrease as the Authority continues its ongoing partnerships with third-party GSE operators to replace or relocate legacy GSE.

For CY 2023, annual NOx emissions from GSE totaled 9.8 tons, which is lower than the 2022 annual NOx emissions from GSE of 11.6 tons². This decrease in total annual NOx emissions is directly attributable to the removal and retirement of legacy GSE from the GSE fleets in operation at the Airport. Overall, the Authority’s GSE Emissions Reduction Program has achieved an annual NOx emission reduction of 48.5%, or 9.3 tons, relative to the annual GSE NOx emissions in 2019, the time of the Program’s inception. In June 2024, the Authority continued its targeted operator outreach approach, coordinating with the operators of remaining legacy GSE in operation at the Airport to facilitate the changeout, relocation, or reduced operation of these highest-emitting equipment.

¹ In response to South Coast AQMD comment on the initial CY 2023 annual report, in December 2024 the CY 2022 performance factor from 1.01 g/hp-hr to 0.96 g/hp-hr. This change was due to updated to equipment specifications for certain GSE which were identified during the CY 2023 annual survey.

² In response to South Coast AQMD comment on the initial CY 2023 annual report, in December 2024 the CY 2022 annual NOx emissions were updated from 12.7 tons to 11.6 tons. This change was due to updated to equipment specifications for certain GSE which were identified during the CY 2023 annual survey.



Hollywood Burbank Airport GSE Performance and Emissions by Survey Year

MOU SCHEDULE NO. 2 – ZERO-EMISSION SHUTTLE BUS PROGRAM

MOU Schedule No. 2 is based on the Authority's AQIP creditable measure for zero-emission buses at the Airport. This measure requires that the Authority replace 50% and 100% of Authority owned and operated or Authority contracted buses with electric buses by January 1 of 2023 and 2031, respectively.

Shuttle services to all parking lots and staff parking lots were suspended in CY 2020 and resumed in June 2021. At that time, the Authority entered into a short-term contract for courtesy shuttle services with an operator using nine (9) natural gas-powered buses which was extended through September 2023. In April 2022, the Authority released a Request for Information ("RFI") to gauge the market and availability of electric shuttle buses. Using information gathered from the RFI, the Authority issued a Request for Proposals ("RFP") for a long-term third-party courtesy shuttle bus operation on April 11, 2023. On July 10, 2023, the Authority awarded a five-year contract to ACE Parking for shuttle services to commence on October 1, 2023.

The contract with ACE Parking incorporates the commitments of the MOU, requiring the operator to procure and utilize a minimum of 50% electric buses and to install the necessary EV chargers to support the operation of that fleet. The contract requires the operator to meet these commitments within 18 months of the contract award, or by April 2025. As of March 3, 2025, vehicles and infrastructure have

been delivered, permitting and installation is underway, and ACE Parking is on schedule to be in operation of a 50% electric bus fleet at the Airport in April 2025.

An RFP for shuttle services following the conclusion of the current contract will include requirements to meet the Airports 100% electric shuttle commitment by 2031.

As required by this measure, a list of shuttle buses operating at the Airport in CY 2023 with the required information specified in MOU Schedule No.2 Section III.B.1. Shuttle Bus List is provided in **Exhibit B, Table 1**. Further, as required by MOU Schedule No.1, Section III.B.2., an emissions inventory for shuttle buses has been developed. Additional supporting information for the development of the shuttle bus emissions inventory can be found in **Exhibit C**.

2023 Hollywood Burbank Airport MOU Shuttle Bus Summary

Fleet Mix ¹		Fleet Emissions (tons per year; metric tons for CO ₂ e) ²						
Electric	Non-electric	CO	ROG	NOx	PM ₁₀	PM _{2.5}	SOx	CO ₂ e
0 (0%)	8 (100%)	11.61	0.03	0.13	0.04	0.01	<0.01	710

Notes:

1. In October 2023, the previous fleet of nine (9) model year 2016 CNG buses were replaced with seven (7) model year 2023 gasoline buses and one (1) model year 2010 propane bus. The one (1) propane bus was removed from service in January 2024 by Authority request due to the contractual requirement to not operate buses nine (9) or more model years old.

2. Fleet emissions include both the emissions from the operation of the previous CNG bus fleet from January through September 2023 and the emissions from the operation of the new gasoline and propane bus fleet from October through December 2023.

The Authority truly appreciates the partnership with South Coast AQMD and the ongoing collaboration. If there are any questions, please contact either myself at mmartinez@bur.org (818) 729-2226 or Tami McCrossen-Orr at tami@trifiletticonsulting.com (310) 709-9637 at your earliest convenience.

Sincerely,



Maggie Martinez
Director, Noise and Environmental Affairs

Enclosed are the following documents.

- Exhibit A: MOU Schedule No. 1 – Ground Support Equipment MOU Report
- Exhibit B: MOU Schedule No. 1 – Ground Support Equipment Survey, Emissions Inventory Report, May 2024
- Exhibit C: MOU Schedule No. 2 – Shuttle Bus MOU Report