

Warehouse Indirect Source Rule



Working Group Meeting
March 22, 2019

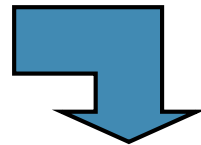
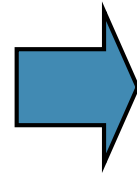
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Agenda

1. Welcome and Introductions
2. Review - Menu of Potential Rule Options and Key Constraints
3. Deeper Dive on Some Potential Regulatory Concepts - Facility Caps and Fleet Crediting Program
4. Other Potential Rule Components - Compliance Options, Applicability, and Reporting
5. Open Discussion
6. Next Steps and Wrap-Up

Menu of Potential Compliance Options for a Warehouse ISR

- Staff exploring potential Indirect Source Rule options
- Structure of proposed rule
- Stringency of proposed rule



Board-directed economic impact study recently initiated

Research into potential air quality benefits underway

Menu of Potential ISR Compliance Options	
Facility Caps	<ul style="list-style-type: none"> • XX% below baseline emissions (<i>SJVAPCD approach</i>) • <XX pounds of emissions per day per facility • <XX pounds of emissions per goods throughput unit or sq. ft.
SOON Program Approach	<ul style="list-style-type: none"> • Indirect sources must apply for incentive funds and use them if available (e.g., warehouse operators that own fleets must apply for funding to replace trucks and use it if awarded)
Local Govt. Measure	<ul style="list-style-type: none"> • Local govt. programs/ordinances can be put directly into SIP (e.g., ordinance requiring new warehouses install alt. fueling infrastructure) • Similar approach available in Rule 2202
Fleet Crediting Program	<ul style="list-style-type: none"> • Clean fleets generate credits managed through a bank and ISR facilities must obtain and retire credit • Potential for localized overlay
Voluntary Fleet Certification Program	<ul style="list-style-type: none"> • Fleet owners may certify that fleets are cleaner than required by CARB regulation • Facility owners required to use XX level of certified fleets
Onsite Best Management Practices	<ul style="list-style-type: none"> • Utilize ZE/NZE equipment onsite • ZE/NZE fueling/charging infrastructure • Solar/energy storage
Mitigation Fee	<ul style="list-style-type: none"> • Pay a mitigation fee if other compliance options not chosen • Collected funds are used to incentivize ZE/NZE equipment

Key Constraints

*"We want a strong ISR,
with zero emissions"*



Truck Emissions
Must Be Reduced

*"Warehouses commonly
don't control trucks."*



Air District Does Not Have
Authority To Directly
Regulate Private Trucks



Warehouse Operation Can Be Highly Segmented

Beneficial Cargo Owner (BCO) exerts direct control over goods flow
*Warehouse operator may have control only within the fenceline**

OUTBOUND



Trucks Operated by
Carriers Contracted
by BCOs



Warehouse Leased and Operated
by Third-Party Logistics Provider (3PL)
to Serve One or Multiple BCOs

INBOUND



Trucks Operated by
Carriers Contracted
by BCO's Suppliers

*Slide demonstrates one example of a warehouse and BCO's relationship with trucks.

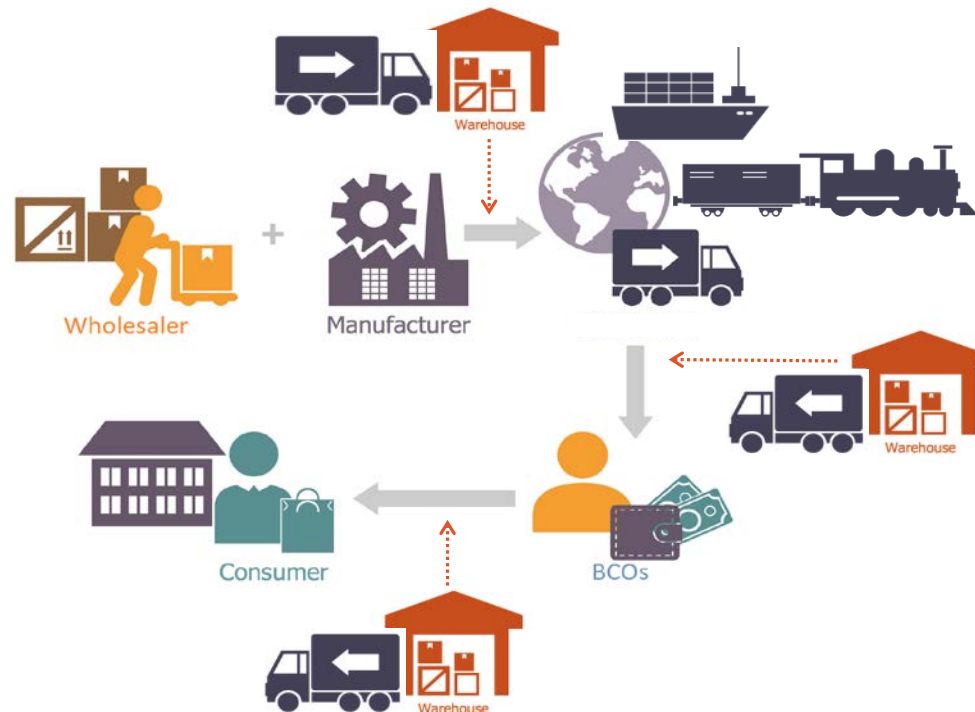
Not All Warehouses Are Alike

Classifications in ITE and SCAG Studies:

- General Purpose Warehouse/Storage^{1,2}
- General Purpose Distribution Center²
- Retail Fulfillment Center^{1,2}
- Transload Facility^{1,2}
- Crossdock Transload Facility²
- Truck Terminal for Less-Than-Truckload Trucks²
- Short-Term Storage¹
- Cold Storage¹
- Parcel Hub¹

Others:

- Deconsolidation/Consolidation Center
- Import Facility
- Industry-specific category, e.g., grocery DC



Warehouse Economic Study Will Identify Appropriate Classifications for Study Purposes

Warehouse Inventory In SCAQMD

Data source: CoStar real estate subscription database

- Used in SCAG's 2018 Industrial Warehouse Study (2014 data)

Preliminary charts of 2019 CoStar data for SCAQMD *(next slides)*

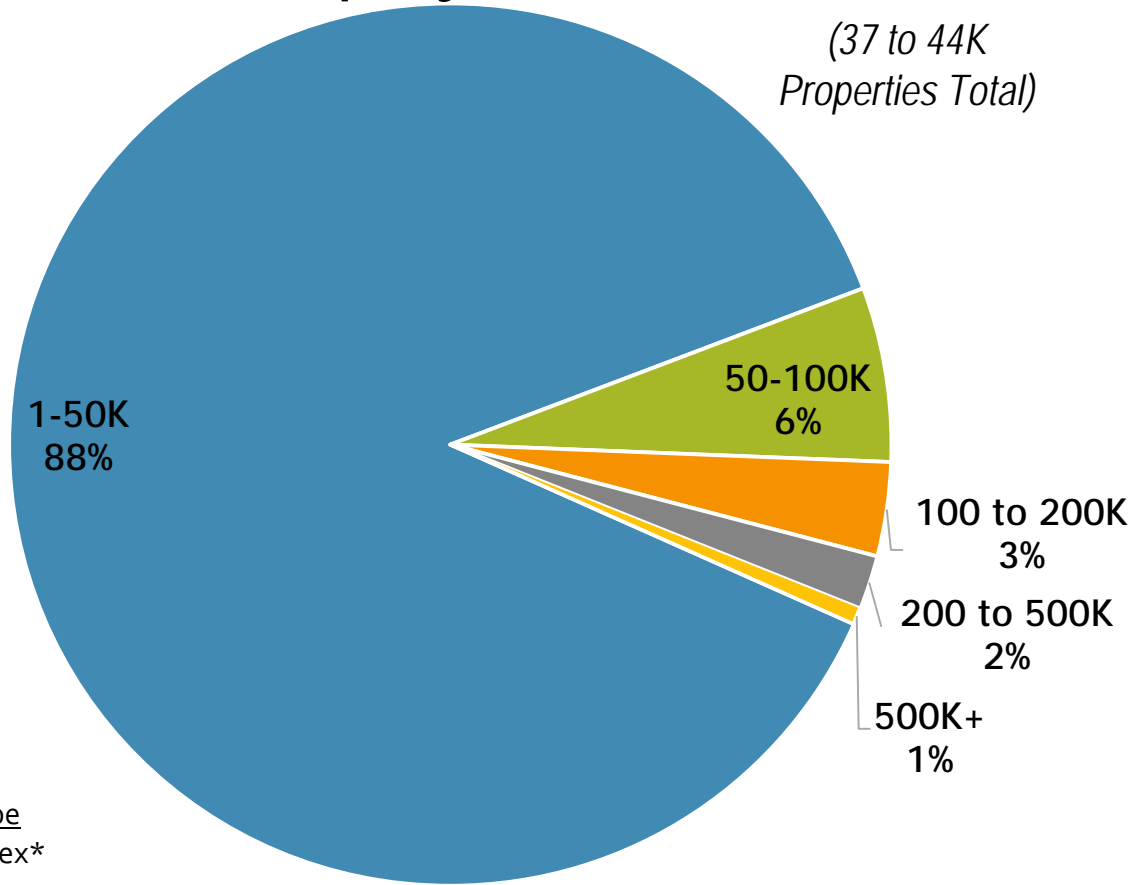
- Count and rentable buildable area (RBA) of existing properties
- Range of estimates based on SCAG classification (lower bound) and a larger universe including flex use and light distribution (upper bound)
- 4-county breakdown for large properties (100,000+ sqft)
- Information to be refined and used in warehouse economic study

Existing SCAQMD Warehouses

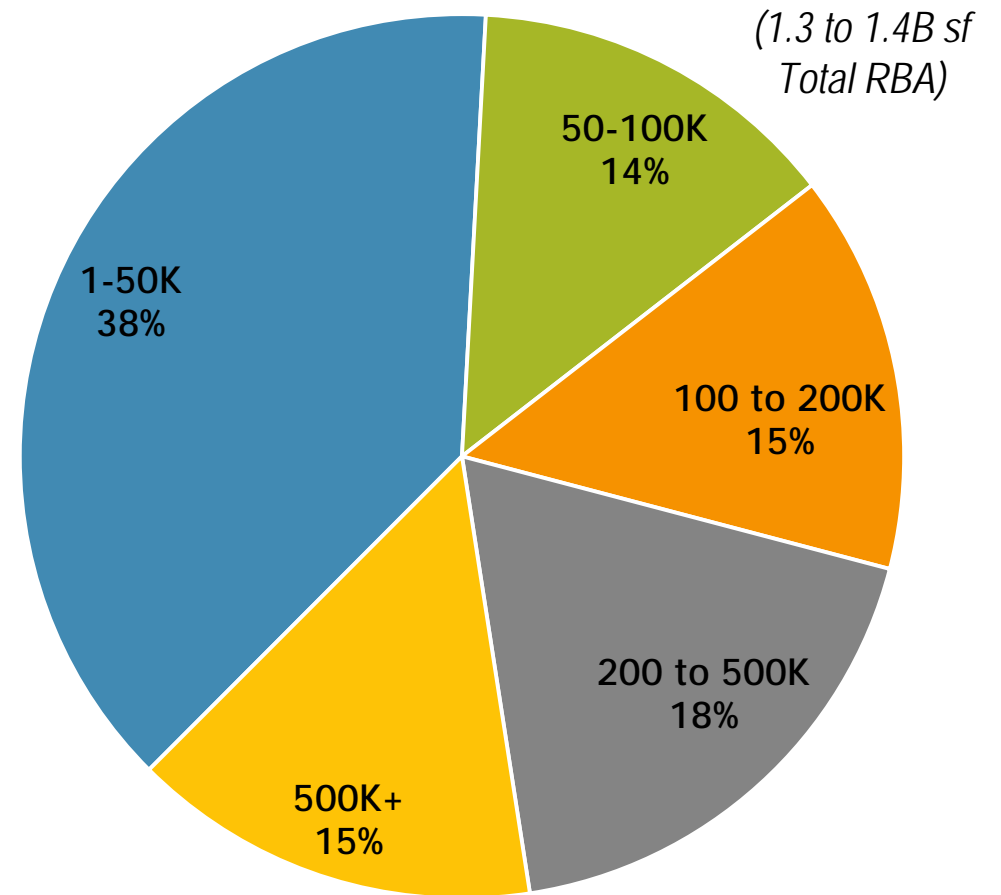
Number of Properties and Total Rentable Buildable Area

Source: CoStar 2019

Property Count



Rentable Buildable Area



Filters:

Property Type

Industrial, Flex*

Secondary Type

Distribution, Light Distribution*, Refrigeration/Cold Storage, Truck Terminal, Warehouse

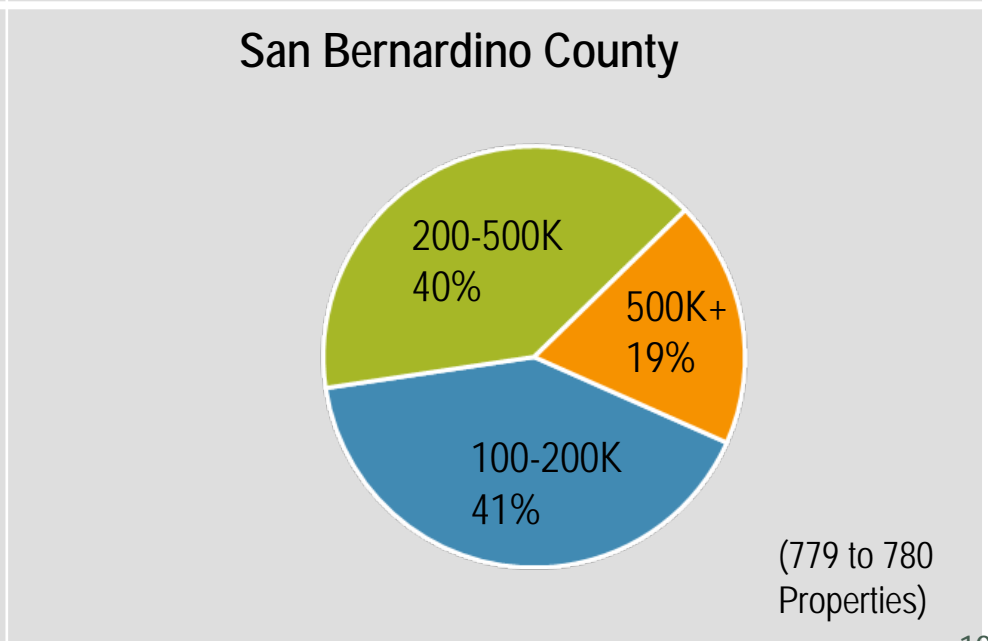
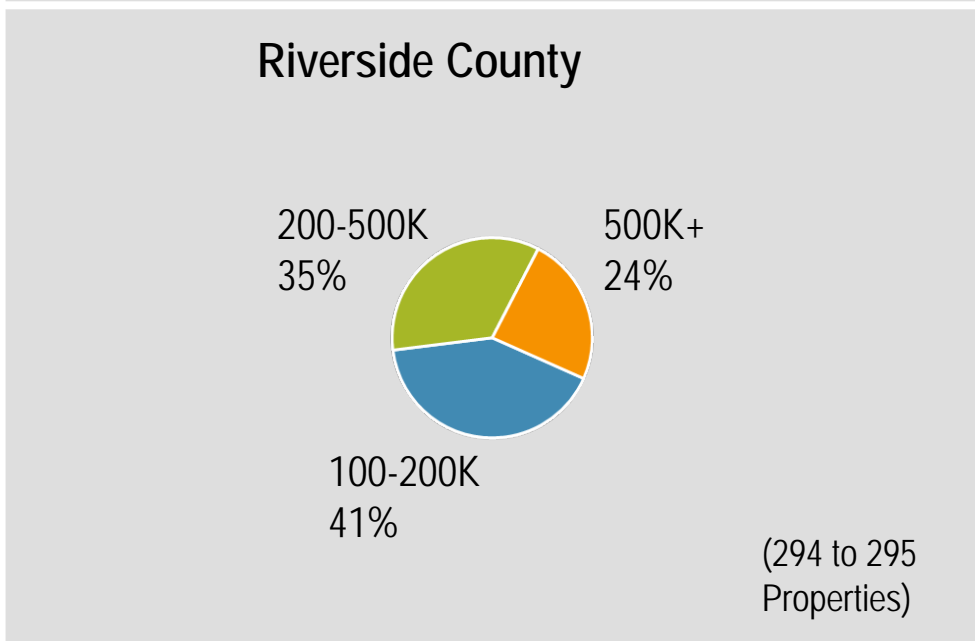
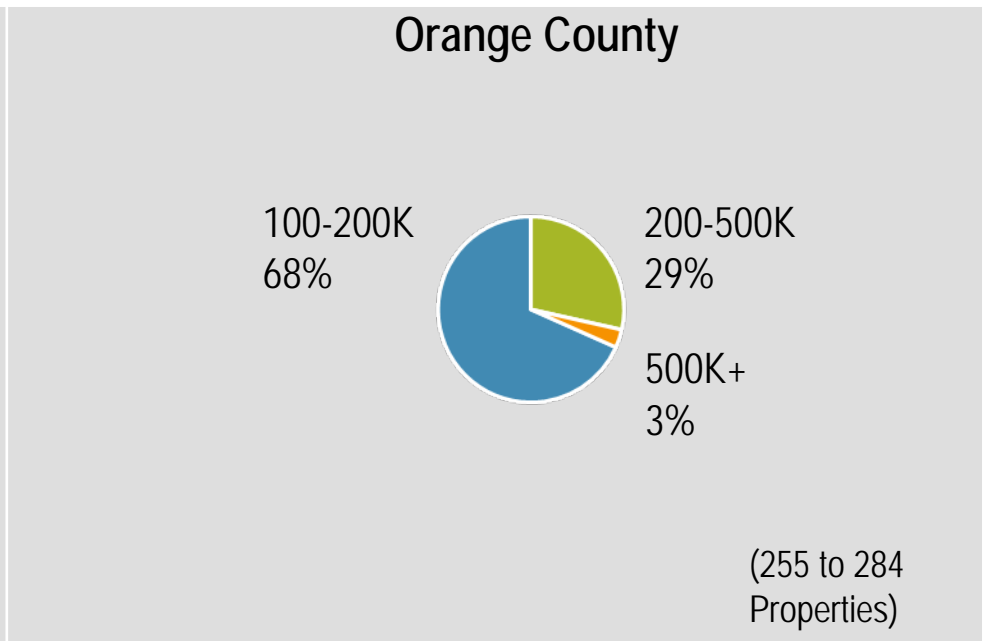
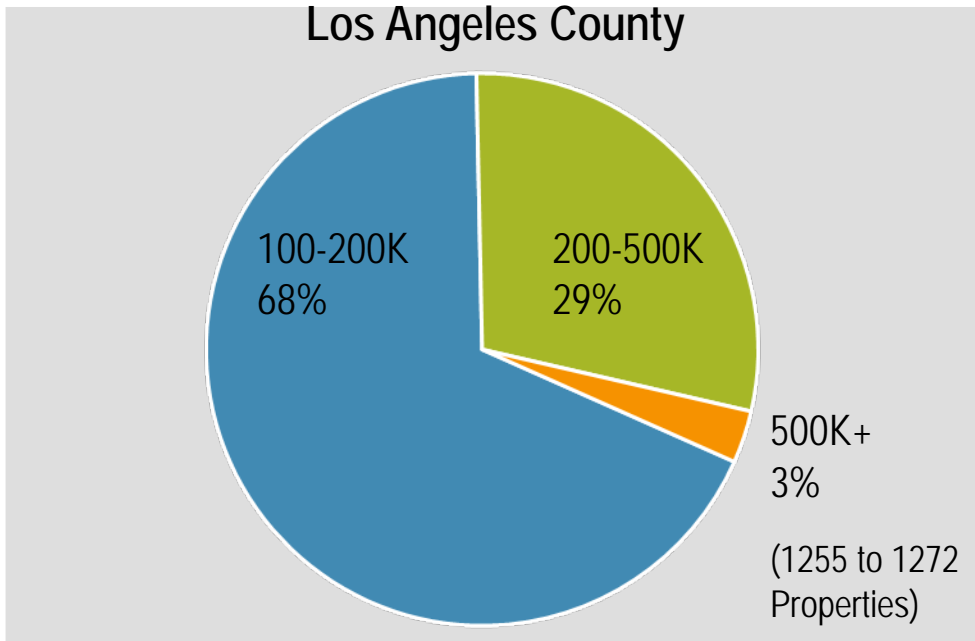
(* Included in high-end value)

Existing SCAQMD Warehouses over 100K Square Feet

Number of Properties by Size

Source: CoStar 2019

Filters:
Property Type
 Industrial, Flex*
Secondary Type
 Distribution, Light Distribution*,
 Refrigeration/Cold Storage,
 Truck Terminal, Warehouse
 (* Included in high-end value)



Existing SCAQMD Warehouses over 100K Square Feet

Rentable

Buildable

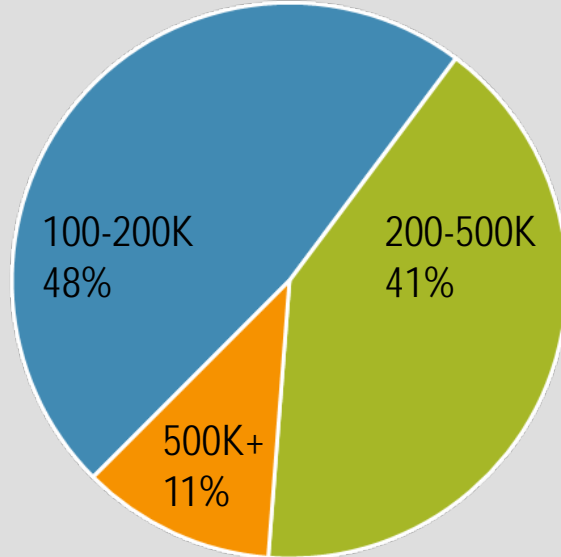
Area (RBA)

by Size

Source: CoStar 2019

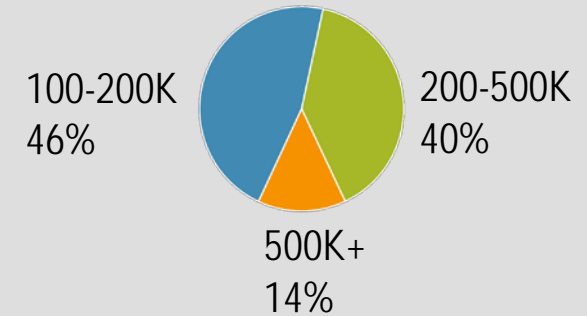
Filters:
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Los Angeles County



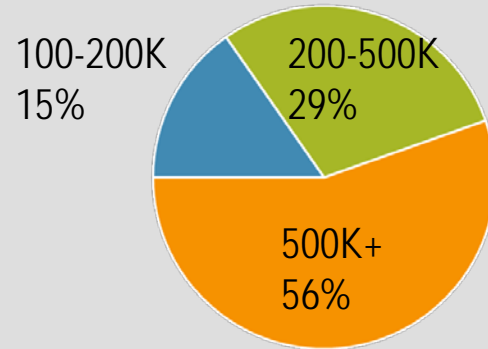
(242 to 248 MM RBA)

Orange County



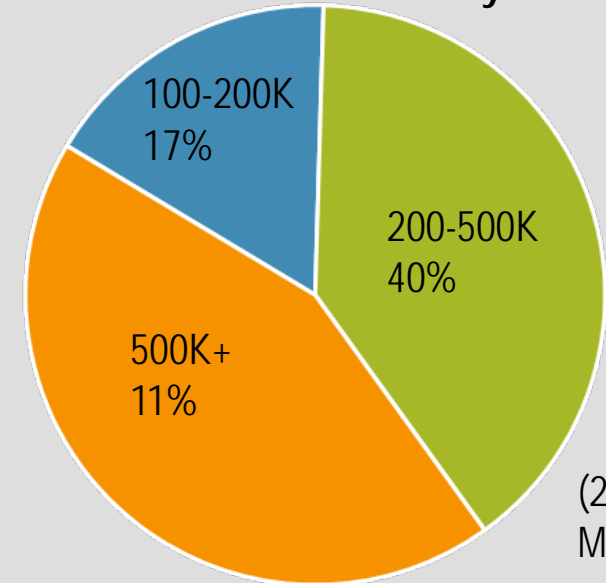
(51 to 57 MM RBA)

Riverside County



(110 to 112 MM RBA)

San Bernardino County



(259 to 260 MM RBA)

DEEPER DIVE ON SOME POTENTIAL REGULATORY CONCEPTS

Facility Caps and Fleet Crediting

Facility Cap Review: 3 Possible Types

Baseline Reduction Cap

Facilities required to reduce emissions XX% below baseline emissions

Mass Emissions Cap

Facilities not allowed to emit more than XX lbs/day of emissions

Efficiency Target

Facilities not allowed to emit more than XX lbs/day of emissions per throughput unit

Facility Cap: Common Themes



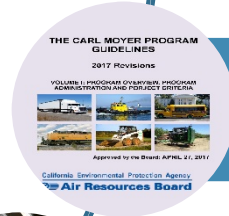
Reduces emissions at/near warehouses



On-site activity monitoring required



Individual truck tracking required



Emissions estimation methodology needed

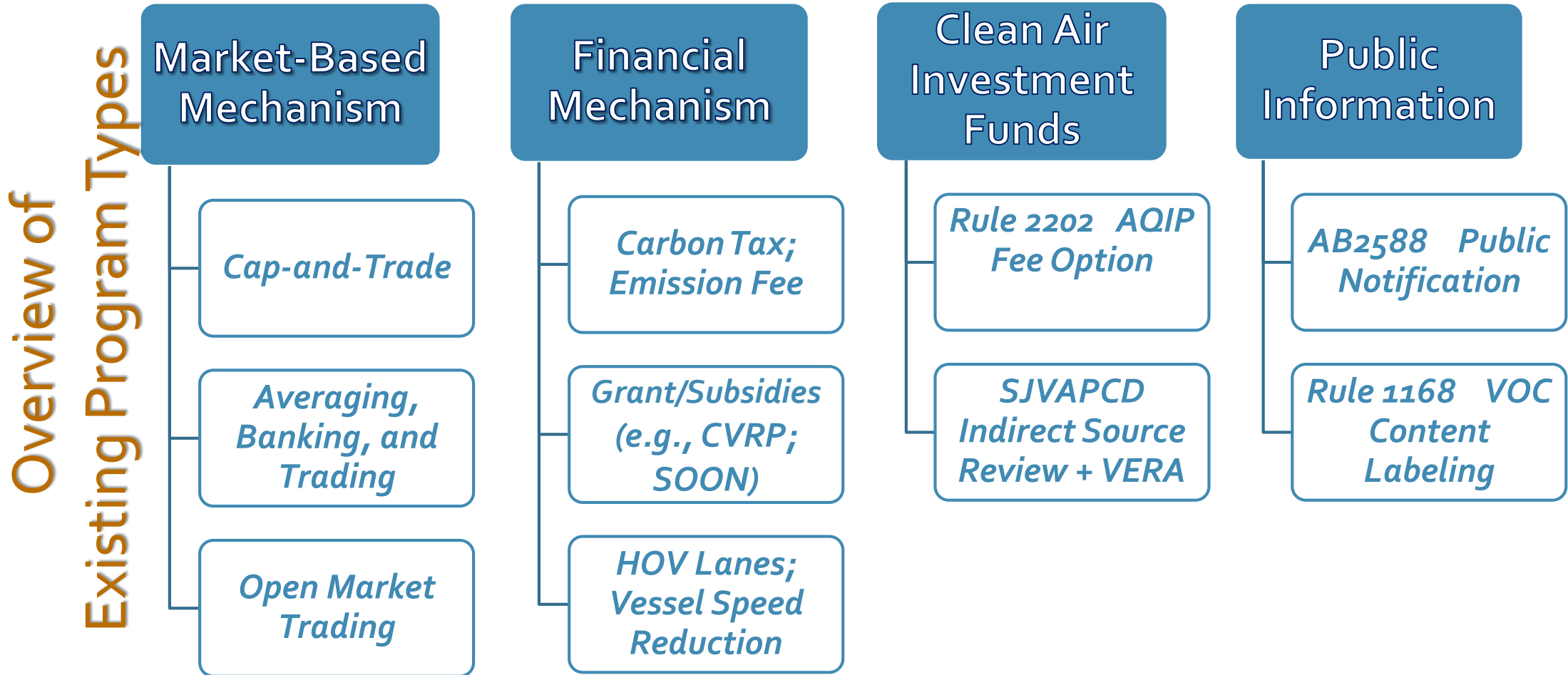


Report preparation and submittal +
SCAQMD review and approval

Facility Cap: Challenges

- All subject warehouse operators would need to control the dispatching of individual trucks
 - Otherwise, facility must use alternative compliance option and/or shut the gate
 - Dispatching decisions are currently made by motor carriers in accordance with contract terms with BCOs; warehouse operators currently often lack visibility into contract
- Varied truck traffic and throughput by facility size and classification
 - Wide seasonal fluctuations of truck traffic
- Metrics for throughput not uniform
- Individual truck tracking and the associated emissions estimation/reporting by each regulated facility + SCAQMD auditing of up to thousands facilities

Other Economic Incentive Programs Utilized in Regulations



Market-Based Compliance Pathway?

Cap-and-Trade	<i>SCAQMD RECLAIM</i>	Reduce stationary source NOx and SOx emissions through credit trading among regulated facilities
	<i>CARB Cap-and-Trade</i>	Reduce stationary source GHG emissions through credit trading among regulated facilities
Averaging, Banking, and Trading	<i>CARB LCFS Program</i>	Reduce mobile source GHG emissions through credit trading among transportation fuel producer and importer
	<i>-US EPA GHG Standard -CARB ZEV Program</i>	Reduce mobile source GHG (and NOx) emissions through credit trading among manufacturers of cars and pickup trucks
Open Market Trading	<i>SCAQMD Rule 2202 "Ride Share" Program – Emission Reduction Strategies</i>	Reduce mobile source VOC, NOx, and CO emissions through large employers' acquiring and retiring emission reduction credits, generated from emission reduction credit programs

SCAQMD staff is exploring the concept of a hybrid "fleet crediting program" based on lessons learned from existing credit systems.

Fleet Crediting Program: Concept

Credit Supply

Truck fleets that are cleaner than required by CARB's Truck & Bus Regulation would generate credits for sale or transfer

Voluntary Participation

Warehouse operators must acquire and retire credits based on the number of truck trips associated with the warehouse (+local overlay)

Credit Demand

Regulatory Requirement

Credit Supply by “Clean” Truck Fleets

Sources of Initial Credit Supply

- Fleets receiving incentive funding for clean trucks
- Cleaner fleets due to other business considerations (e.g., corporate sustainability targets)

Fleet Credit Generation as Further Incentive for Clean Truck Investment

- Credit generation can help reduce fleets’ total cost of ownership for procuring clean trucks
- Incentive program currently oversubscribed; credit program creates additional funding for clean trucks

Broad-Based Credit Generation

- NOT from regulated facilities in the program (unlike cap-and-trade or emission-averaging programs)
 - However, truck fleets owned by regulated facilities could generate fleet credits
- Smaller fleets, such as mom-and-pop independent owner/operator, can generate fleet credits without having to own/operate clean truck infrastructure
- Fleets generate credits through travel in air basin, not necessarily tied to local warehouses, therefore ensuring additional credit supply necessary for the local overlay requirements (see next slide)

Credit Demand by Regulated Warehouse Operators

Facility Specific Emission Reduction Obligation

- Calculation could be similar to a “baseline reduction” facility cap
- Percent emission reduction from the baseline depends on stringency of proposed rule
- Comply by regularly acquiring and retiring credits equivalent to a warehouse’s emission reduction obligation
- Facilities not allowed to ‘trade’ obligation to acquire/retire credits (unlike cap-and-trade or emission-averaging)

Rule Stringency

- Based on air quality need, economic analysis, feasibility (correlated with fleet credit supply), etc.
- Stringency will phase in through time

Local Overlay to Induce Emissions Reduction at/near Warehouses

- Warehouses located in close proximity to sensitive receptors or in EJ communities could be required to acquire and retire more credits (unless retired credits are generated by fleets serving the warehouse), or ensure some other localized emission reduction, and/or obtain XX percentage of credits from ZE fleets.

Fleet Crediting Program Management

- Need to build in fail-safe price levels and regular reporting to the Board to ensure functioning of market
- Either SCAQMD, CARB, or an independent 3rd party would act as a credit manager
 - Fleet verification
 - Crediting program management
 - Transaction price monitoring
 - Tracking fleet credit generation and incentive funding to ensure no double counting of emission reductions for SIP purposes

Fleet Crediting Program: SIP Credit

- Fleet credits \neq SIP credits
 - Conversion by SCAQMD/CARB likely needed
 - Remove double counting from other programs (e.g., Carl Moyer)
- SIP credits likely obtained through the fleets, not the warehouses
- General ISR SIP creditability and the interaction with other facility based measures will be discussed in more detail in a future meeting

Fleet Crediting Program: Challenges

- Complexity of setting up and administering a new crediting program
 - Simpler compliance for industry than pure facility caps
 - Warehouse operators would not need to track individual trucks and prepare emission reduction reports; fleet tracking part of crediting program management
- Market stability would be key:
 - Credit supply depends on truck fleet's voluntary participation
 - Credit price needs to be sufficiently high to attract participation beyond those fleets receiving current level of incentive grant funding
 - Built-in mechanism needed to prevent excessive windfall and ensure market liquidity
 - Credit demand would depend on rule stringency, as well as availability and facility use of other compliance options

OTHER POTENTIAL RULE COMPONENTS

Compliance Options, Applicability, and Reporting

Rule Structure Would Include Multiple Compliance Options

A Option(s) to Reduce Warehousing Related Truck Emissions*

B Warehouse Onsite/Near-Site Measures

C Mitigation Fee

* Not limited to facility cap or fleet crediting program options

Other Compliance Options

Warehouse Onsite/ Near-Site Measures

- Emission reductions achieved from ZE onsite equipment, e.g. hostlers, forklifts, etc., can be credited towards a facility's emission reduction obligation
- Onsite ZE truck charging/fueling infrastructure installations also creditable (calculations method to be defined)

Mitigation Fee

- Based on a facility's remaining emission reduction obligation
- Cost of obtaining emissions reduction through incentive grant funding programs, inclusive of administrative cost
- Funds would be spent in areas where facilities paid the fee

Potential Rule Applicability Under All Combination of ISR Options

- Rule could apply to operators of warehouses whose operations average more than XX one-way truck trips/day
 - No requirements on owners of warehouses
- Rule could not apply to operators of warehouses that are explicitly covered by a SIP-credited MOU (e.g., MOUs for airports or ports)
- Potentially could include warehouse-similar land uses like truck terminals and peel-off yards
 - Land uses used for transfer of containerized goods delivered by trucks
 - Concern raised by AB 617 community steering committees about these land uses that perform similar function as warehouses

BCO's Role
in Rule
Compliance?

Example Thresholds For All ISR Options

- Reporting required for warehouses above XX threshold
 - Potential threshold: 50 one-way truck trips/day
 - Equal to ~100,000 sq. ft. default* transload warehouse
 - Equal to ~50,000 sq. ft. default* cold-storage warehouse
 - Facility must report annual average number of daily truck trips
 - Fleet/truck reporting?
- Emission reduction obligation required for warehouses above YY threshold
 - Potential threshold: 100 one-way truck trips/day
 - Equal to ~200,000 sq. ft. default* transload warehouse
 - Equal to ~100,000 sq. ft. default* cold-storage warehouse
 - Potential phase-in of threshold to start program with a smaller universe of facilities
- Reporting potentially required before emission reduction obligations

Open Discussion Topics

- What are your utmost concern regarding facility caps and/or fleet crediting program concepts? Is your concern inherent to the concept itself, or can it be addressed by carefully designing the rule option(s)?
- What are the best ways to ensure the reduction of warehousing related emissions would occur at the highly impacted communities?
- What are some important considerations for using onsite/near-site infrastructure installations as a compliance option, given they do not directly reduce but only facilitate warehousing related emission reductions?
- How might the economic study consider the structure of the rule (e.g., fleet credit vs. facility caps, etc.)?

Next Steps

CONTINUE OUTREACH EFFORT

- *COMMUNITY*: AB 617 meetings; ISR community town hall meeting(s)?
- *INDUSTRY*: warehousing facility visits; trade associations representing various logistics industries
- *OTHERS*: e.g., Ports

NEXT WORKING GROUP

- Spring, 2019

PROPOSED RULE ADOPTION

- Currently scheduled for December 2019
- Regular status updates to the Mobile Source Committee

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