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Review of the South Coast Air Quality Management District Warehouse Indirect Source Rule

Study Commissioned by



Study Conducted by

RAMBOLL

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Contact

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South Coast AQMD – WAIRE Program

- Applies to **warehouses** that have **>100,000 square feet** of indoor space used for warehousing activities.
- Also applies to **manufacturing facilities** and **grocery stores** with goods storage areas.
- **Annual reporting and compliance requirements** based on truck trip counts.
- Actions and investments for compliance include **ZE/NZE trucks, ZE yard trucks, ZEV infrastructure, and mitigation fee payments.**
- Overlaps with existing CARB Regulations.
- Considered State Implementation Plan (**SIP**) **Strengthening Rule.**

Rule 2305

Warehouse Indirect Source Rule (ISR) – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program

SCAQMD's WAIRE Program did not generate any creditable emissions reductions

Emission benefits from NZE and ZE truck visits are a result of existing Statewide vehicle and fuel regulations, including CARB's:

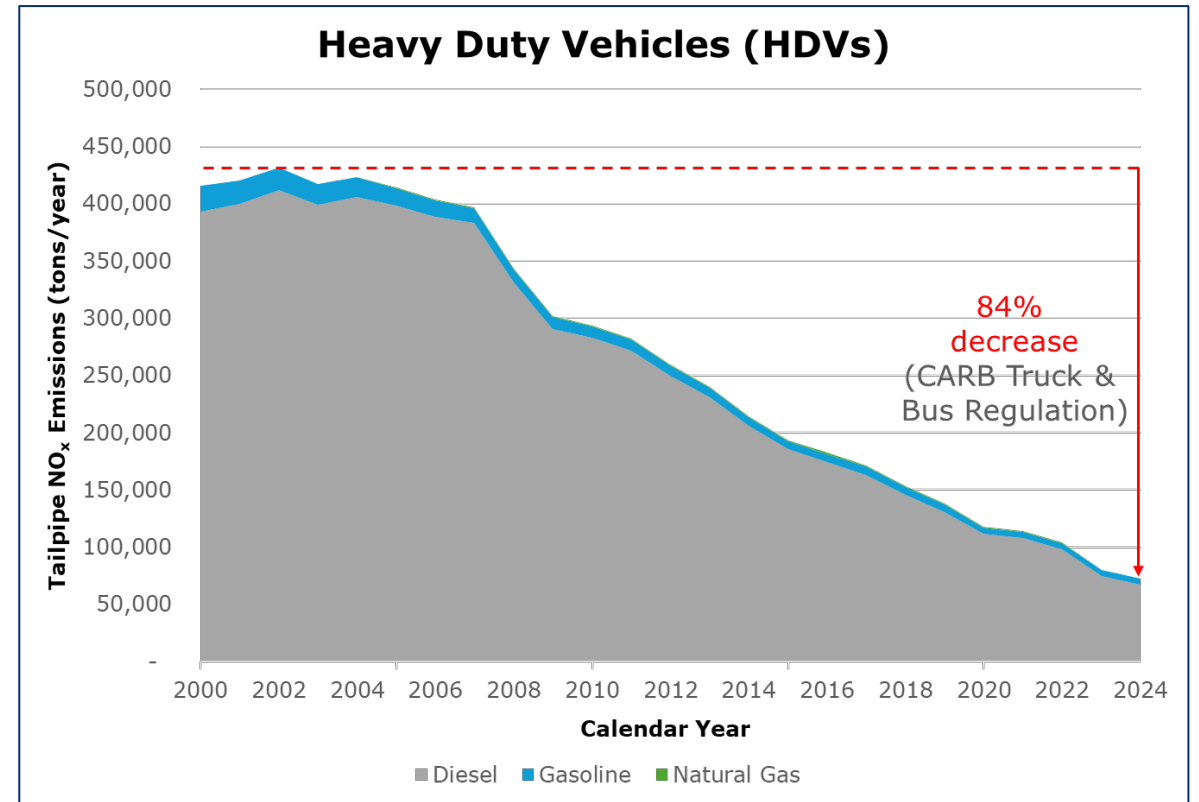
- Truck and Bus Regulation
- Low Carbon Fuel Standard (LCFS) Program
- Advanced Clean Truck Regulation¹
- Advanced Clean Fleets Regulation²

The WAIRE Program requires NZE trucks to use engines that meet the lowest optional NO_x standard.

- Since the WAIRE program adoption in 2022, no new engines have been certified to this standard.

USEPA stated that it

"did not find a sufficient basis to credit Rule 2305 with achieving a specific amount of emissions reductions."



¹ In 2025, the United States Congress revoked the U.S. Environmental Protection Agency waiver that allowed California to implement the rule. The resolution was signed into law in June 2025, creating regulatory uncertainty and prompting ongoing legal challenges regarding California's authority to enforce the program.

² CARB adopted a September 25, 2025 Board resolution that repealed the regulation's drayage, high-priority, and federal fleet requirements. As a result, the rule currently applies primarily to state and local government fleets, while broader fleet transition mandates for private operators are no longer in effect.

SCAQMD
significantly
overestimated
emission benefits of
certain actions
credited under the
WAIRE Program

Yard Hostlers

The District claims NO_x emission benefits of 0.22 tons per day in 2022, 0.31 tons per day in 2023, and 0.52 tons per day in 2024 which significantly exceed the baseline NO_x emissions of 0.09 tons per day baseline for these equipment.

Zero-Emission (ZE) Trucks

Use of basin-wide average one-way trip lengths overestimate emissions benefits of ZE trucks, typically deployed on shorter routes.

Solar Electricity Generating Systems

Contrary to the District's assumptions in the emission benefit analysis for these systems, most electric power supplied to the region is not produced by local natural-gas fueled power plants.

Far-Reaching Effects on Industry

The WAIRE program has profound impacts on the supply chain industry, affecting not only warehouses but also retail (office supplies, grocery stores, etc.), e-commerce, and manufacturing.

True Compliance Costs

Ramboll estimates that actual compliance costs are three-fold to nine-fold higher than SCAQMD's initial estimates.

Financial Burdens on Consumers and Small Operators

Increased compliance costs will be passed down to consumers, resulting in higher prices for goods.

Small warehouse operators, unable to absorb these additional costs, could be forced out of business.

SCAQMD
underestimated the
cost burden of rule
compliance and the
negative financial
impacts on industry

The WAIRE program primarily acts as a tax and will pose a significant financial burden on industry

Limited Truck Control for Warehouse Operators

- Most warehouse operators do not control the trucks visiting their facility or own the warehouse buildings they operate in.
- Their primary compliance option is to pay a mitigation fee.

Excess Early Action WAIRE Points

- SCAQMD's 3rd Annual Report states that mitigation fees account for only 5% of total WAIRE points earned.
- However, most WAIRE points earned to date were credits for early actions/banked points whose emission benefits were not caused by the WAIRE program.

Increasing Reliance on Mitigation Fees

- The Annual Report shows that 15% of reported compliance obligations in the first three years of implementation were met using mitigation fees.
- This value could increase to as much as 70% once all warehouses subject to the rule submit their overdue annual reports.

Relocation of Warehousing Operations

Increased warehousing costs from indirect source rules could result in relocation of operations out of the region, shifting emissions rather than reducing them.

Increased Truck Trip Distances

Relocation could result in longer truck trip lengths, leading to a net increase in regional emissions.

Indirect source rules
can cause emissions
leakage
and net emissions
increases

Warehouse indirect source rules will result in a significant administrative burden for implementing agencies

Software Development and Maintenance Costs

- SCAQMD has allocated over half a million dollars for the development and maintenance of their online reporting tool, WAIRE POP, which still suffers from foundational data integrity issues.

Inadequate Staffing

- SCAQMD's 6.3 Full Time Equivalent staff for rule implementation have been unable to keep up with warehouse operators' requests; response times have varied from 1-2 weeks to over a year.
- Additional staff are required for enforcement and the development/implementation of the mitigation fee funding program.

Final thoughts



Warehouse ISRs can impose a **significant financial and administrative burden** on the industry and the implementing agencies.

Warehouse ISRs are **not effective in generating meaningful emission reductions** and can instead result in economic and emissions leakage.

State/Federal **regulations and incentive programs** are more effective at reducing emissions than Warehouse ISRs.



Thank you

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