



South Coast Air Quality Management District

Airports Mobile Source Working Group Meeting 7
November 18, 2025



long beach
airport

where the going is easy®

Annual Report Requirements



- LGB's MOU has one schedule:
Commercial Ground Support Equipment (GSE)
- LGB conducts an annual GSE survey and reports on June 1st for the preceding calendar year, starting in 2021 and continuing through 2032. Reports cover:
 - Performance metrics relative to MOU targets
 - Emission inventories
 - Legacy GSE phase-out

Reporting Improvements

Prior Reports

- A small number of GSE used for general aviation activities (non-commercial) had been included in previous reports' inventories and performance calculations

Updates for 2023

- To maximize transparency, the results from all prior reporting years were updated to show separate commercial (MOU-required) and non-commercial equipment inventories, emissions, and performance levels

Moving Forward

- Like the other MOU-participating airports, only commercial GSE (i.e., serving passenger, cargo, or charter operations) will be included in annual reporting.



long beach
airport

Schedule No. 1 – Commercial GSE Performance



Airport-wide Commercial GSE Performance Trends

- 2017 Baseline – 1.50 grams per horsepower-hour (g/hp-hr)
- 2020 – 1.12 g/hp-hr
- 2021 – 0.74 g/hp-hr
- 2022 – 0.68 g/hp-hr
- 2023 – 0.55 g/hp-hr

✓ MOU 2023 Target – 0.93 g/hp-hr (achieved in 2021)

□ MOU 2031 Target – 0.44 g/hp-hr

Schedule No. 1 – Commercial GSE Emissions

Airport-wide Commercial GSE Emissions Trends

- 2017 Baseline – 23.7 tons of NOx
- 2020 – 13.3 tons of NOx
- 2021 – 6.1 tons of NOx
- 2022 – 5.6 tons of NOx
- 2023 – 3.1 tons of NOx



✓ Emissions in 2023 are 87% lower than baseline.



long beach
airport

Schedule No. 1 – Commercial GSE Fleet

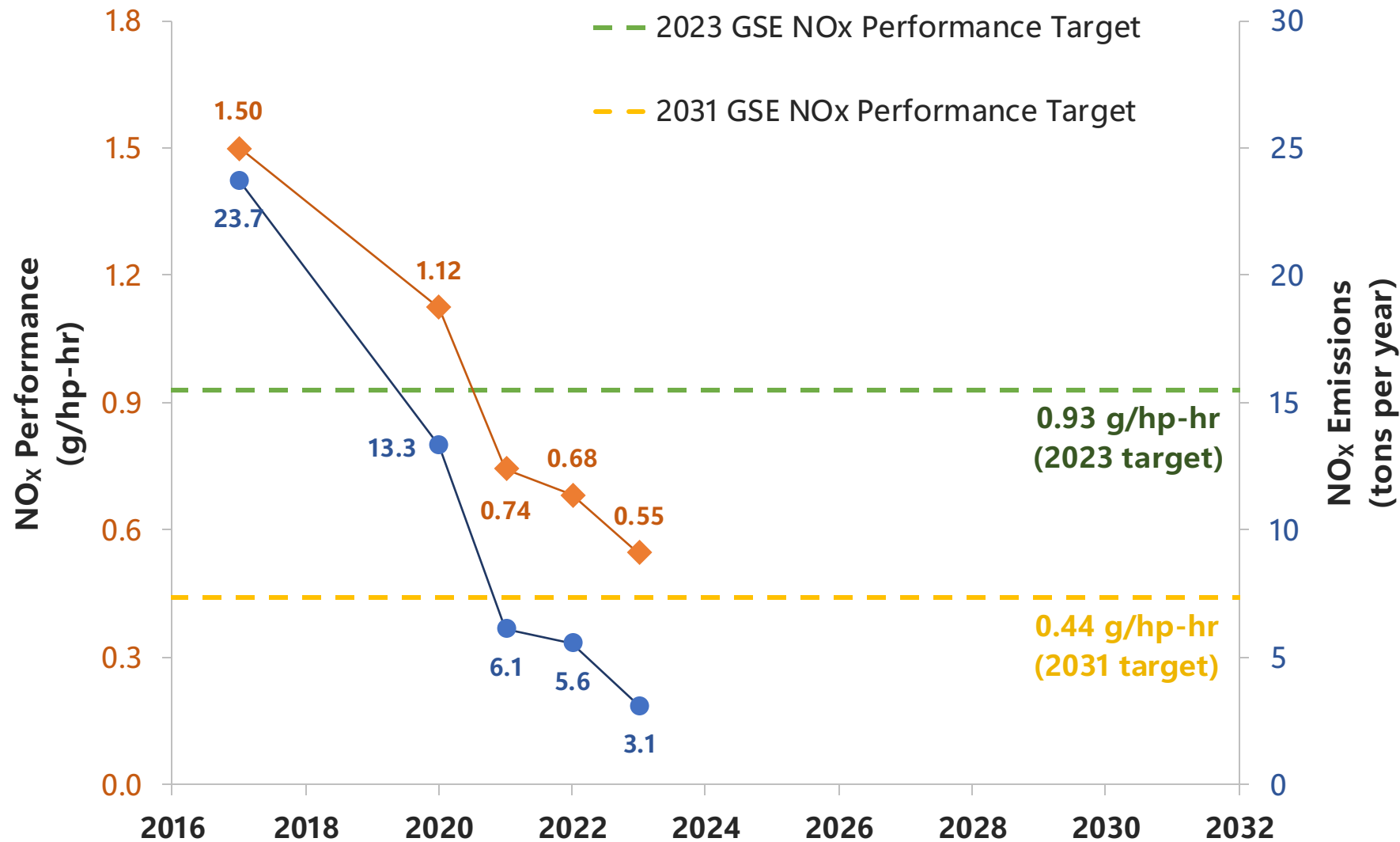
2023 Commercial GSE Fleet (In-Use, ≥ 25 Horsepower equipment only)

Year	Gasoline		LPG/Propane		Diesel				Electric	Total Fleet
	Legacy	2010+	Legacy	2010+	Legacy	Tier 3	Tier 4	Onroad		
2017	36	13	15	3	84	3	11	0	155	320
2020	24	29	12	1	24	15	31	12	96	244
2021	3	21	11	3	7	9	25	6	75	160
2022	3	23	9	2	6	7	24	7	83	164
2023	4	28	4	1	2	2	28	8	96	173

✓ Only 10 units of legacy GSE remained in-use at Long Beach Airport in 2023, down from 135 units in the MOU baseline (93% reduction).

✓ Roughly 55% of in-use Commercial GSE were electric in 2023.

Schedule No. 1 – Progress and Looking Forward



Looking Forward

- Continuation of downwards trends expected
- Airport is on track to achieve its 2031 MOU target within two years

Non-Commercial GSE Snapshot

Non-Commercial GSE

- Emissions have gradually decreased from a high of 2.9 tons of NO_x in 2020 down to 1.2 tons of NO_x in 2023
- Emissions were calculated assuming commercial activity levels and are likely conservative
- In 2023, 18 in-use non-commercial GSE were reported, 10 of which (56%) were electric



Detailed non-commercial GSE data are included in the 2023 report.



long beach
airport

Commercial Tenant Updates

Updates Since Working Group Meeting #6

- Airport has fully recovered to pre-COVID activity, with 2024 having the highest commercial activity in the airport's history
- Delta Air Lines e-GSE phase-in conversion planned throughout fall of 2025



Additional Non-MOU Air Quality Initiatives



EVs and Solar Trees

Sep 2024 – \$750,000 grant awarded for 6 Airport Electric Airside Vehicles and 2 free-standing “solar tree” chargers

Alternative Fuels

Dec 2023 – Atlantic Aviation FBO begins offering SAF for business jets

Jan 2024 – Unleaded Aviation Gasoline Subsidy approved by City



Solar Canopies

Apr 2024 – Parking structure solar canopies project completed; generating 3.2M kilowatt-hours of zero emission electricity in its first year of operation



long beach
airport

where the going is easy[®]

