



Informative Session: Transport Refrigeration Units & CARB Regulation Process

September 12, 2023

Listening to Language Interpretation

1. In your meeting/webinar controls, click **Interpretation**. (located at bottom of screen) / En los controles de su reunión/seminario web (meeting/webinar), haga clic en **Interpretación** (Interpretation) ubicado en la parte inferior de la pantalla.
2. Click the language that you would like to hear. Options for this meeting are English and Spanish. / Haga clic en el idioma que le gustaría escuchar. Las opciones para esta reunión son inglés y español.
3. To only hear the interpreted language, **click Mute Original Audio**. / Para solo escuchar el idioma interpretado, haga clic en **Silenciar audio original** (Mute Original Audio).

Windows | macOS

1. In your meeting/webinar controls, click **Interpretation**.

2. Click the language that you would like to hear.

3. (Optional) To hear the interpreted language only, click **Mute Original Audio**.

Before We Get Started

- Please **mute** and **rename** yourself to have your First Name, Last Name, and your affiliation:
 - To **rename**, click on the top right side of your picture/video

Example: **Jane Doe - CARB**

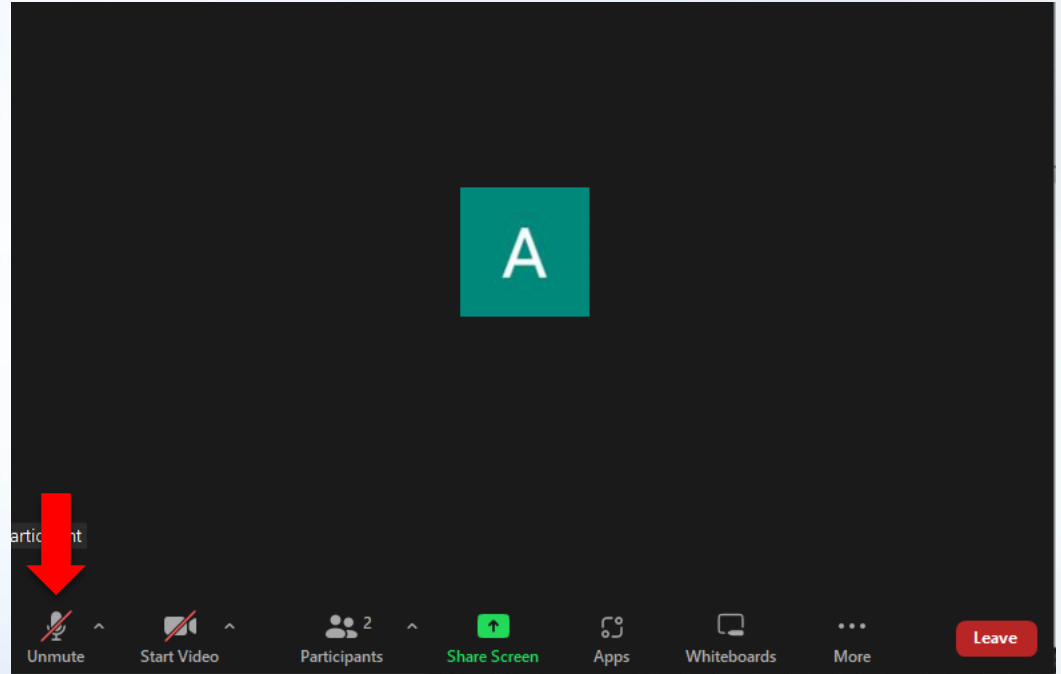
- Affiliations: Community Organization / Agency / Air District / Company / Resident / etc.
- **Need help?** Use the Chat function to request assistance

Zoom Orientation

Mute/Unmute

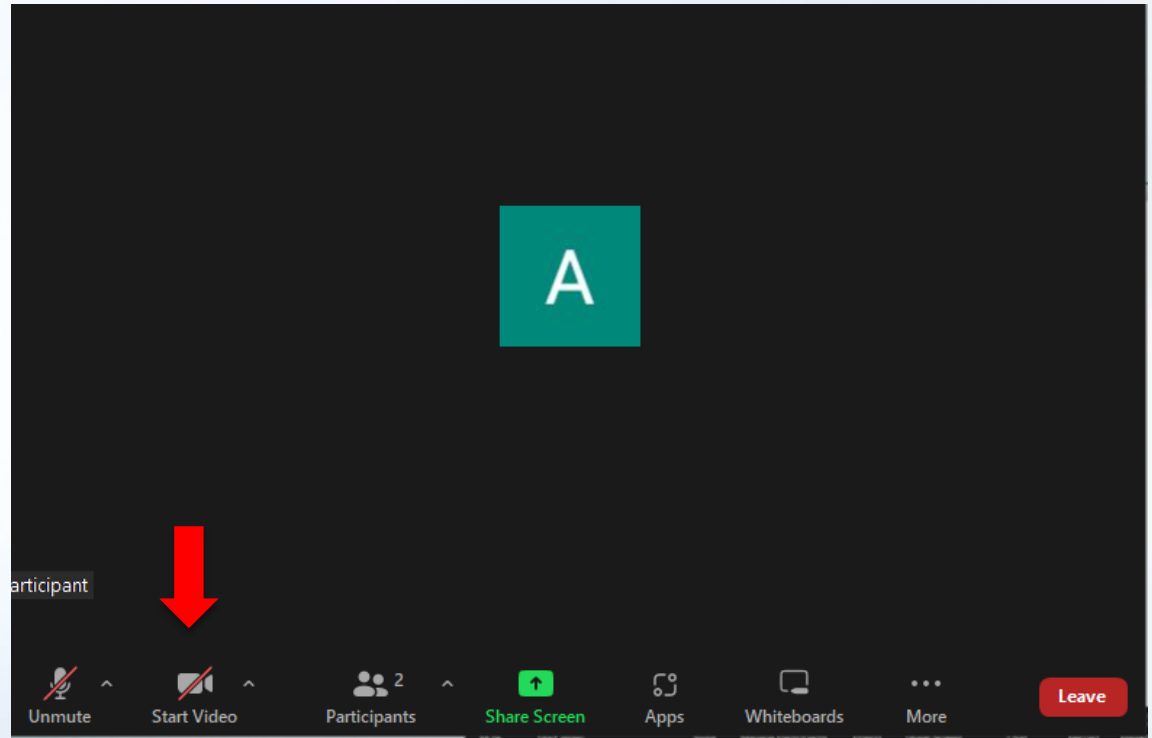
Please remain on mute when you are not speaking.

- Zoom: **Mute/Unmute** button at the bottom left
- Phone: Dial ***6** to mute/unmute



Video

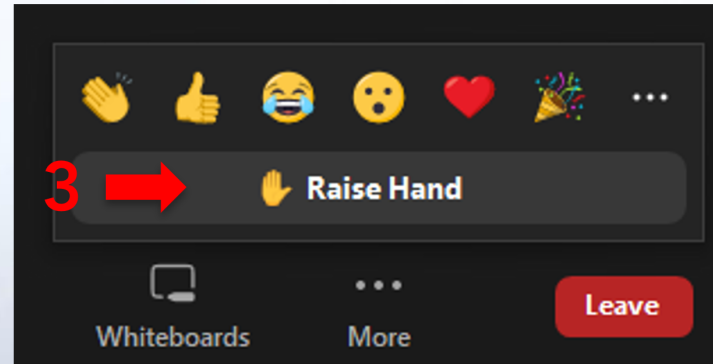
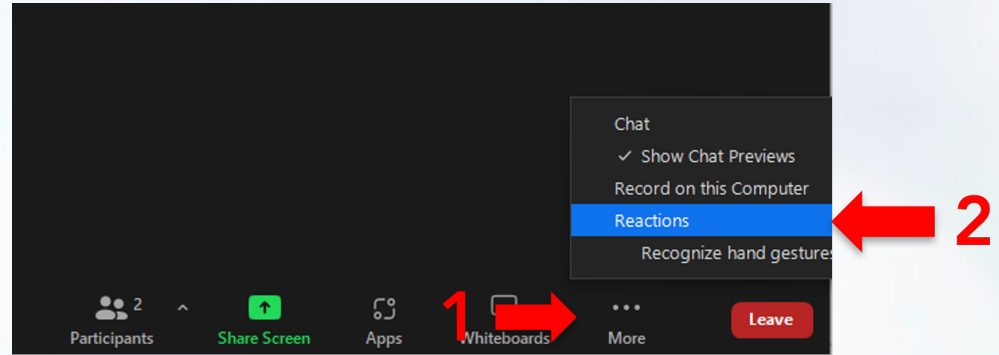
Click the camera icon at the bottom left of your screen to toggle your video on and off.



Raise Hand

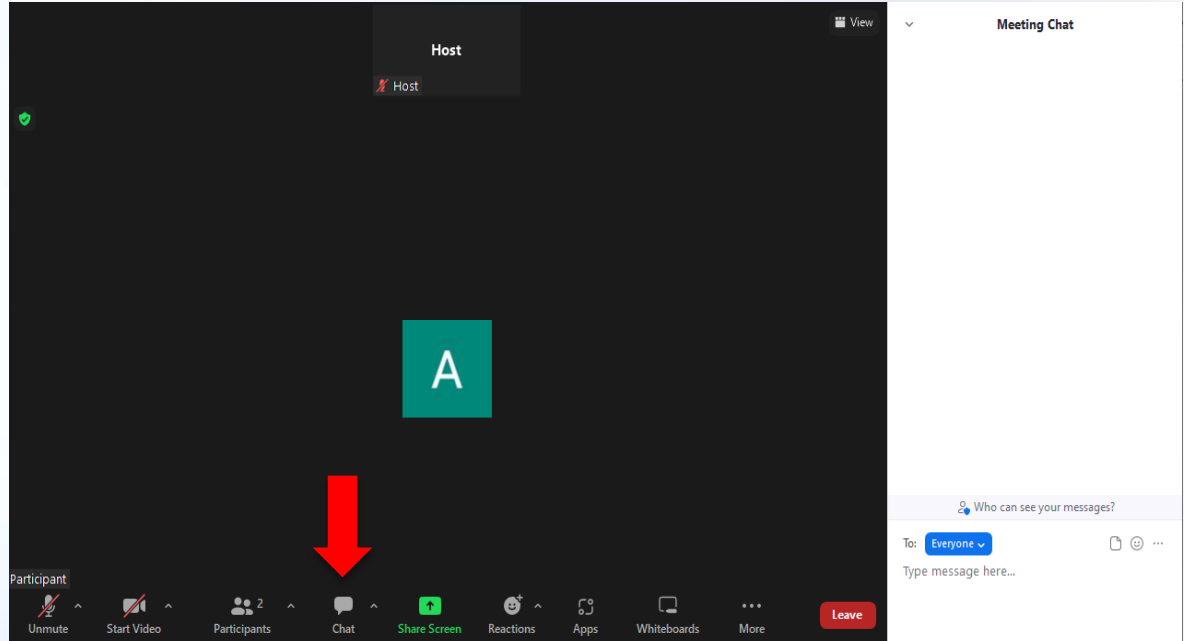
To be added to the speaking queue, please use **Raise Hand**

- Zoom: Click **Participants**, then **Raise Hand**.
- Phone: dial *9 We'll check in with the phone line periodically.



Chat

- Click on the **chat** icon near the center bottom of your screen.
- Choose “private” chat to chat with the Host or Co-host
- Private chats are archived.



Purpose and Agenda

- Introductions
- Purpose and agenda
- California Air Resources Board (CARB) Objectives
- Transport Refrigeration Units (TRU)



Purpose and Agenda Cont.

- Regulation history
- CARB regulation development
- Discussion
- Questionnaire



What communities are being represented today? / ¿Qué comunidades están representadas hoy?

 0

Nobody has responded yet.

Hang tight! Responses are coming in.

CARB Objectives



Cut community health risk
(support Assembly Bill 617 emission reductions)



Help attain regional air standards
(support State Implementation Plan)



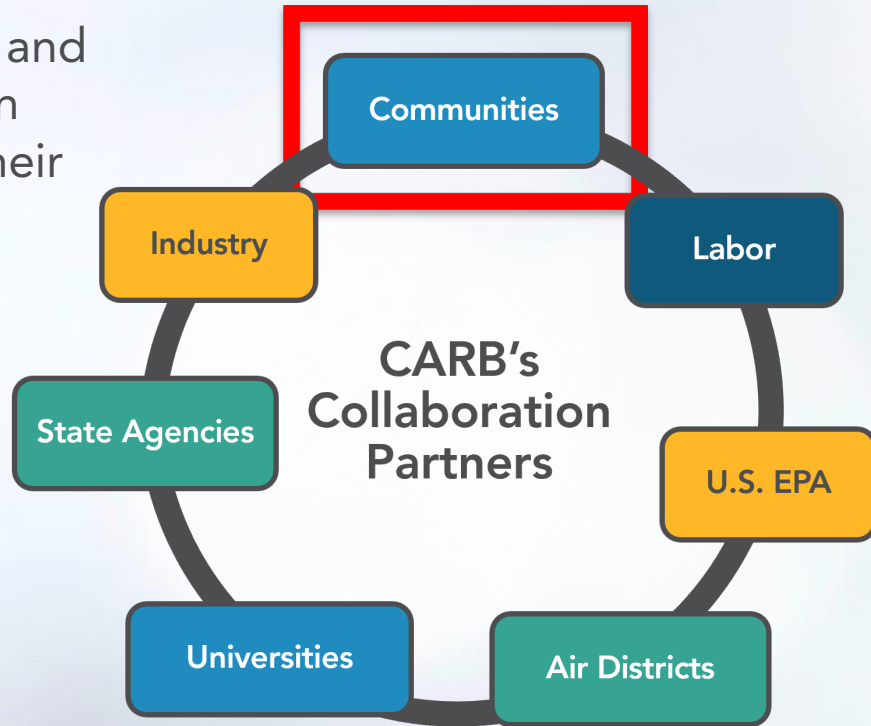
Mitigate climate change (support Scoping Plan and
Short-Lived Climate Pollutant Reduction Strategy)



Governor's Executive Order N-79-20

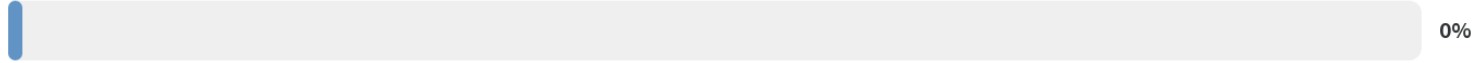
Community Engagement Plan

- Engage the communities thoughtfully and intentionally throughout the regulation development process while seeking their guidance
- Includes different outreach activities:
 - Informative sessions
 - Environmental justice (EJ) tours
 - Webpage updates
 - Flyers/brochures
 - Office hours
 - Questionnaires
 - Input and recommendations surveys



Do you know what a TRU is? / ¿Sabe qué es una TRU?

(1) Yes/Si



(2) No



Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

What Are TRUs?

- Use a diesel engine to control the environment of temperature-sensitive products during transport.



Types of TRUs



Trailer
TRU



Truck TRU



Domestic
Shipping
Container TRU

Railcar
TRU



TRU
Generator
Set



Have you seen any of these units operating near your communities?



Trailer
TRU



Truck TRU



Domestic
Shipping
Container TRU

Railcar
TRU

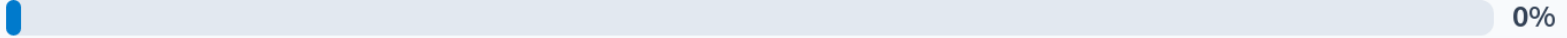


TRU
Generator
Set

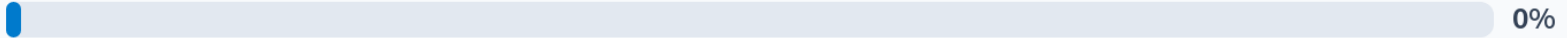


Have you seen any of these units operating near your community? / ¿Ha visto alguna de estas unidades operando cerca de su comunidad?

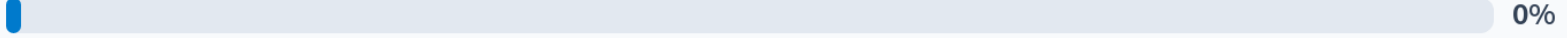
Trailer TRU



Truck TRU



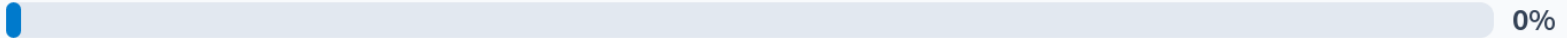
Domestic Shipping Container TRU



Railcar TRU



Generator Set TRU



TRU Operations



How many TRUs operate in California? Which class makes up the biggest population? /
¿Cuántas TRU operan en California? ¿Qué clase constituye la mayor población?

Nobody has responded yet.

Hang tight! Responses are coming in.

TRU Operations in California (2022)

	Number of TRUs that operate in California annually	Average number of TRUs that operate in California daily
Truck TRU	7,153	7,153
Trailer TRU	160,930	42,677
Domestic shipping container and railcar TRU	4,147	787
TRU generator set	30,710	3,178
TOTAL	202,940	53,795



Where Do TRUs Operate?

- Cold storage warehouses and distribution centers
- Seaports
- Intermodal railyards
- Grocery stores



Emissions

- TRUs are diesel-powered and emit the following:
 - Fine particulate matter (PM_{2.5})
 - Oxides of nitrogen (NO_x)
 - Greenhouse gases (GHG)



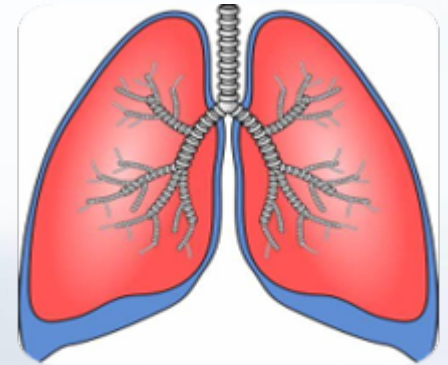
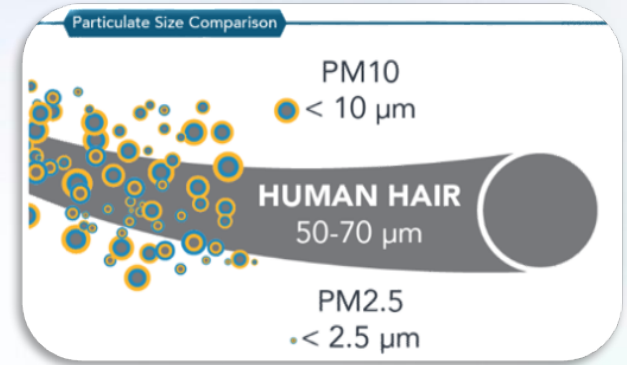
Source Impact of TRUs



Health Risks and Impacts

Exposure to PM_{2.5} and NO_x can lead to:

- Increased risk of heart attacks and heart disease
- Impaired lung development in children
- Asthma
- Premature death
- Lung tissue damage
- Chronic illnesses
- Increased risk for cancer



Health Risks and Impacts Cont.

- Near-source cancer risk at high-activity facilities (~1,000 in a million)
- Facilities often sited in clusters

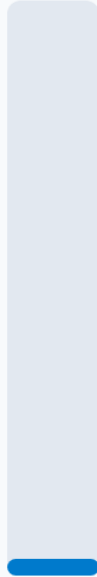


 = Facility size

Example: Salinas, CA

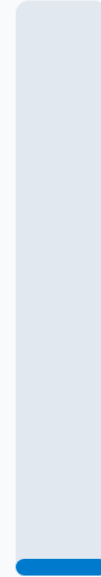
Have you or someone you know been affected by one or more of the illnesses mentioned before? / ¿Usted o alguien que conoce ha sido afectado por una o más de las enfermedades mencionadas anteriormente?

0%



Yes/Si

0%



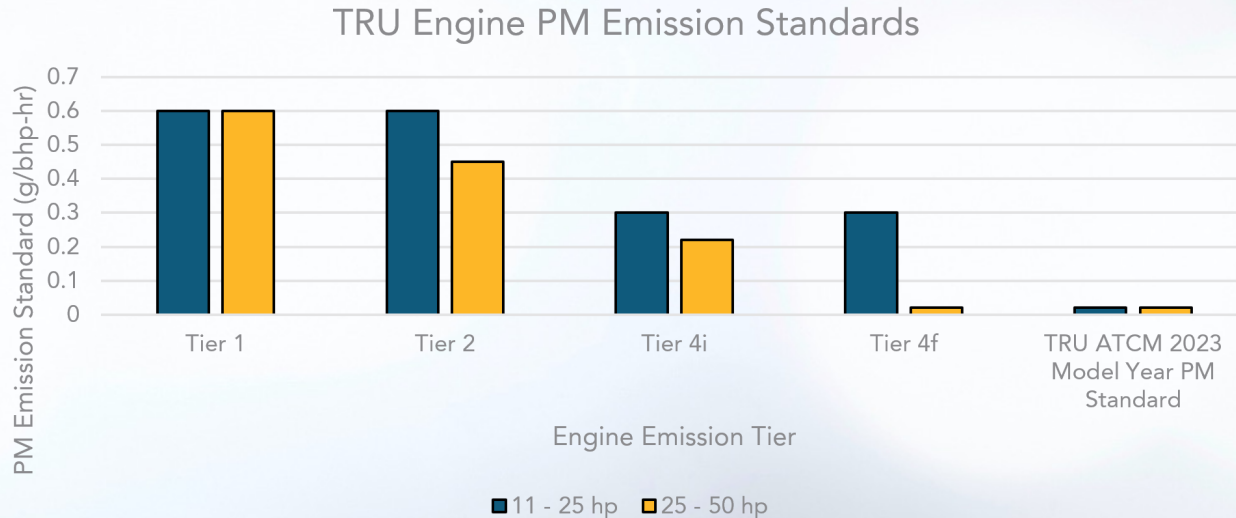
No



How Has CARB Addressed TRUs?

Existing TRU Regulation

- Adopted in 2004 (amended in 2010, 2011, 2022)



Note: engines in the 11-25 hp category were not subject to a Tier 4i standard, and instead were subject to only a Tier 4f standard

Part 1: Zero-Emission Truck TRUs

Adopted in February 2022

- Key Elements
 - Zero-emission truck TRUs
 - Particulate matter (PM) standard for newly-manufactured non-truck TRU engines
 - Lower global warming potential refrigerant



Part 1: Zero-Emission Truck TRUs

Adopted in February 2022

- Key Elements
 - Facility registration and reporting
 - Expanded TRU reporting and labeling
 - Fees



Need to Keep Addressing TRUs

- Clean air in communities
- Meet Governor's Executive Order: N-79-20
- Plan to address remaining TRU classes:
 - Trailer TRUs, domestic shipping container TRUs, railcar TRUs, TRU generator sets



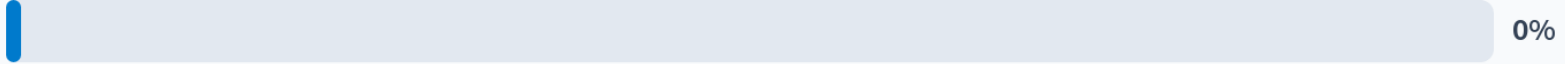
Questions?



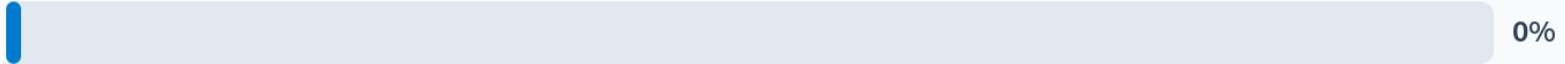
Regulation Process

Have you already participated in the CARB rulemaking process before? / ¿Ha usted participado anteriormente en el proceso de regulación de CARB?

I have participated / Si he participado



I have not participated / No he participado



What do you think when you hear "Regulation Process"? / ¿Qué piensa cuando escucha "Proceso de Regulación"?

 0

Nobody has responded yet.

Hang tight! Responses are coming in.

Pre-Regulation Development

- Research
 - Sector/equipment
- Survey(s)
- Technology Assessment
 - Research/public meetings
 - Workshop/public review period
 - Draft/final documents
- Scope of concepts



Regulation Development

- Regulatory Concept Development
- Technical Analysis
 - Emissions inventory
 - Cost analysis
 - Health benefits
 - Health risk assessment
 - Environmental analysis (EA)



Regulation Development Cont.

- Stakeholder Outreach
 - Calls, meetings, site visits
 - Public workshops/workgroups
 - Community engagement
 - EJ site tours



Regulation Development Cont.

- Rulemaking Documents
 - Standardized Regulatory Impact Assessment (economic analysis)
 - Notice and Staff Report (Initial Statement of Reasons)
 - CEQA Environmental Analysis
 - Board documents
 - 15-day change package(s)
- Board Consideration

Post-Board Adoption Activities

- Submit Final Statement of Reasons (FSOR)
- Submittal of final rulemaking package to Office of Administrative Law (OAL)
- Implementation
- United States Environmental Protection Agency (U.S. EPA) approval

Transport Refrigeration Units (TRU) Regulation

[< BACK TO ALL RULEMAKING](#)

This page last reviewed July 18, 2022

Proposed Amendments to the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate

HEARING DATE(S)

September 23, 2021

February 24, 2022

PUBLIC COMMENTS RECEIVED

CARB Regulation Process



Questions?

Discussion

Next Steps

TRU Webpage

<https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit>

EJ Blog

<http://carbej.blogspot.com/>

Join the TRU list serve

https://public.govdelivery.com/accounts/CARB/subscribe/new?topic_id=tru

Transport Refrigeration Unit

[< BACK TO ALL PROGRAMS](#)

Transport Refrigeration Unit

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[New Regulation Development](#)

[Meetings & Workshops](#)

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PRIMARY CONTACT

ARBER Help Line

Email arber@arb.ca.gov

Phone (888) 878-2826

Transport Refrigeration Units (TRU) are refrigeration systems powered by diesel internal combustion engines designed to refrigerate or heat perishable products that are transported in various containers, including truck vans, semi-truck trailers, shipping containers, and railcars.

[MORE ABOUT THIS PROGRAM >](#)

2022 Amendments to the TRU ATCM

New amendments to the TRU ATCM are effective October 1, 2022. CARB staff have prepared a [Regulatory Advisory on the 2022 Amendments \(Español\)](#) to assist with the new requirements. Additional implementation-related information is available on the [TRU Compliance Information Webpage](#), including a [Frequently Asked Questions \(Español\)](#) document.

[LEARN MORE](#)



2022 TRU Technology Assessment



Check TRU Compliance



Register Your TRU Online

Next Steps

TRU Webpage

<https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit>

EJ Blog

<http://carbej.blogspot.com/>

Join the TRU list serve

https://public.govdelivery.com/accounts/CARB/subscribe/new?topic_id=tru



The screenshot shows the CARB Environmental Justice Blog homepage. At the top, the title "CARB ENVIRONMENTAL JUSTICE BLOG" is displayed in teal, with the tagline "Share Stories. Uplift Voices. Empower Communities." below it. A navigation bar includes links for "HOME", "OUR WORK", "ARTICLE CATEGORIES", and "SUBSCRIBE". The main content area features a large graphic with overlapping blue and yellow arcs. A red "UNCATEGORIZED" tag is positioned above the article title: "Public Workshop On Updating The Indoor Air Quality Guidelines For Nitrogen Dioxide". Below the title, the date "CARB ENVIRONMENTAL JUSTICE | APRIL 20, 2023" is shown. A sidebar on the left contains a "PSR" logo and a date "August 02, 2023" with a list of tags including "# Air Monitoring", "Air Toxics", "CARB Air Toxics Program", "Community Air Protection", "Disadvantaged Communities", "Empowerment", and "Environmental". A "Read more" button is present. Below the article is a social media sharing section with icons for Facebook, Twitter, Google+, LinkedIn, and a "0 Comment" indicator. The right sidebar has an "ABOUT US" section with a photo of five people and the CARB Environmental Justice Unit logo.

Next Steps

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To sign up for updates or to access your subscriber preferences, please enter your contact information below.

Email Address *

Submit

Cancel

Your contact information is used to deliver requested updates or to access your subscriber preferences.

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For Additional Information

The TruckStop

<https://ww2.arb.ca.gov/our-work/programs/truckstop-resources/truckstop>

Environmental Complaints

<https://ww2.arb.ca.gov/environmental-complaints>

Enforcement Data Portal

<https://ww2.arb.ca.gov/our-work/programs/enforcement-policy-reports/enforcement-data-portal>

The TruckStop

REGULATIONS



Truck & Bus



Clean Truck Check (HDIM)



TRU/Reefer Regulation

[MORE REGULATIONS](#)

POPULAR RESOURCES

ZEV TruckStop

Off-Road Zone

Citations

Engine Filters

Buyer Beware Notices

Emission Control Labels

TruckStop Web Resources

TRUCRS Reporting

Privacy Policy

Printable Materials

Financial Assistance

Training & Events

For Additional Information

The TruckStop

<https://ww2.arb.ca.gov/our-work/programs/truckstop-resources/truckstop>

Environmental Complaints

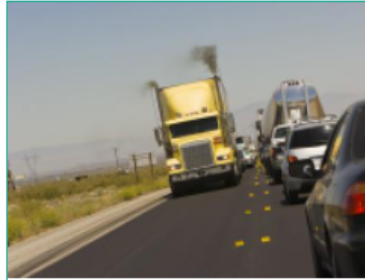
<https://ww2.arb.ca.gov/environmental-complaints>

Enforcement Data Portal

<https://ww2.arb.ca.gov/our-work/programs/enforcement-policy-reports/enforcement-data-portal>

Environmental Complaints

Reporting potential violations of air quality requirements can provide important information for Enforcement. Staff investigates tips about non-compliance and complaints about smoking vehicles and other sources of air pollution.



Report Smoking or Noncompliant Commercial Trucks



Smoking Passenger Vehicles



Idling Complaints



Off-Road Vehicle Complaints



Report General Air Quality Complaints



Labor Violation Complaints

For Additional Information

The TruckStop

<https://ww2.arb.ca.gov/our-work/programs/truckstop-resources/truckstop>

Environmental Complaints

<https://ww2.arb.ca.gov/environmental-complaints>

Enforcement Data Portal

<https://ww2.arb.ca.gov/our-work/programs/enforcement-policy-reports/enforcement-data-portal>



Enforcement Data Portal

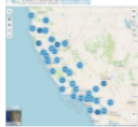
Enforcement Policy & Reports

- About
- News
- Resources
- Advisories Index
- CCPI
- Case Settlements
- Enforcement Data Portal
 - Enforcement Summary
 - Field Operations
 - Complaint Program
 - Portable Equipment Registration Program
 - Stationary Sources
 - Training Program
 - Supplemental Environmental Projects
 - Settlement Agreements
 - District Partnerships

Showcases

Map Enforcement Data

Use the Enforcement Data Visualization System (EDVS) to visualize CARB's enforcement activities across the state, including field inspections and case settlements, on a map interface.



Map Enforcement Data

Exe 202 Data Explorer

Get data on CARB's enforcement activities by selecting a category below.

 Enforcement Summary	 Field Operations	 Complaint Program
 Portable Equipment Registration Program (PERP)	 Stationary Sources	 Training Program
 Supplemental Environmental Projects (SEP)	 Settlement Agreements	 District Partnerships
 Compliance Summary	 Truck and Bus Regulation Compliance	 Penalty Summary

CARB co regulatory business: Despite income require critical p. In recent enforcer problem commu

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nt Activities in

t human health and the environment. These nge, and level the playing field for all

ognizes that communities of color and low- and stationary sources. CARB's regulations ces, and CARB's enforcement program is a ntended emissions reductions are achieved. ze its enforcement efforts, develop better strategies that may help to solve the ormation they need to effect change in their

e in communities and across California, and

advantaged communities. d resulted in 223 citations for non-

, including \$2.5 million to the West Oakland res, healthy jobs, and healthy neighborhoods

ies and 23 landfills.

English Survey

Post Session Survey: Introduction
to TRUs & CARB Regulation
Process Informative Session



Encuesta en Español

Encuesta posterior a la sesión:
Introducción a las TRU y al proceso
de regulación de CARB





Thank You!

Questions? Email us at freight@arb.ca.gov