

Energy Consumption & Emissions Inventories

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Port of
LONG BEACH
The Green Port

AIR EMISSIONS INVENTORY - 2015



PORT OF LOS ANGELES INVENTORY OF AIR EMISSIONS - 2015



July 2016

Prepared by:
STARCREST CONSULTING GROUP, LLC

Technical Report
APP# 151021-520 A
July 2016

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STARCREST CONSULTING GROUP, LLC

2015 SPBP EI Overview

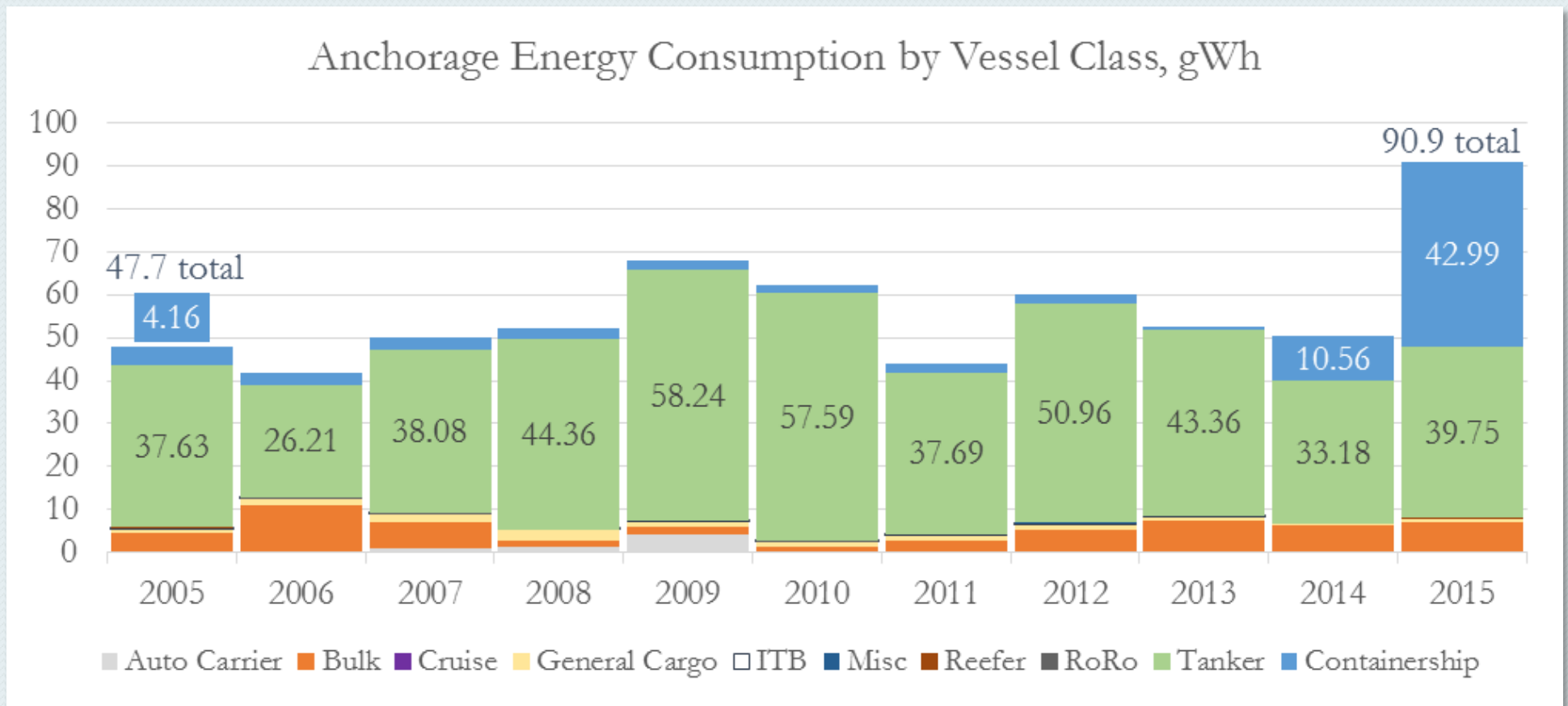
- 11th Annual EI since 2005
- Developed to track effectiveness of Clean Air Action Plan measures & capture operational efficiency improvements
- Most data intensive inventories conducted for any port area
- Generates significant local data that is used by others
- Validated database algorithms
 - Methods & improvements coordinated with CARB, EPA, & SCAQMD
 - Inventory improvement projects
 - Collected data & interviews related to operational parameters
- Detailed energy consumption estimates
 - Better understand context around changes in emissions
 - Identify 'low hanging fruit' emissions reduction opportunities

2015 SPBP EI Highlights

- Identify impacts from congestion (2014 & 2015)
- Evaluate changes in CHE fleet

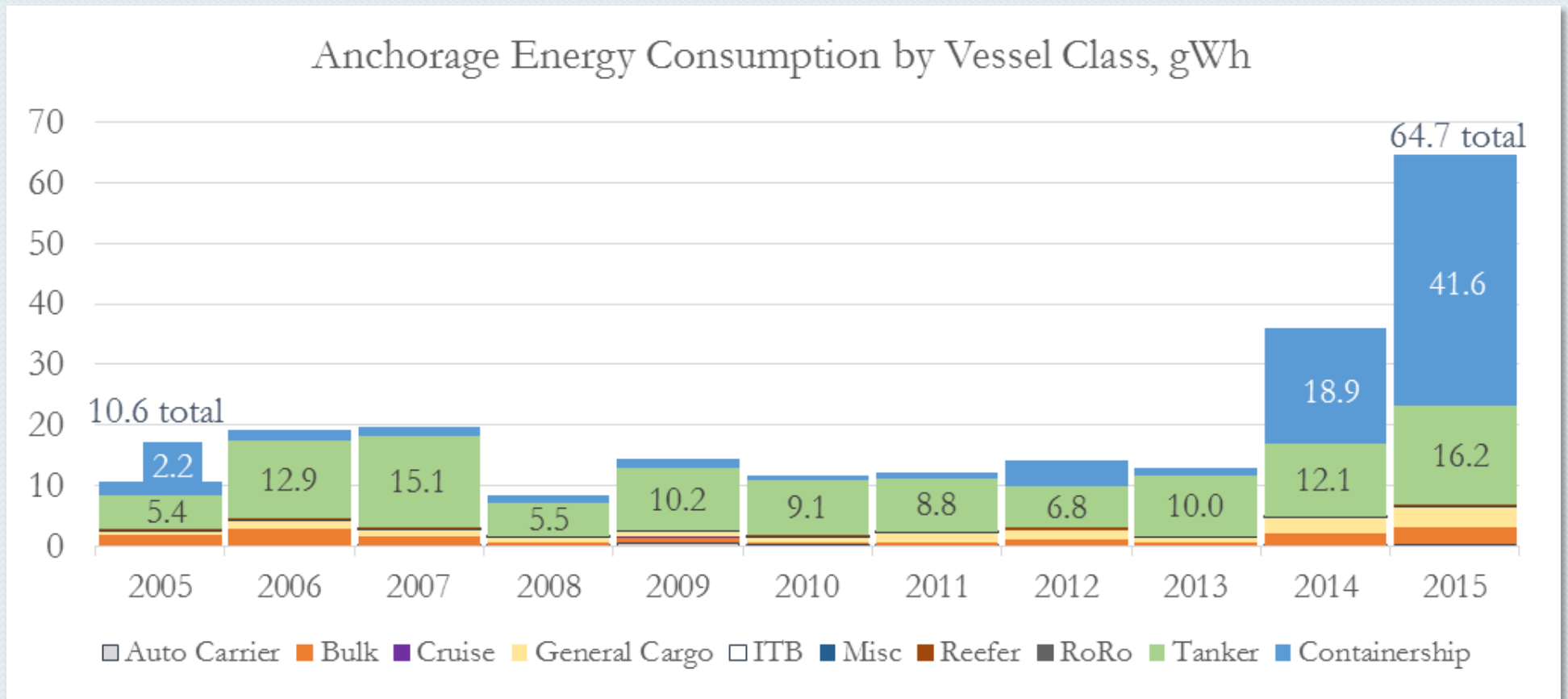
2015 SPBP EI Highlights

2005-2015 POLB Anchorage Activity



2015 SPBP EI Highlights

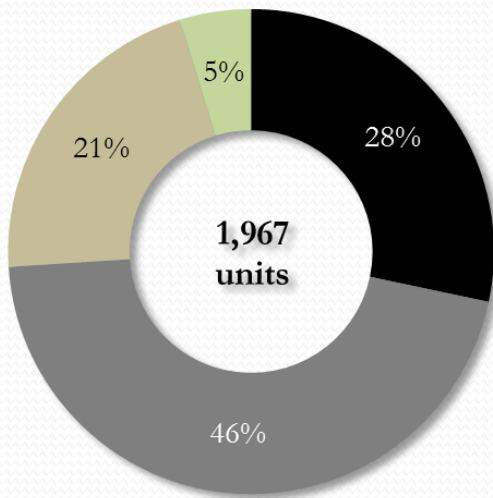
2005-2015 POLA Anchorage



2015 SPBP EI Highlights

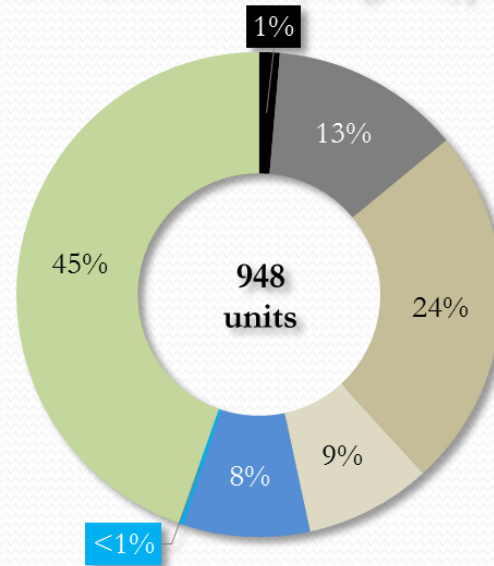
POLB Diesel-Fueled CHE Counts

2005 Diesel CHE by Engine Type



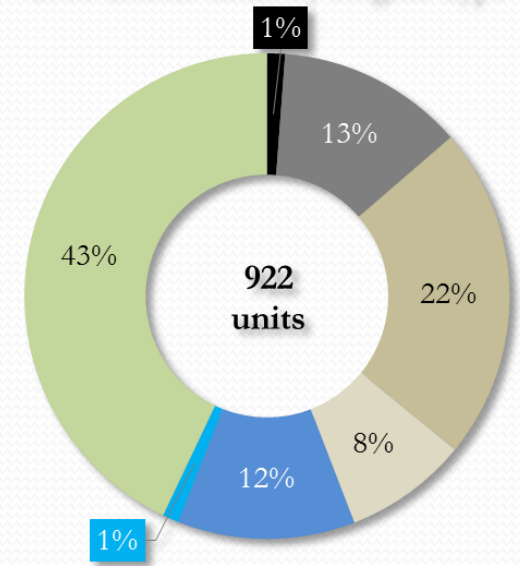
■ T0 ■ T1 ■ T2 ■ On Road

2014 Diesel CHE by Engine Type



■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 Diesel CHE by Engine Type

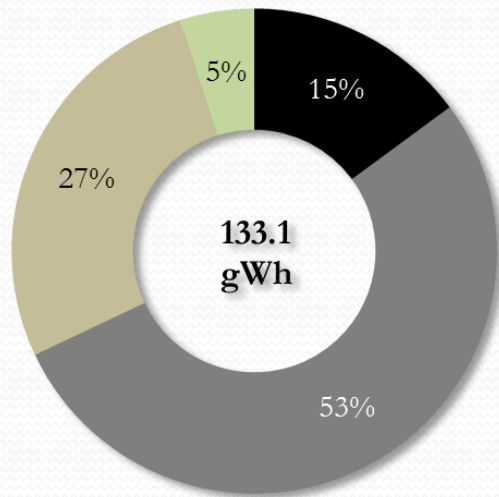


■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 SPBP EI Highlights

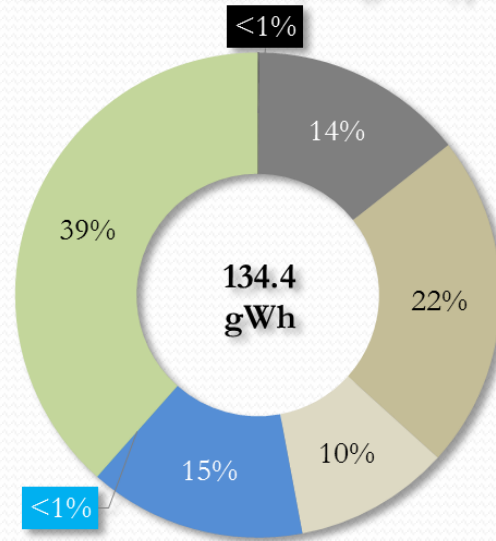
POLB Diesel-Fueled CHE Activity

2005 Diesel CHE by Engine Type



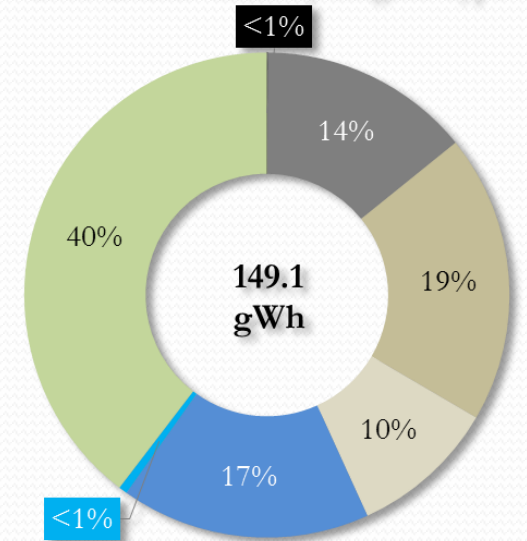
■ T0 ■ T1 ■ T2 ■ On Road

2014 Diesel CHE by Engine Type



■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 Diesel CHE by Engine Type

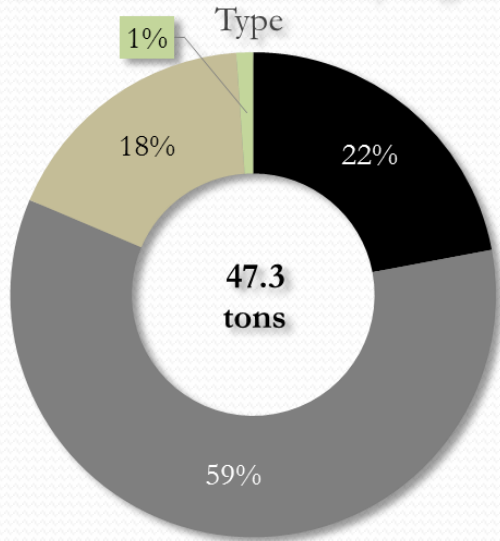


■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 SPBP EI Highlights

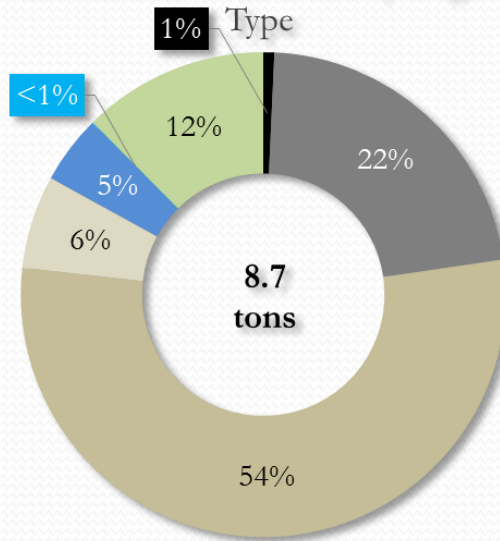
POLB Diesel-Fueled CHE DPM

2005 Diesel CHE DPM by Engine Type



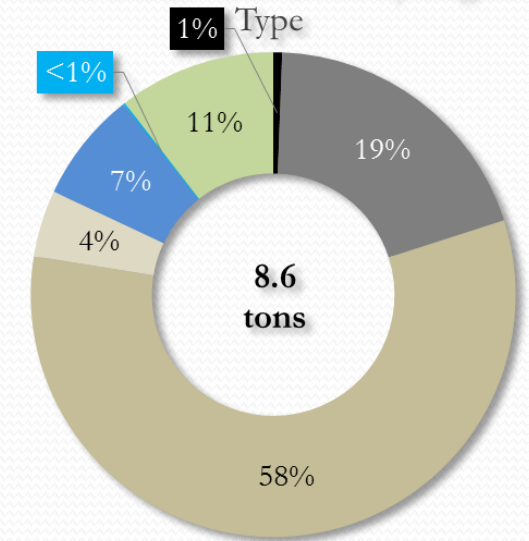
■ T0 ■ T1 ■ T2 ■ On Road

2014 Diesel CHE DPM by Engine Type



■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 Diesel CHE DPM by Engine Type

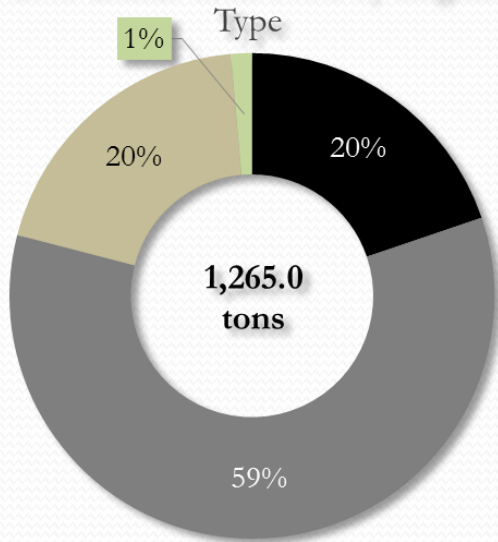


■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 SPBP EI Highlights

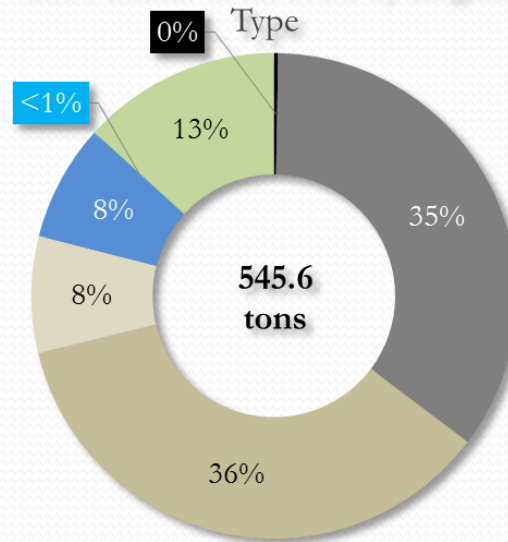
POLB Diesel-Fueled CHE NOx

2005 Diesel CHE NOx by Engine Type



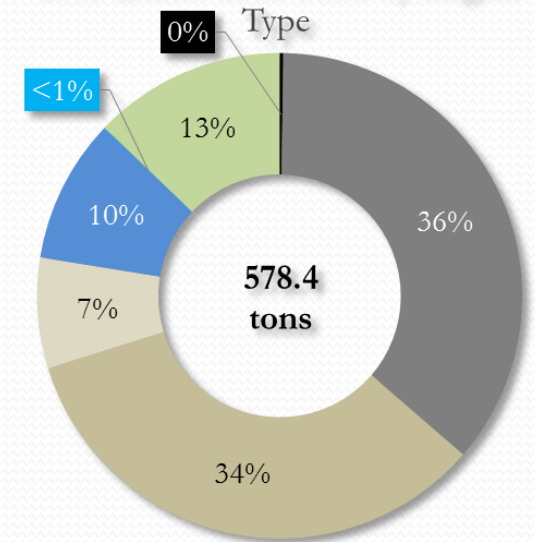
■ T0 ■ T1 ■ T2 ■ On Road

2014 Diesel CHE NOx by Engine Type



■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 Diesel CHE NOx by Engine Type

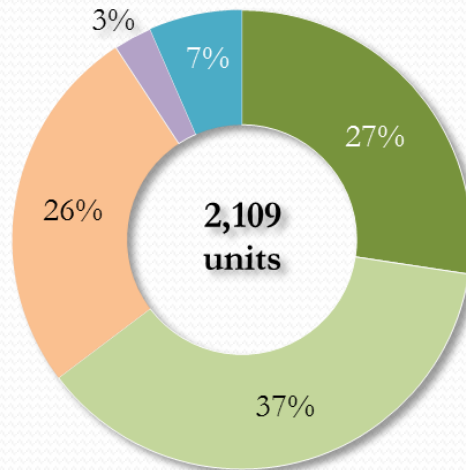


■ T0 ■ T1 ■ T2 ■ T3 ■ T4i ■ T4f ■ On Road

2015 SPBP EI Highlights

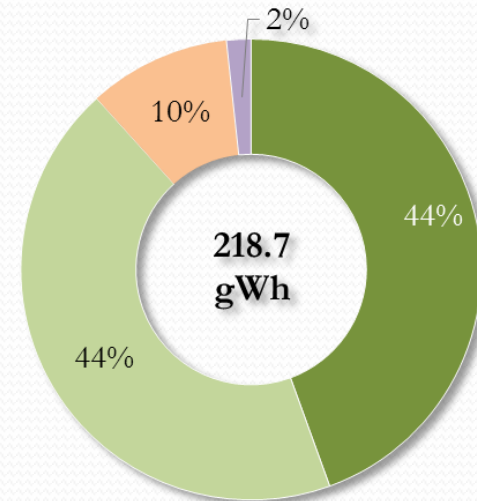
2015 POLA CHE

2015 CHE by Engine Type



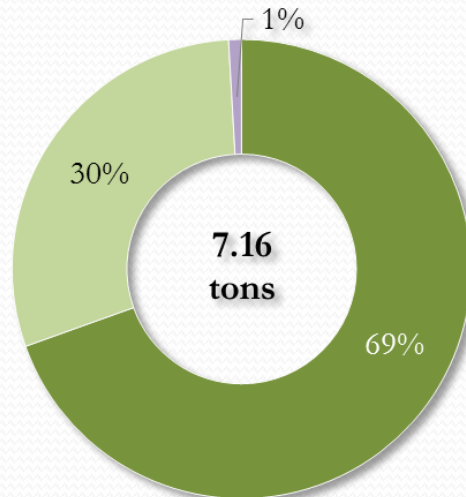
■ Nonroad Diesel ■ Onroad Diesel ■ Propane
■ Other ■ Electric

2015 CHE gWh by Engine Type



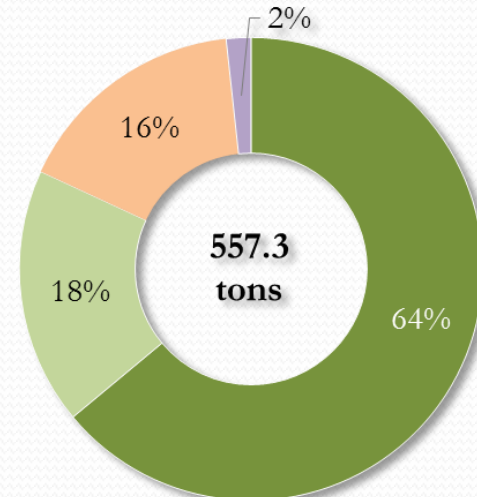
■ Nonroad Diesel ■ Onroad Diesel ■ Propane ■ Other

2015 CHE DPM by Engine Type



■ Nonroad Diesel ■ Onroad Diesel ■ Other

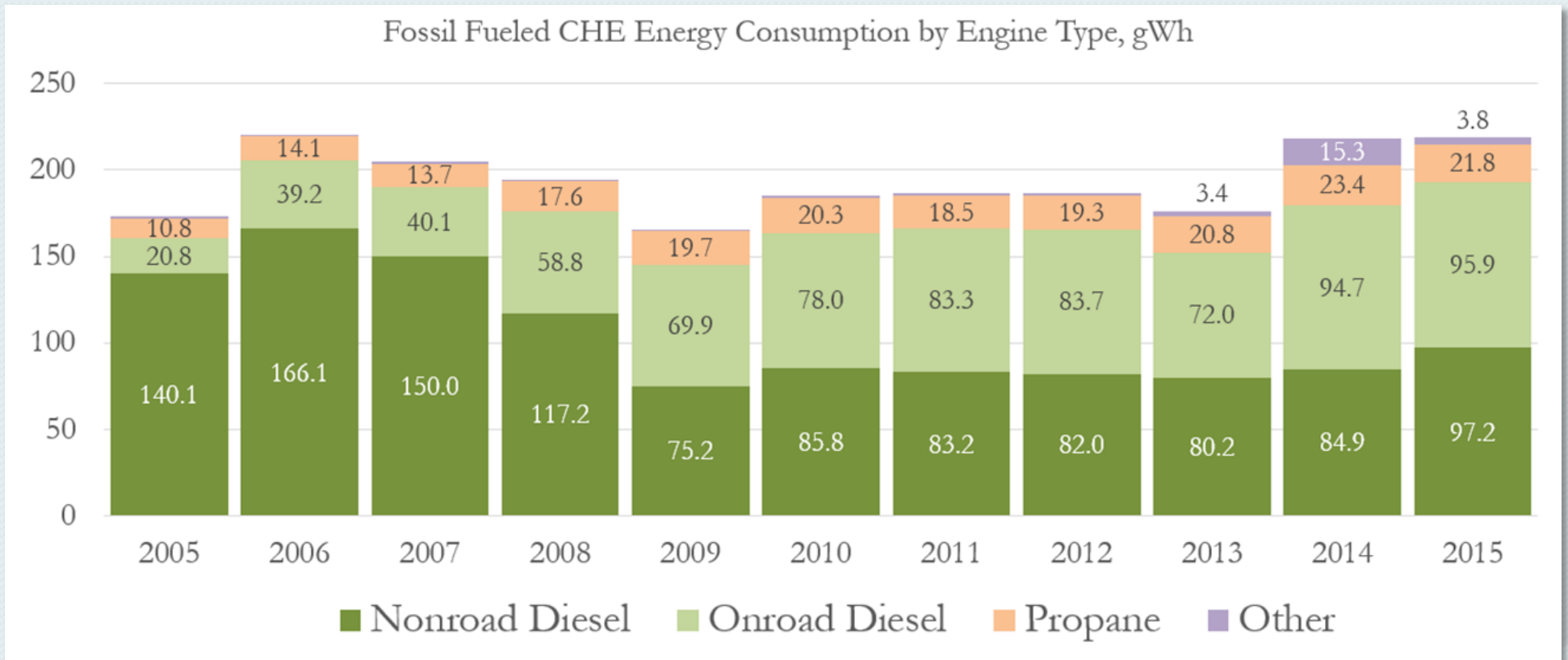
2015 CHE NOx by Engine Type



■ Nonroad Diesel ■ Onroad Diesel ■ Propane ■ Other

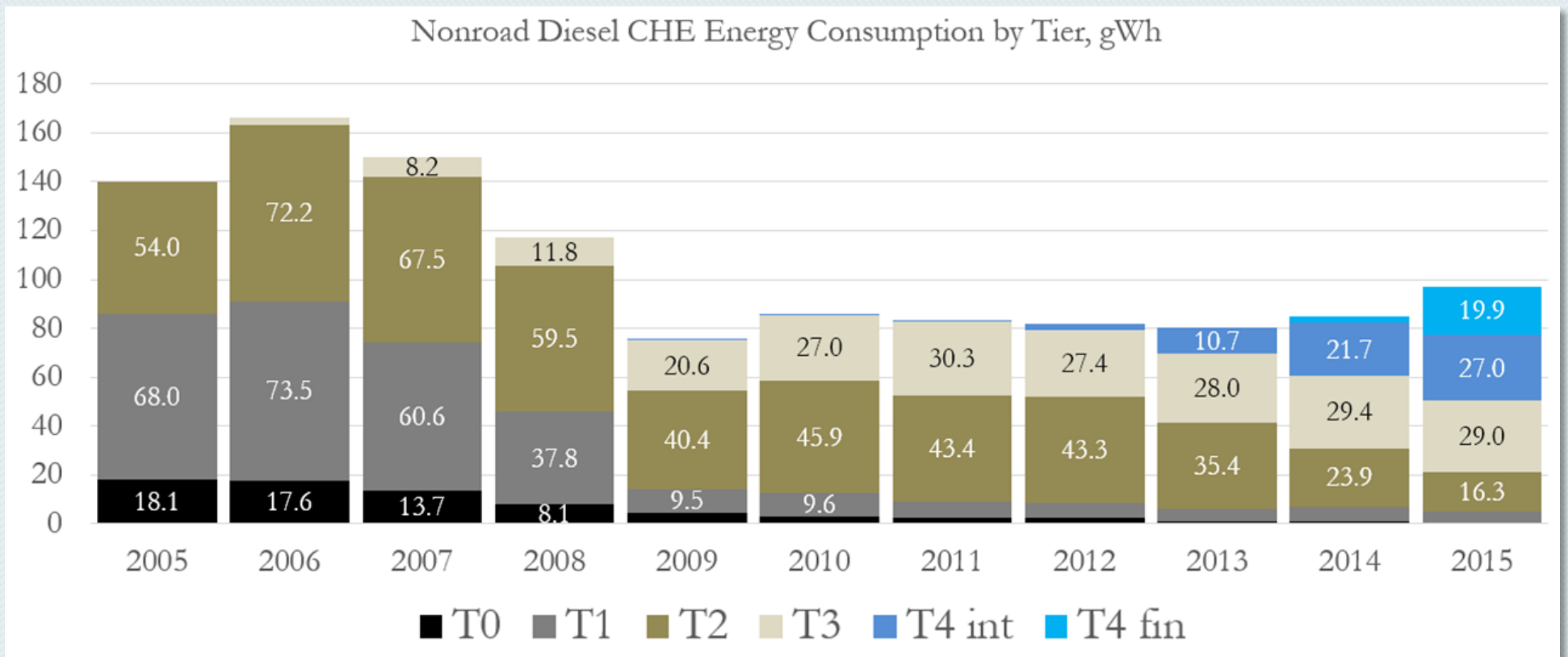
2015 SPBP EI Highlights

2005-2015 POLA CHE Activity



2015 SPBP EI Highlights

2005-2015 POLA CHE Nonroad Diesel Activity



2015 SPBP EI Highlights

2005-2015 POLA Tenant Operations Activities

