

On the Path Toward Zero-Emission LASAN Solid Resources Collection Fleet



Prepared To ECCEJR Committee

By

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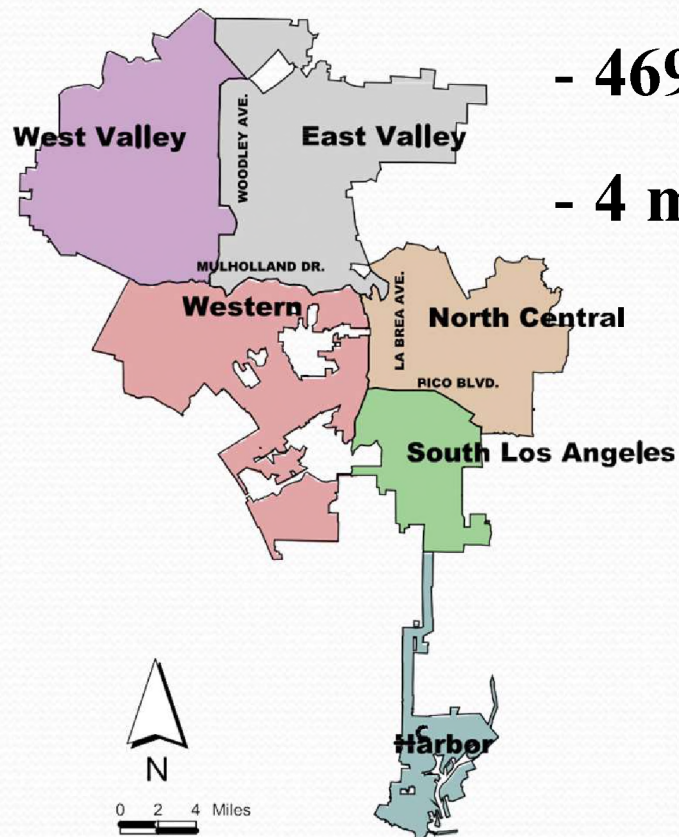
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LA Sanitation and the Environment





City of Los Angeles:

- Largest city in CA; second largest in US
- 469 square miles
- 4 million residents



LA Sanitation's Residential Curbside Collection



Recyclables Bin
850 tons/day



Yard Waste Bin
1,600 tons/day



Manure Bin
10 tons/day



Refuse Bin
3,600 tons/day

LASAN Journey To Clean, low-carbon fuel for solid resources collection vehicles



- **June 2000: Los Angeles City Council adopted a Clean Fuel Policy.**
- **Late 2000: LA Sanitation launched a Clean Fuel Program, with the deployment of 10 Dual-Fuel solid resources collection vehicles.**
- **LASAN Expands the fleet to 240**
- **2003 LASAN constructs the largest LNG & CNG fueling facility in the Country with capacity of 45,000 gallons capacity .**
- **Early 2017: LA Sanitation issued Purchase Order for 150 CNG / LNG collection vehicles with Near –Zero NG engines.**
- **2017: LA Sanitation began testing of electric solid waste collection vehicles.**
- **2018- 2019 : LASAN in coordination with GSD issues Purchase requests for electric Trucks**



Clean Fuel Program Infrastructure



**East Valley LNG/LCNG Facility
(2003)**



**West Valley LNG/LCNG Facility
(2004)**



**Harbor LNG Facility
(2005)**



**South L.A. LNG/LCNG Facility
(2006)**



**North Central LNG/LCNG Facility
(2010)**



**West Los Angeles CNG Facility
(2014)**

Total fuel storage capacity of these fueling facilities is 216,000 gallons of liquefied natural gas

...Since 2001

- ❑ Over 45 million gallons of diesel fuel were avoided
- ❑ Reduced emission over 17 tons of Particulate Matter
- ❑ Over 1,100 tons Reduction of Oxides of Nitrogen (Nox)
- ❑ Reduction of Greenhouse Gasses of over 94,000 (MTCO₂E)



LASAN Evaluation Criteria As Provider of Non Deferrable Services

- **Performance:** Trucks operates easily in all Terrains including the hilly areas of the City. Drivers Feedback are crucial on noise , feel and handling
- **Range:** Achieve same as Clean Fuel with proper filling
- **Maintenance:** Type and extent of maintenance requirements . Most repairs during initial phase are handled thru warranty
- **Payload:** Determine legal payload
- **Reliability :** Vehicle reliability
- **Fueling :** Ensure Reliable Electric Fueling Infrastructure, and possible backup electricity generation n Place, for six Collection Division facilities. Three Livability Division facilities, multiple operational facilities. **(Earthquakes!!)**

LASAN Fleet Electrification Plan

- Ongoing testing of electric vehicles.
- In Partnership with SCAQMD two Meritor Peterbilt electric trucks ASL are destined for City of LA by March 2023 for testing- Over 250 Engineering changes since discussions began.
- Mack Rear Loader Truck tested.
- Trucks On Tap to be tested Battle Motors – Rear Loader and Side Loader, Mack Side Loader , XL, Lion, , etc



LASAN Future Vehicle Purchasing

- **In addition to the two Meritor Peterbilt trucks Purchase 30 electric trucks of different types for various testing (5 ASL, 12 RL, 6 DAC, 7Stkbd)**
- **Coordination with GSD to purchase 80 electric vehicles.**
- **Replace remaining old diesel trucks with Near-Zero emission CNG/LNG vehicles fueled with Renewable Natural Gas.**
- **Upon testing completion purchase upgraded Electric trucks**



Challenges

- **Ensuring vehicles meet 1 for 1 replacement**
- **20+ facilities (Solids, Clean Water and LSD) need electrical installs to accommodate the fleet needs**
- **Power demand with 7 facilities having 100+ vehicles (megawatts)**
- **Infrastructure purchasing and supply chain**
- **Master plan and yard conversion multi year**



Thank you !!

