South Coast AQMD Symposium



June 11, 2015 Diamond Bar



Chief, Transportation & Toxics Division
California Environmental Protection Agency



Equipment + facilities = system

(E-Commerce Supply Chain)





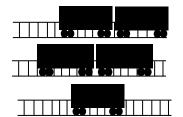
Shipping Container



California transport:



















Equipment-based ARB freight rules

- ✓ On-road diesel fuel
- √ Off-road diesel fuel
- ✓ Ship fuel
- ✓ Port/railyard trucks
- ✓ Truck and Bus
- ✓ Truck idling limits
- ✓ Truck/trailer efficiency

- ✓ Shore power at berth
- ✓ Harbor craft
- ✓ Cargo equipment
- ✓ Industrial equipment
- ✓ Off-road equipment
- ✓ Transport refrigeration units

✓ Locomotive/railyard agreements



Why consider a facility approach?

- Facilitate transformation
 - Flexibility for facility operators choose which functions are best suited for zero/near-zero emission technology in the near-term
 - Synergies in fueling/charging infrastructure
- Prioritize further action based on near-source health risks, including from national/international sources

Potential design objectives

- Reward efficiency improvements
- Encourage exposure reduction actions
- Incentivize zero-emission technology
- Offer options for facility/equipment operators
- Minimize complexity and maximize investments that cut emissions