

Warehouse Distribution Centers Facility-Based Mobile Source Measures



4th Working Group Meeting
January 17, 2018

FBMSM

Agenda

- Background
- Emissions Inventory for Warehouse Distribution Centers
- Emission Reduction Opportunities
- Emission Reduction Strategies
- Next Steps

Background – Previous FBMSM Activities

2016 AQMP Approved

- Calls for year-long process to identify potential facility-based measures

1st FBMSM Working Group Meeting

- FBMSM Framework and SIP Integrity Elements introduced

3rd FBMSM Working Group Meeting

- Discuss potential Emission reduction opportunities

Mar.

May

Jun.

Jul.

Oct.

Jan.

2017

Introductory FBMSM Working Group Meeting

- Focused on process for working group

2nd FBMSM Working Group Meeting

- Discussed key requirements for obtaining SIP credit

2018

4th FBMSM Working Group Meeting

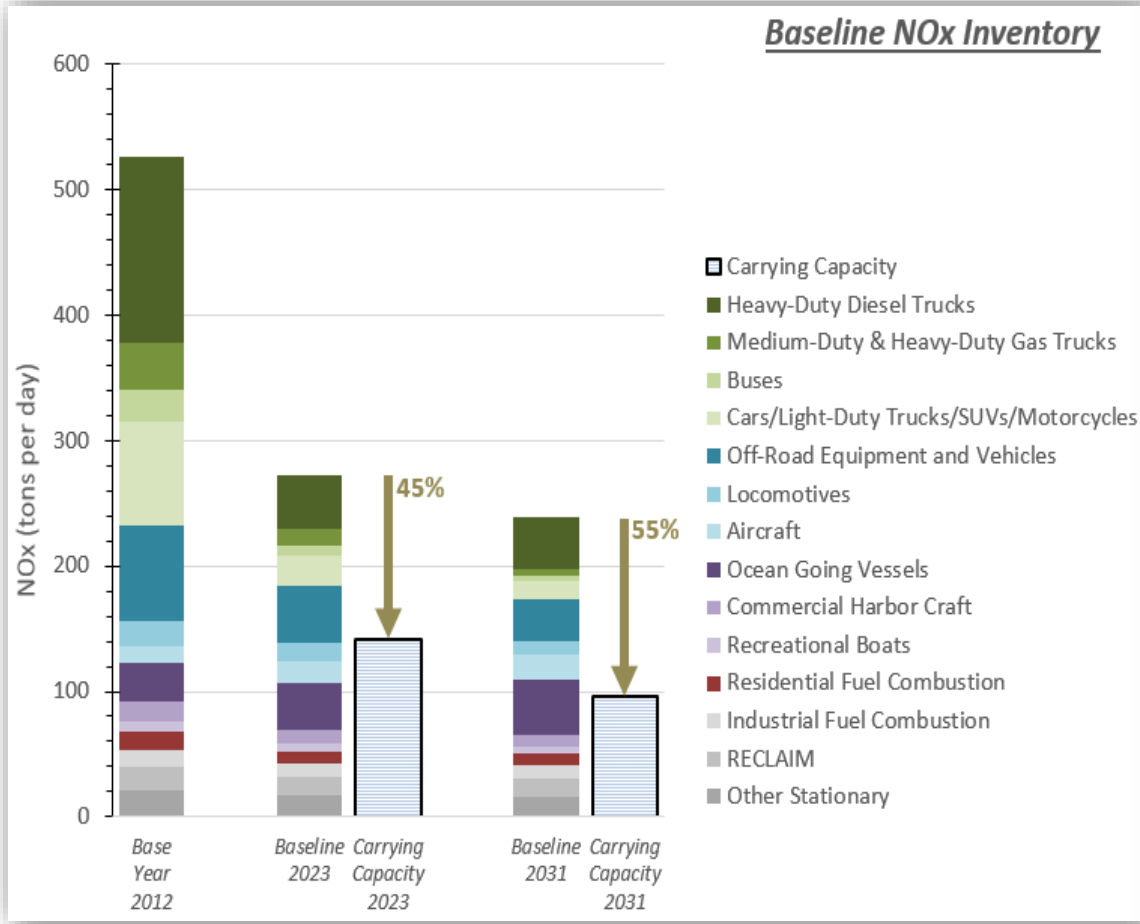
- Discuss emission reduction strategies

Background

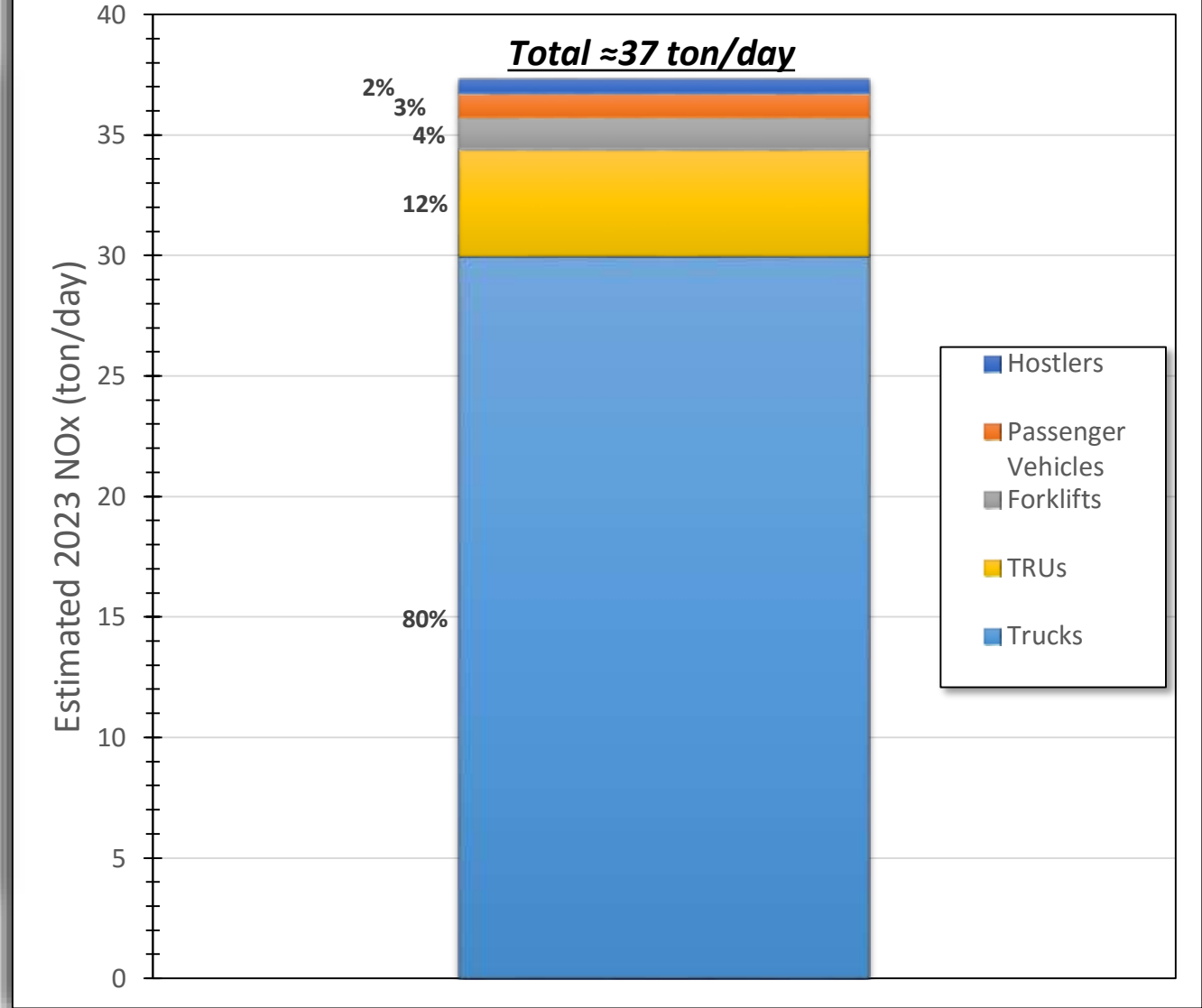
Key mobile source emissions associated with warehouses

- On-road Mobile Sources
 - Trucks and passenger vehicles
- Off-road Construction Equipment
 - Transportation refrigeration units (TRUs), forklifts and yard hostlers

Total South Coast SIP NOx Inventory



Estimated 2023 NOx Emissions Associated with Warehouses



Opportunities for Emission Reductions

- Promising emission reduction strategies are already included in some projects, for example, air quality mitigation funds and clean equipment requirements
- Other emission reduction strategies include state-wide goals set-forth by the Sustainable Freight Action Plan and 2017 CAAP
 - Prospective SIP credit for these strategies are difficult to assess
- Additional strategies are needed to meet attainment goals
- Proposed measures on following slides take into account previous work in FBMSM working groups and SCAQMD staff experience with reviewing CEQA documents for new warehouse projects and other logistics projects

Key Considerations for Emission Reduction Mechanisms



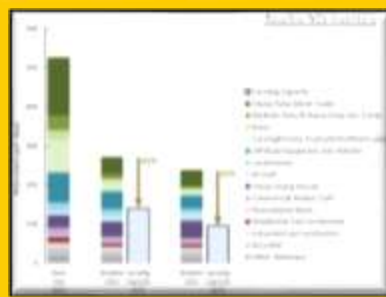
Regulation

- Must be feasible based on cost, availability of technology, etc.
- Should avoid significant administrative or cost burdens
- Should not hinder available incentives



MOU

- Includes mutually agreeable emission reduction target
- Procedure to make-up shortfalls required in case target not met to be SIP creditable



Inventory Adjustment

- Requires demonstrated history of behavior (e.g., VMT reductions)
- Records of behavior must be available to be SIP creditable



Facilitating Measures

- Infrastructure projects (e.g., EV charging, TRU plug-in, etc.)
- Generally not SIP creditable but critical to facilitate emission reductions



Incentives

- Availability of technology
- Funding commitment
- Must demonstrate that incentivized activity meets 'integrity elements' to be SIP creditable

Potential Emission Reduction Strategies-Off-road CHE

Already Proposed Emission Reduction Strategies

- Regulation ✓
- Incentives ✓
- Facilitating Measures ✓
- MOU
- Inventory Adjustment

Regulation

- State Mobile Source Strategy
 - Zero-Emission Off-Road Forklift Regulation Phase 1
- Transport Refrigeration Units Used for Cold Storage
- Low-Emission Diesel Requirement

Incentives

- Incentive programs such as SOON, Prop. 1B, etc.

Facilitating Measure

- CARB Board Resolution for port/railyard CHE – up to 100% by 2030

Potential Additional Emission Reduction Strategies

- Regulation ✓
- Incentives ✓
- Facilitating Measures ✓
- MOU
- Inventory Adjustment

Regulation

- Potential for infrastructure and onsite forklift and hostler ZE/NZE requirements

Incentives

- Transition CHE to cleanest technology available

Facilitating Measure

- Potential for solar powered battery storage to replace e-gens and to provide at least all onsite power needs

Potential Emission Reduction Strategies-Trucks

Already Proposed Emission Reduction Strategies

- Regulation ✓
- Incentives ✓
- Facilitating Measures
- MOU
- Inventory Adjustment

Regulation

- State Mobile Source Strategy
 - Low NOx engine standard
 - MD/HD GHG phase 2
 - Last mile delivery

Incentives

- Incentive programs such as Carl Moyer, Prop 1B, etc.

Potential Additional Emission Reduction Strategies

- Regulation ✓
- Incentives ✓
- Facilitating Measures ✓
- MOU
- Inventory Adjustment

Regulation

- Potential new Fleet Certification + ISR (next slide)
- Potential infrastructure requirement for TRUs at refrigerated warehouses

Incentives

- Potential new CEQA air quality fund for projects to contribute to for regional NOx mitigation

Facilitating Measure

- Work with CEC/PUC and utilities on infrastructure improvements for ZE/NZE trucks
- Develop new guidance for new and existing warehouses for measures like siting, idling avoidance, efficiency measures to reduce VMT, etc.
- Develop Green Delivery Options:
 - Examples: one day/week delivery option, opt-in clean fleet fee, etc.

ISR Concept – Two Components

Fleet Component

- Voluntary certification program
- Truck fleet could voluntarily certify that their truck activity in the air basin is XX% cleaner than Truck and Bus Rule on average
- Fleets that don't certify are assumed to only operate 2010 trucks starting in 2023
- Voluntary certification program would begin sometime between 2020-2023



Project Component

- Indirect Source Rule
- Facilities would be required to ensure that truck fleets serving their facility are YY% cleaner than the Truck and Bus rule on average
- Facilities must record trucks that visits the facility and which fleet they belong too
- Facility average based on fleet certification levels
- Full implementation would begin by 2023

Expected Benefits

- Voluntary for fleets
- Participating fleets would be eligible for incentive funding
- Fleet certification program would not interfere with other truck regulations
- Fleet certification program would be available for other programs (e.g., CEQA and other FBMSM)
- Facilities would not be required to track truck emission level compliance
 - Example: 100% of trucks visiting a facility could be 2010 trucks as long as average of all fleets serving the facility meet the ISR requirement
- Facility ISR requirement could be supported by substantiating studies (e.g., cost-effectiveness, availability of incentives, feasibility, etc.), and could be modified as conditions change
- ISR could include mitigation fee or other options

Next Steps

- Report to Mobile Source Committee on February 16, 2018
- Present proposed Emission reduction strategies to the Governing Board on March 2, 2018 and seek further direction

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Discussion Period

- Question 1: What are some operational considerations for fleets with the proposed fleet certification program?
- Question 2: What are potential approaches to develop Green Delivery options?
- Question 3: What additional or replacement strategies should SCAQMD consider and why would they be better?