

Long Beach Airport Sustainability Air Quality Improvement Plan (AQIP)



long beach
airport

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Our Direction

Long Beach Airport will develop a plan to lead the nation on sustainability for airports and work with the airlines serving LGB and other partners to become an incubator of clean tech in aviation, with goals of becoming a carbon neutral facility.

Mayor Robert Garcia

August 14, 2018



Aviation Presents an Excellent Opportunity



Plan Will Evaluate:

- **Air Emissions**
- **Energy**
- **Water Conservation**
- **Water Quality**
- **Solid Waste and Recycling**
- **Carbon Accreditation**

EONS Approach to Sustainability



AQIP Components

1. 2017 and 2023 Business-as-Usual (BAU) Inventory
2. Measures and Initiatives / Emission Benefits
 - GSE Policy
 - Clean Construction Policy
 - Airport Clean Vehicle Fleet Policy
 - EV Charger and Electrification Program
 - LEED Policy
 - Renewable Energy Initiatives
 - TNC Initiative
3. Approval Process

Baseline Inventories

LGB 2017 AQIP Emissions Inventory		
Airport Emissions Source	Pollutant Emissions, tons per year	
	VOC	NOx
Ground Support Equipment Total	2.55	16.78
Traffic and Parking		
Regional Traffic	50.42	49.55
On-Airport Roadways & Parking Lots	1.99	2.25
Paved Road Dust Total	--	--
Traffic and Parking Total	52.41	51.8
Construction Total	0.36	2.91
GRAND TOTAL	55.32	71.49

LGB 2023 AQIP BAU Emissions Inventory		
Airport Emissions Source	Pollutant Emissions, tons per year	
	VOC	NOx
Ground Support Equipment Total	2.04	13.23
Traffic and Parking		
Regional Traffic	31.14	23.16
On-Airport Roadways & Parking Lots	1.23	1.04
Paved Road Dust Total	--	--
Traffic and Parking Total	32.37	24.2
Construction Total	6.17	8.59
GRAND TOTAL	43.27	59.9

Ground Support Equipment

Baseline Year end 2017: LGB GSE Fleet-Wide Average Factor of 1.5 g/bhp-hr

- Policy will require GSE Operators to reduce NO_x+HC emissions to a fleet-wide average
- Enforcement: Lease and license requirements
- Airport to monitor compliance, require annual data collection, develop reporting procedures, and calculate emissions

Target Goals

- 2023: LGB GSE Fleet-Wide Average Factor of 0.93 g/bhp-hr
- 2031: LGB GSE Fleet-Wide Average Factor of 0.44 g/bhp-hr



Clean Construction Initiative

- LGB AIP Projects would require contractors to use the cleanest construction equipment on the market, and recycle construction and demolition debris.
- LGB's Clean Construction Program seeks ensure contractors follow sustainable construction practices such as using low-emission equipment, recycling construction and demolition waste, and minimizing non-essential trips through efficient schedule coordination.

Clean Construction Initiative

- On-road medium-duty and larger diesel-powered trucks with a gross vehicle weight rating of at least 19,000 pounds shall, at a minimum, comply with USEPA 2010 on-road emissions heavy-duty diesel engine emissions standards. Contractor requirements to utilize such on-road haul trucks or the next cleanest vehicle.
- All self-propelled off-road diesel-powered construction equipment 25 horsepower or greater shall meet, at a minimum, USEPA/CARB Tier 4 off-road emissions standards. Contractor requirements to utilize Tier 4 (final) equipment or next cleanest equipment available.
- The on-road haul truck and off-road construction equipment requirements shall apply unless certain circumstances exist and the Contractor provides a written finding consistent with project contract requirements.

Target Goal: 100% compliance for Long Beach Airport CIP construction projects.

Airport Vehicle Fleet

Policy Under Development: Beginning Fall 2019, the Airport is exploring if it can obtain commercially available passenger car, light-duty truck, or medium-duty vehicles that are certified at ultra-low-emission standards (SULEV) or cleaner when adding or replacing a vehicle in its fleet. Police and fire vehicles will not be subject to the policy. The intent of this policy is to secure emission reductions in excess of SCAQMD Rule 1191.

Target Goal: Convert the Airport-owned fleet (excluding police and fire vehicles) to vehicles that are certified at super-ultra-low-emission standards (SULEV) or cleaner by December, 2023.

Electric Vehicle Charging

Baseline Year End 2017: Six (6) EV Charging Stations for 3,447 Public Parking Spaces ($\approx 0.2\%$ of spaces)

Action Plan Under Development:

Conduct pilot study to identify installation costs of EV charging stations.

Develop Electric Vehicle Supply Equipment (EVSE) master plan including a building electrical capacity assessment and identify roles and responsibilities related to purchasing, installing, maintaining and replacing EV charging stations.

Explore grant funding to support EV infrastructure.

Collaborate with external stakeholders in a regional response to EV infrastructure challenges.

Target Goals: provide EV charging stations in public parking lots – potentially up to 2% of spaces by 2023 (a 10-fold increase in EV charging spaces from baseline), expand as necessary to accommodate demand in 2031.

LEED Design

LGB is committed to advancing sustainable design for its redevelopment program.

Design Initiatives:

- LEED Silver Policy will mandate energy efficient design, fundamental commissioning of building energy systems and optimization of overall energy performance.
- LEED Silver will be required as part of sustainable design construction scoring criteria in future procurement process
- LEED Sustainability Review Committee will be developed upon RFP Award to support LEED policy implementation and to monitor enforcement

Renewable Energy

Action Plan:

To provide additional clean energy to Long Beach's power grid, the City and Airport are exploring a solar feasibility study for the campus to assess the viability of installing additional photovoltaic solar.

TNC Initiative

- Rematching TNCs (Uber, Lyft...etc) that departing passengers use to arrive at the Airport with arriving passengers looking to leave the Airport in a TNC
- Unmatched TNC trips represent 3.5 tpy NO_x in 2023, and represent 2.2 tpy NO_x 2031

Thank You!



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