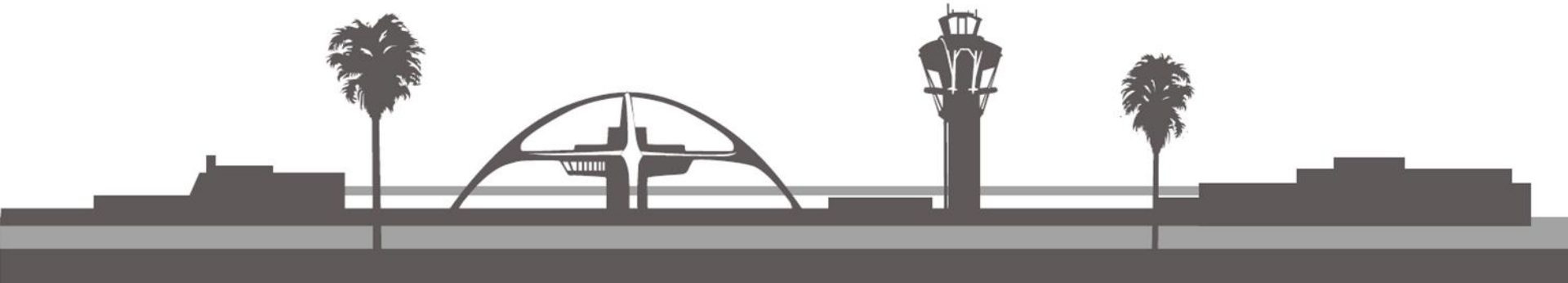
Los Angeles World Airports
Environmental and Land Use Planning

Los Angeles International Airport

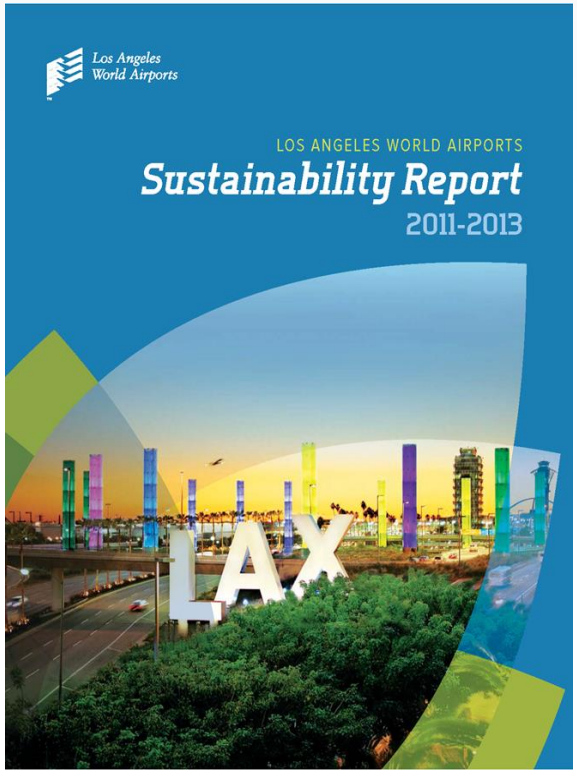
LAX – Ground Service Equipment Emissions Reduction Policy

2016 AQMP Control Strategy Symposium
Aircraft and Ground Support Equipment Panel
June 10, 2015



LAWA & Sustainability

- Sustainability Program
  - LAWA began its Sustainability Program in 2007
  - LAWA in midst of revamping its Sustainability Program
  - Updating goals and initiatives to better align with the City's goals
  - Continuing annual reporting and developing metrics-based approach

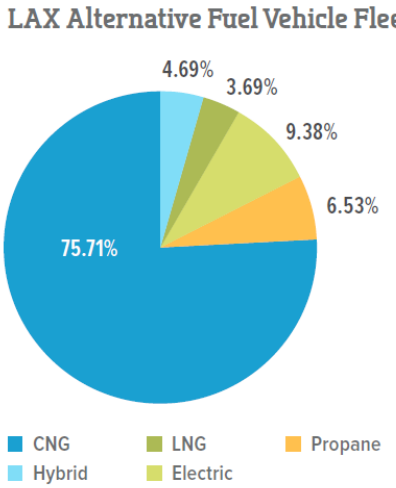


Current Air Quality Initiatives

Los Angeles World Airports

Improve Air Quality/Reduce Emissions

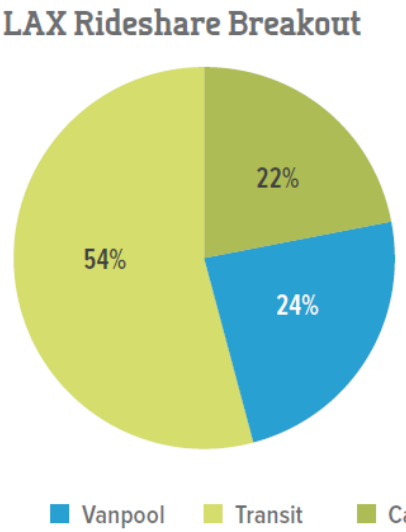
- **Alternative Fuel Programs**
  - Vehicle Fleet
  - Ground Service Equipment
  - EV Chargers
  - CNG stations



Current Air Quality Initiatives

Los Angeles World Airports

- **Trip Reduction Programs**
  - Rideshare/Vanpool
  - FlyAway
- **Clean Construction Equipment**
- **Ground Power to offset use of Auxiliary Power Units (APUs)**
  - Electrification of Remain Overnight (RON) gates, Cargo Parking Positions, Maintenance & Hangars
  - Provide Pre-conditioned air



LAX GSE Emissions Reduction Policy Goals

Los Angeles World Airports

- Reduce GSE emissions factor at LAX to 2.65 g/bhp-hr of HC + NOx by Dec. 31, 2021
  - Target originated with South Coast GSE MOU, 2002
  - Included in LAX Community Benefits Agreement, 2005

- LAWA will require Operators at LAX to meet statewide CARB target of 2.65 g/bhp-hr *at LAX*
  - No later than Dec. 31, 2021
  - Must maintain target
  - Must submit annual report on fleet mix and emissions

2013 GSE Inventory and Feasibility Study

Los Angeles World Airports

- 2013: LAWA Completed Comprehensive evaluation of existing GSE fleet at LAX
  - No other airport in the nation has such an exhaustive GSE inventory
  - Inventory provides update to 2006 LAX GSE inventory

GSE Type	Conventional	LNG/CNG	Electric	Total	% LNG/CNG	% Elec.
2013 GSE Inventory	1,281	444	999	2,724	16%	37%
2006 GSE Inventory	1,815	510	722	3,047	17%	24%

- Key Study Findings:
  - 37% of GSE fleet is zero-emission technology (ZEV)
  - 16% is low-emission technology (CNG or LNG)
  - Aggregate HC + NOx emission rate is 5.17 g/bhp-hr
  - Ability to achieve 2.65 g/bhp-hr is feasible

LAX GSE Emissions Reduction Policy

Los Angeles World Airports

- Requires GSE Operators to maintain a maximum of 2.65 g/bhp-hr of HC + NOx by December 31, 2021
- Interim assessment on March 31, 2019
  - If operator exceeds composite emission factor of 3.0 g/bhp-hr, operator must provide action plan for achieving 2.65 target by 2021
- Requires GSE Operators to submit data on an annual basis
- Requires GSE Operators not to exceed 2.65 target after 2021
- Provides remedies to LAWA if GSE Operator fails to meet target, including potential loss of operating license at LAX
- Provides incentives for further emissions reduction
  - Particularly as related to eGSE and charging infrastructure but will not mandate eGSE
- Recognizes LAWA's responsibility to provide necessary infrastructure to support conversion to electric GSE
- Board of Airport Commissioners adopted Policy on April 16, 2015

GSE Next Steps

- Now – July 2015: LAWA staff working to craft implementation plan for GSE Policy, including:
  - Amendments to LAX Rules & Regulations
  - Emissions Calculator
  - Data collection & Reporting procedures
  - Ramp policies for common use terminals /gates

- July 1, 2015 – Policy effective date

- July 1, 2015 – LAWA to hire consultant to assist with monitoring, analysis, and implementation of GSE program

Industry and Regulatory Opportunities for Future Success

Los Angeles World Airports

- Develop low-emission equivalents for high-horsepower equipment
- Provide monetary incentives to replace newer but dirtier equipment
- Target incentives to assist smaller operators so they can compete for airport business
- Cultivate public and private relationships to develop similar programs