

Presented to:
South Coast Air Quality Management District

2023 MOU PROGRESS REPORT

Presented by:
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Environmental

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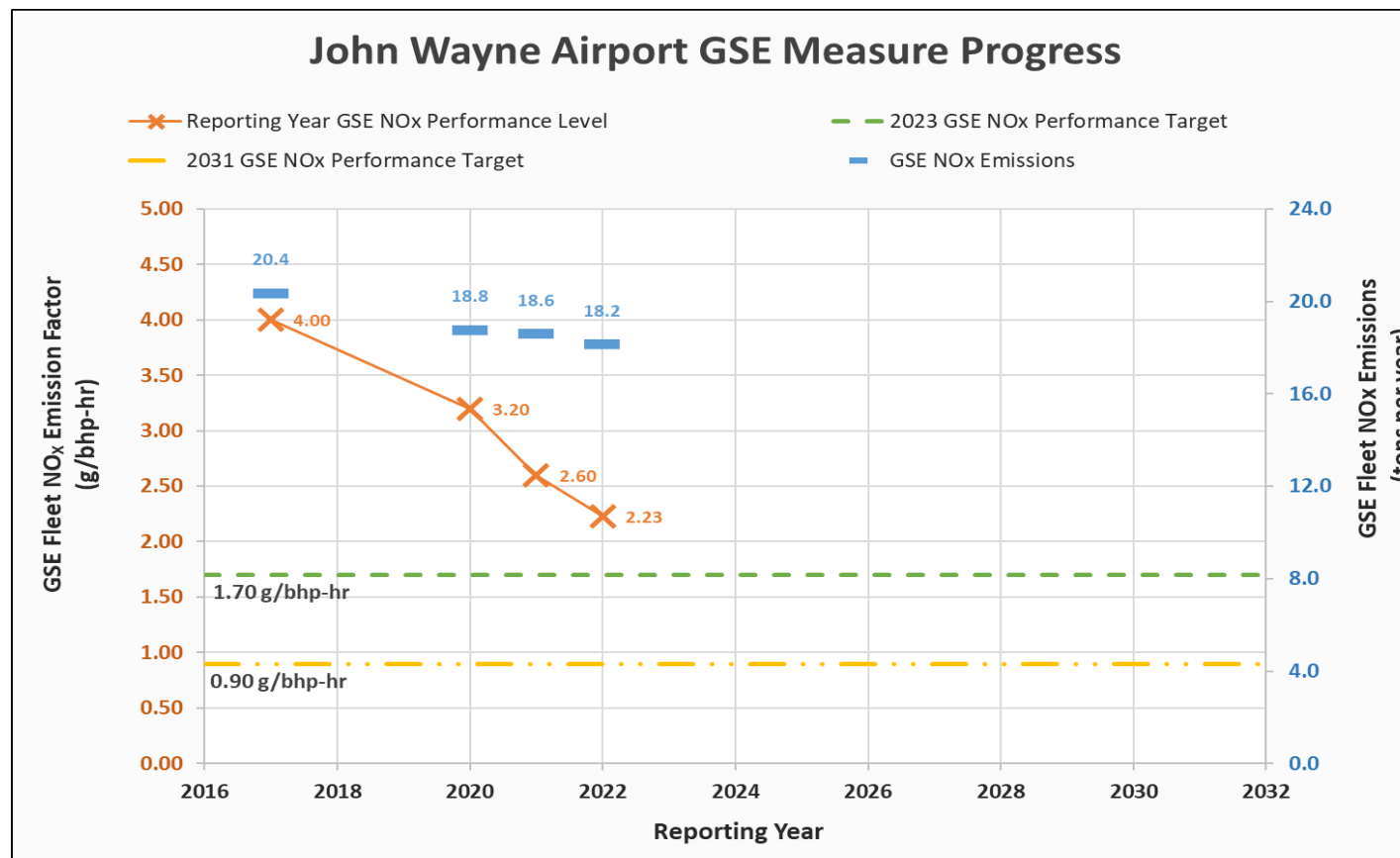
John Wayne Airport, Orange County Annual Report Requirements

MOU Airport Obligation:

- Report on an annual basis by June 1 for previous calendar year
- Provide information to AQMD as listed in the MOU
- Beginning in 2021, ending 2032
- Three MOU Measures:
 - 1 - Ground Support Equipment
 - 2 - Jet Fuel Delivery Trucks
 - 3 - Parking Shuttle Bus Electrification



MOU Measure 1 GSE Emissions Targets and Improvements



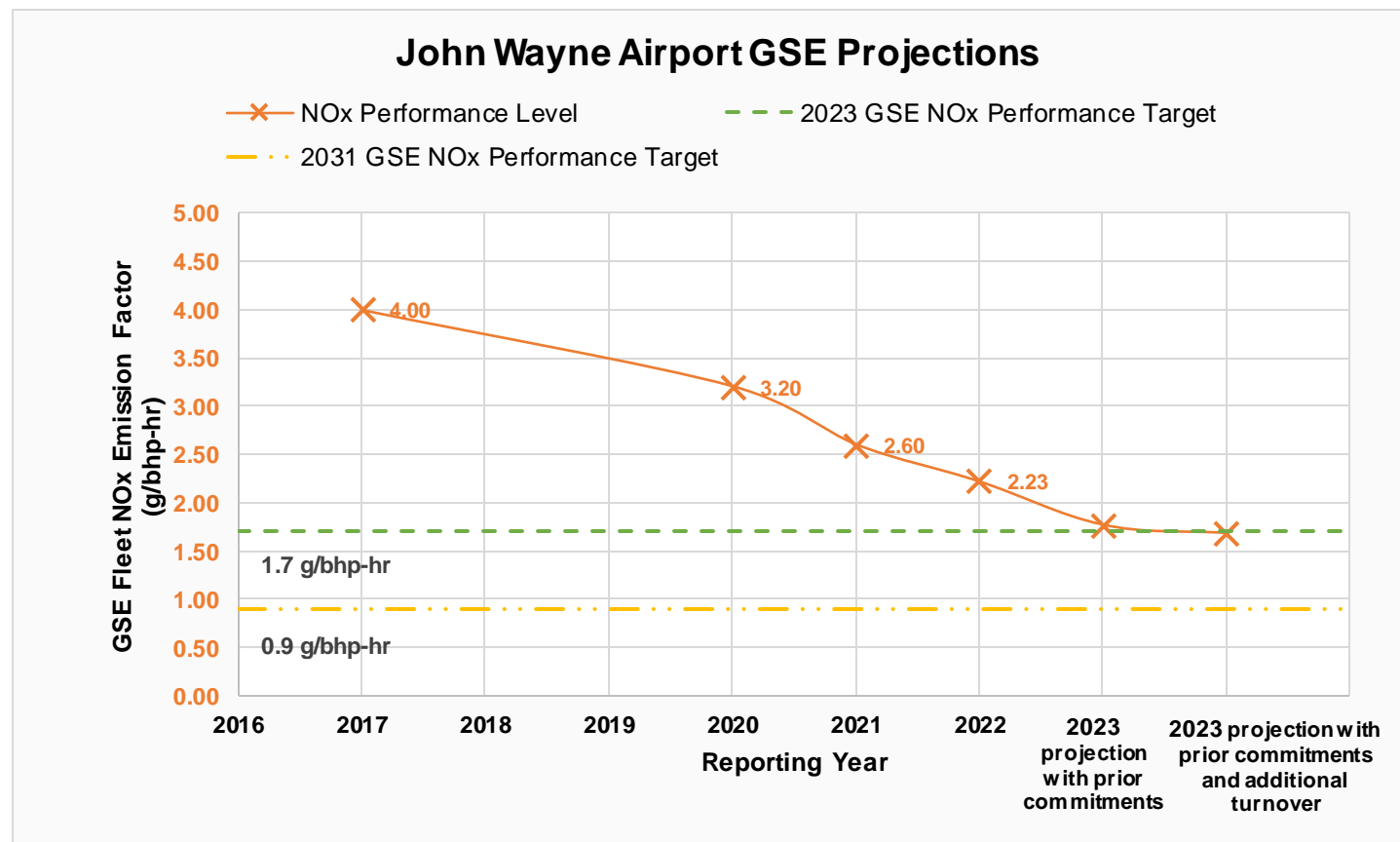
GSE Measure 1 Fleet Improvements

Type	Breakdown	2017	2020	2021	2022	2022 vs 2017
Diesel	Tier 0	11	4	3	4	-7
	Tier 1	21	20	20	11	-10
	Tier 2	4	5	5	4	0
	Tier 3	7	6	6	6	-1
	Tier 4 Interim	3	5	5	5	+2
	Tier 4 Final	11	19	37	36	+25
TOTAL		57	59	76	66	
Gasoline	MY <2001	12	8	10	7	-5
	MY 2001-2006	2	2	2	2	0
	MY 2007-2009	1	3	4	1	0
	MY >= 2010	16	28	29	35	+19
TOTAL		31	41	45	45	
Electric	TOTAL	96	99	133	147	+51 (+53%)
TOTAL ALL EQUIPMENT		184	199	254	258	



MOU Measure 1 GSE Targets and Performance Level Projections

- Calculated that the changing out Diesel GSE Model Year <2000 would allow JWA to meet the 2023 target.
 - Estimate turnover of 3-4 units beyond existing commitments is a pathway to meet the 2023 target.
 - Have not completed analysis of 2023 data to determine if target met.
- Ongoing communication with Operators regarding turnover of older GSE to new electric or at least Tier 4 diesel units.
- Newly upgraded electric panels at four gates facilitating installation of new chargers to aid in meeting the target.





MOU Measure 1 Airline GSE Commitments

- Lease Agreements:
 - MOU emission requirements have been incorporated into each airline lease.
 - Each lease has been executed.
 - Flow down provisions to GSE operators through airline lease.
- Airlines have developed GSE improvement plans and submitted to JWA.
- Many airlines have purchased fast charger systems and will install upon completion of associated JWA infrastructure upgrades.

CERTIFIED PASSANGER
AIRLINE LEASE
_____ Dated
Between
County of Orange
And

MOU Measure 1 Gate Electrification for GSE

Capital Improvement Program

- New chargers installed in areas on the commercial ramp where existing JWA electrical infrastructure can support needed capacity.
- Current electrical system capacity issues limit installation of new chargers in other areas of the commercial ramp.
- Upgrades are needed to existing JWA electrical infrastructure (both landside/airside) to meet airline requests. Upgrades to be completed in two phases.



MOU Measure 1

Phase I Electrification

- **Phase 1** – Electrical upgrades (Year 2023-2024):
 - Electrical infrastructure upgrades completed at four gates.
 - Gates upgraded were those that had enough electrical capability, and also have many of the highest emission GSE units (older Tiered units).
 - GSE operators are currently obtaining permits (Plan Check) to install DC Fast chargers at these four gates.
 - Allow retirement of older diesel GSE and operation of electric replacements.



MOU Measure 1

Gate Electrification Improvements for GSE

- **Phase 2** – Upgrades for remaining gates
 - Existing system-wide Airport electrical infrastructure > 35 years old
 - Gate electrical infrastructure upgrade design expected to be completed 4th Q 2024.
 - Upgrades have been assigned/funded as part of the airport capital Improvement program.
 - Construction scheduled for 2025/2026.
 - Will allow JWAGSE operators to meet 2031 target.



MOU Measure 2

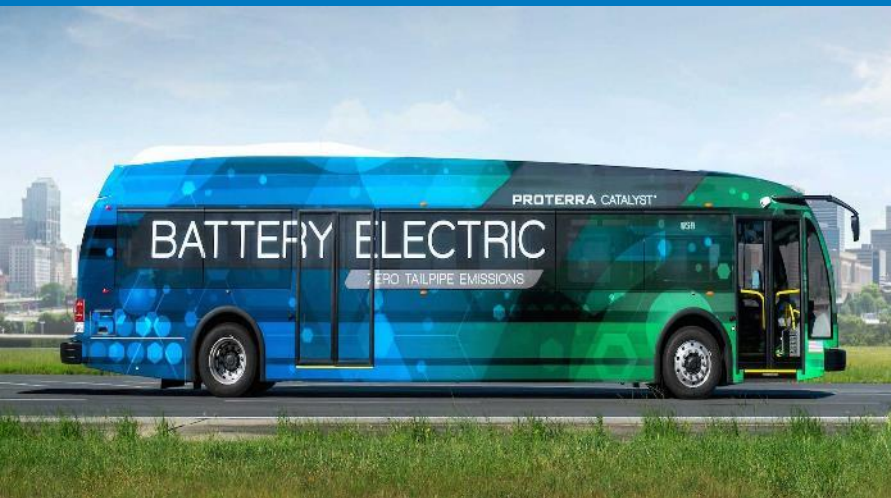
Eliminate/Reduce Jet Fuel Delivery by Tanker Trucks

- Jet fuel pipeline operational as of October 2019.
- The majority of jet fuel now delivered via pipeline.
- Some jet fuel delivery trucks may continue beyond January 1, 2023 due to:
 - existing contracts with a fixed-base operator (FBO) which serves a commercial service airline.
 - emergency fuel deliveries to airlines.
 - pipeline maintenance outages.
- JWA continues to work with the FBO to transition to pipeline deliveries as feasible.

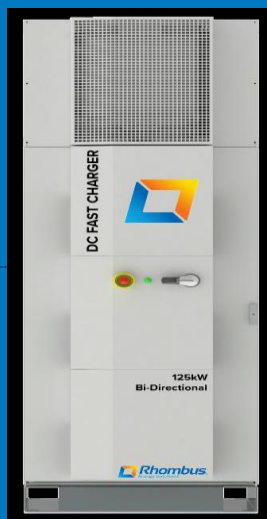


MOU Schedule 3

Electric Shuttle Buses



- MOU - Replace 50% of 10 existing CNG buses with electric buses by 2023
 - ✓ Five electric buses purchased and onsite prior to 2023
 - ✓ Five electric bus chargers purchased and onsite prior to 2023
 - ✓ Bus chargers pending installation
 - JWA design of charger system complete
 - Require new power feed from SCE
 - Awaiting SCE final power feed upgrades (supply chain delays)
 - Planning to install temporary charging with shuttle bus operator.



For more information:

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