

The logo features a green bar chart icon with three bars of increasing height to the left of the text 'GMA | TRUCKING'. The text is in a bold, dark blue, sans-serif font. The background is a blurred image of a road at sunset with light trails from a truck.

# **GMA | TRUCKING**

***Aggregating demand to accelerate decarbonization of heavy-duty road transport***

***RFI Webinar – September 17<sup>th</sup>, 2024***

# Today's Speakers



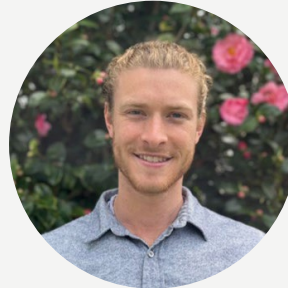
**Andre de Fontaine**

Senior Director,  
Center for Green Market Activation



**Cristiano Façanha**

Director, Road Freight Electrification  
Smart Freight Centre



**Clayton Gerber**

Program Manager,  
Center for Green Market Activation



**Sam Pearl Schwartz**

Program Associate,  
Center for Green Market Activation

# Today's Goal & Agenda

## GOAL

*Provide information about GMA Trucking, book and claim for heavy duty road transportation, and the ongoing request for information (RFI), and answer any questions about how these systems operate for stakeholders across the value chain.*

## AGENDA

- **12-12:15PM:** Welcome and overview of GMA, SFC, GMA Trucking, and the program's objectives – Andre and Cristiano
- **12:15-12:30PM:** Introduction to book and claim in heavy duty road transport and the benefits to carriers, shippers, and solutions providers – Sam and Cristiano
- **12:30-12:40PM:** Overview of GMA Trucking procurement process, including ongoing RFI and upcoming RFP – Clayton
- **12:40-12:55PM:** Participant Q&A
- **12:55-1:00PM:** Next steps

# GMA brings together buyers to execute procurement contracts for decarbonization in the world's hardest-to-abate sectors



The Center for Green Market Activation (GMA) is a US-based, globally focused nonprofit that leverages innovative **book-and-claim systems**, new and creative **procurement approaches**, and demand aggregating **buyers alliances** to catalyze decarbonization and scale critical climate technologies within hard to abate sectors, including:



Aviation



Maritime



Trucking



Cement &  
Concrete



Chemicals



Future  
Programs

## We go beyond collecting commitments by executing on our members' demand through procurement:

1

CONVENE BUYERS

We bring together previously siloed buyers in need of climate solutions to address their scope 3 value chain emissions

2

CONSOLIDATE DEMAND

We combine the demand of individual buyers in the group to form a higher overall "aggregated" demand number.

3

PROCURE GREEN GOODS TO  
MEET DEMAND

We go to market with this aggregated demand and help our members find producers, evaluate proposals, and execute on contracts with sellers.

# GMA brings together buyers to execute procurement contracts for decarbonization in the world's hardest-to-abate sectors



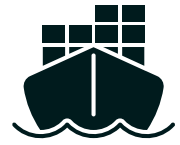
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Aviation



*GMA serves as secretariat  
In partnership with RMI and EDF*



Maritime



*GMA works closely with  
Aspen Institute on ZEMBA*



Trucking



Cement & Concrete



Chemicals



Future Programs

*Developing initiatives*

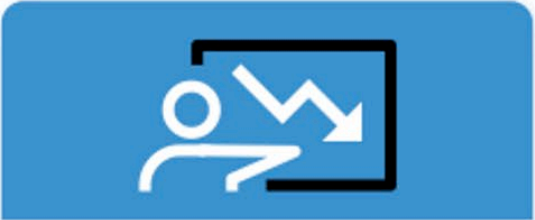
# Smart Freight Centre (SFC) mobilizes global shippers to track and reduce emissions towards net-zero carbon by 2050



## SELECTED CORE STRATEGIES



By **setting global standards for emission accounting** in logistics and maintaining recognition as global authority to enable validation and impact/tracking



By **creating and scaling capacity building programs** within the logistics ecosystem in partnerships, with a focus to spread implementation of standards, foster collaboration, and support impact



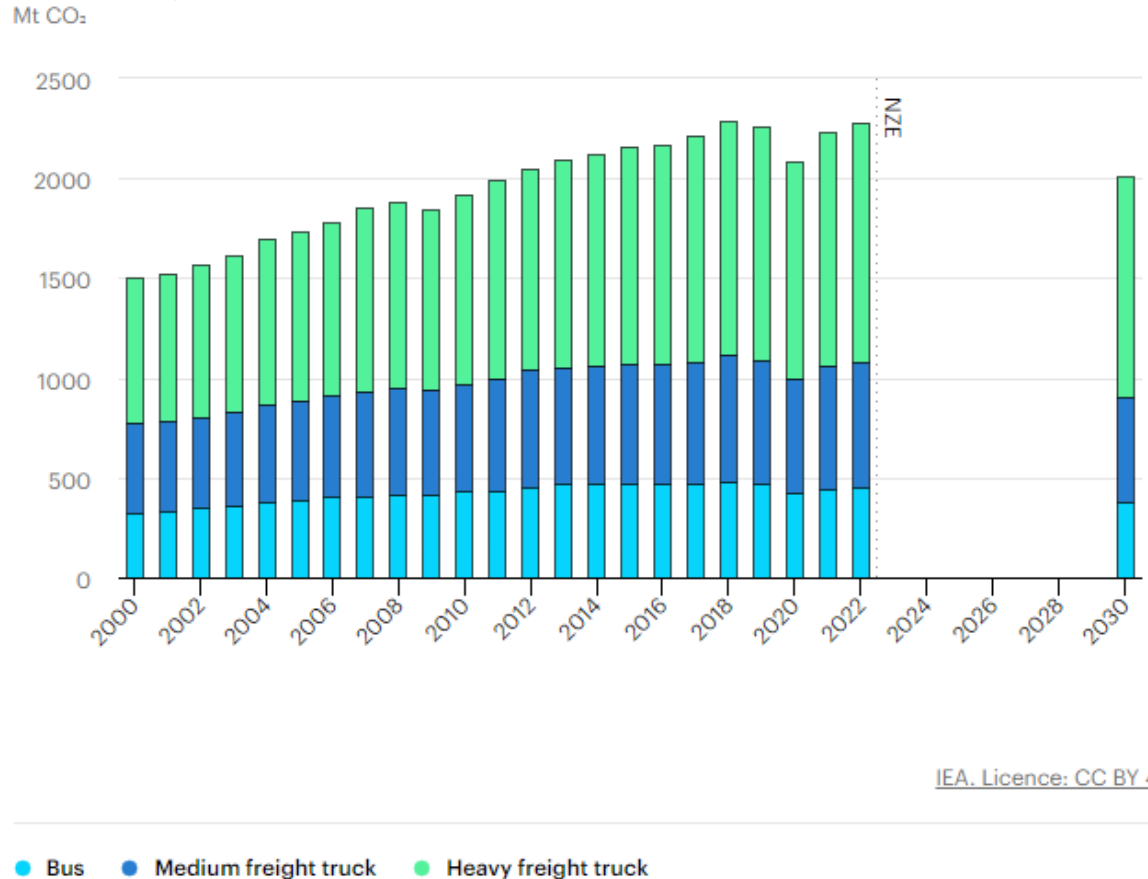
By **shaping collaborative initiatives for action**, focusing on high impact scalable decarbonization levers, that require joint action across the logistics ecosystem



FEC helps shippers and LSPs **accelerate large-scale e-truck deployment** by aggregating demand and channeling it to collaborative projects and partnerships.

# Heavy duty road transportation is a major contributor to global emissions, and is not on target to meet the sector's net zero pathway

Global CO2 emissions from trucks and buses in the Net Zero Scenario, 2000-2030



IEA. Licence: CC BY 4.0

**1.2 GtCO<sub>2</sub>**

emissions from heavy-duty trucks, or roughly 3.3% of global energy-related emissions

**<1.2%**

of combined medium- and heavy-duty truck sales were electric in 2022, with ~0.1% fuel cell electric (FCEV)<sup>1</sup>

**2-3x**

times the cost for a FCEV or BEV class 8 truck compared to the diesel equivalent

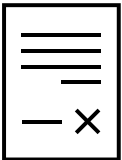
1) IEA

# Decarbonizing heavy-duty trucking today is out of reach for many carriers and shippers – due to overlapping challenges



*ZE vehicles are **not technically or economically feasible** for many routes today*

*Trucking contracts **change frequently** and are typically **shorter than asset lifetime***



## **Challenges to decarbonizing trucking emissions today**

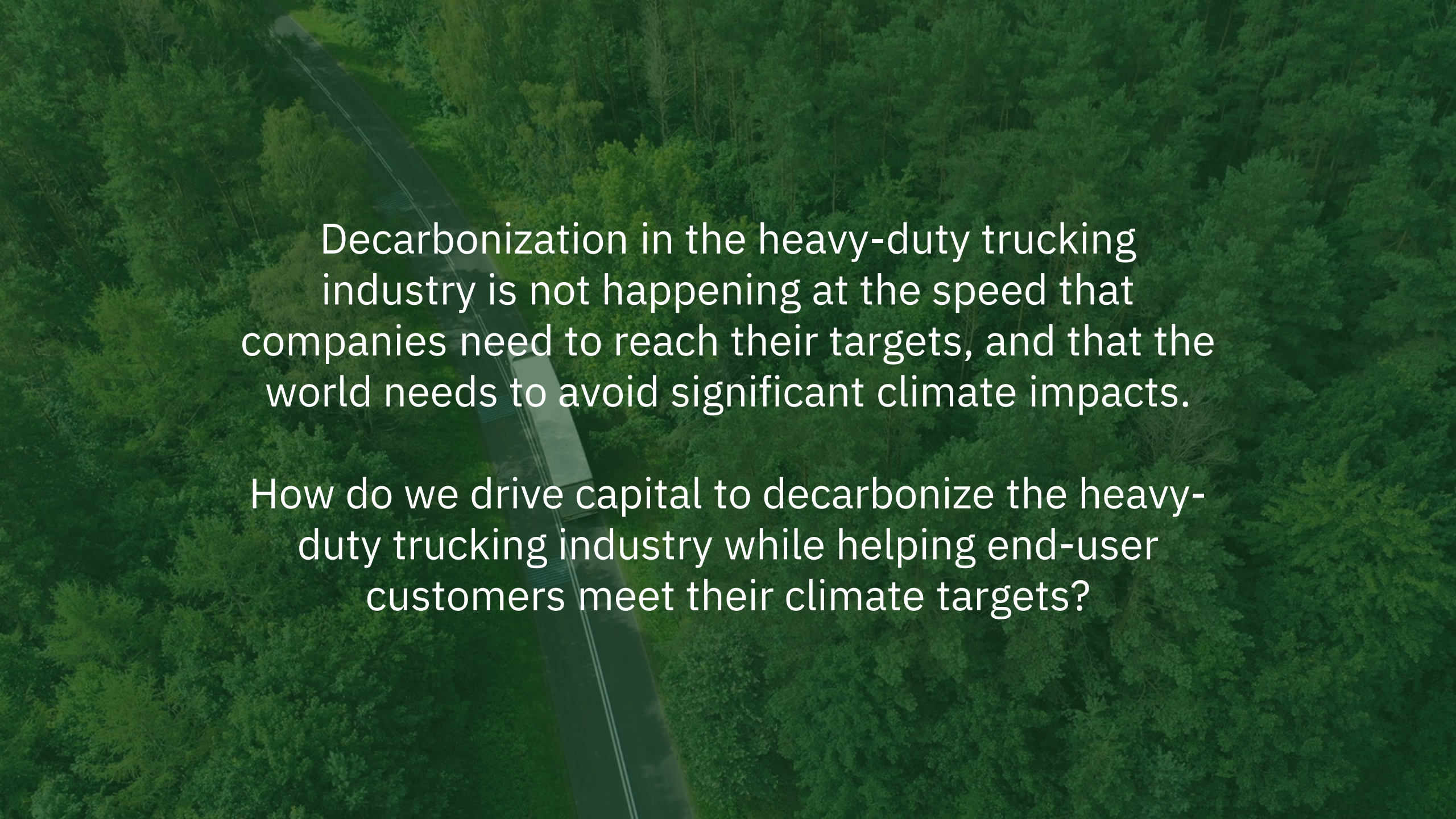


*Trucks, fuels, infrastructure and willing operators are in **short supply***

*Lack of clarity on customer **willingness to pay** for zero emission services*





An aerial photograph of a road winding through a dense, lush green forest. The road is dark and appears to be a two-lane highway. The trees are vibrant green and cover the entire landscape. The text is overlaid on the right side of the road.

Decarbonization in the heavy-duty trucking industry is not happening at the speed that companies need to reach their targets, and that the world needs to avoid significant climate impacts.

How do we drive capital to decarbonize the heavy-duty trucking industry while helping end-user customers meet their climate targets?

# GMA Trucking aims to address the existing issues in road freight decarbonization and catalyze deployment of ZEVs

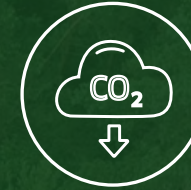
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Enable shippers to **meet their scope 3 climate targets**



Move the deployment of ZEV trucks **up the adoption curve and down the cost curve**



Create a market that can ultimately **lead the trucking industry towards a net-zero future**

# **will aggregate demand from its members and facilitate heavy-duty road transport decarbonization projects**

## **Core Functions and Workstreams:**



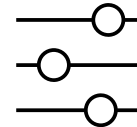
### **DEMAND AGGREGATION**

**Convene a group of shippers and freight-forwarders as members and develop preferences for**



### **BOOK AND CLAIM SYSTEM DESIGN**

**Develop and refine book and claim guidance and infrastructure to ensure credible accounting and**



### **PROJECT IDENTIFICATION**

**Through a competitive RFP process, identify zero-emission road transport**



### **CONTRACT FACILITATION**

**Help our members negotiate and sign bilateral contracts for ZE trucking service attributes**

## **GMA Trucking Members:**



**PEPSICO**



**Meta**



**greenworldwide<sup>®</sup>  
SHIPPING**

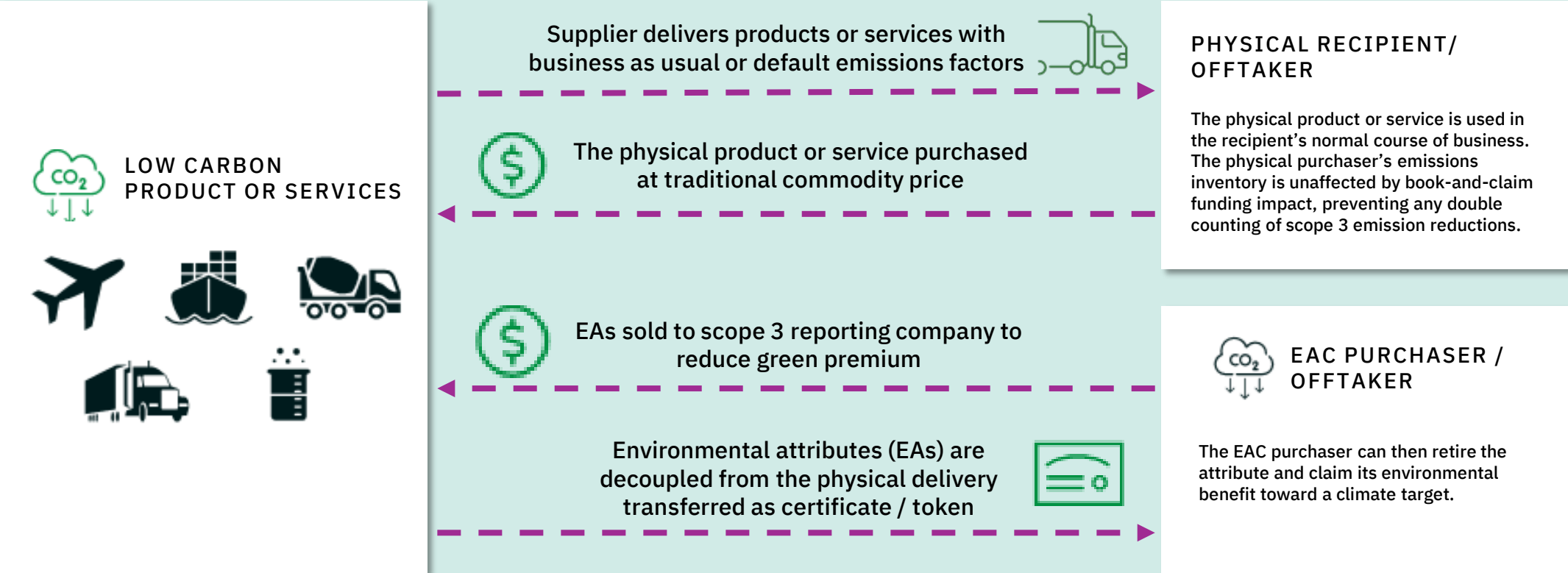


*... with several others in*

# **Book and Claim in Heavy Duty Road Transportation**



# Book and claim systems disaggregate the emissions profile from the physical product or service, allowing a different “end user” to incentivize the decarbonization

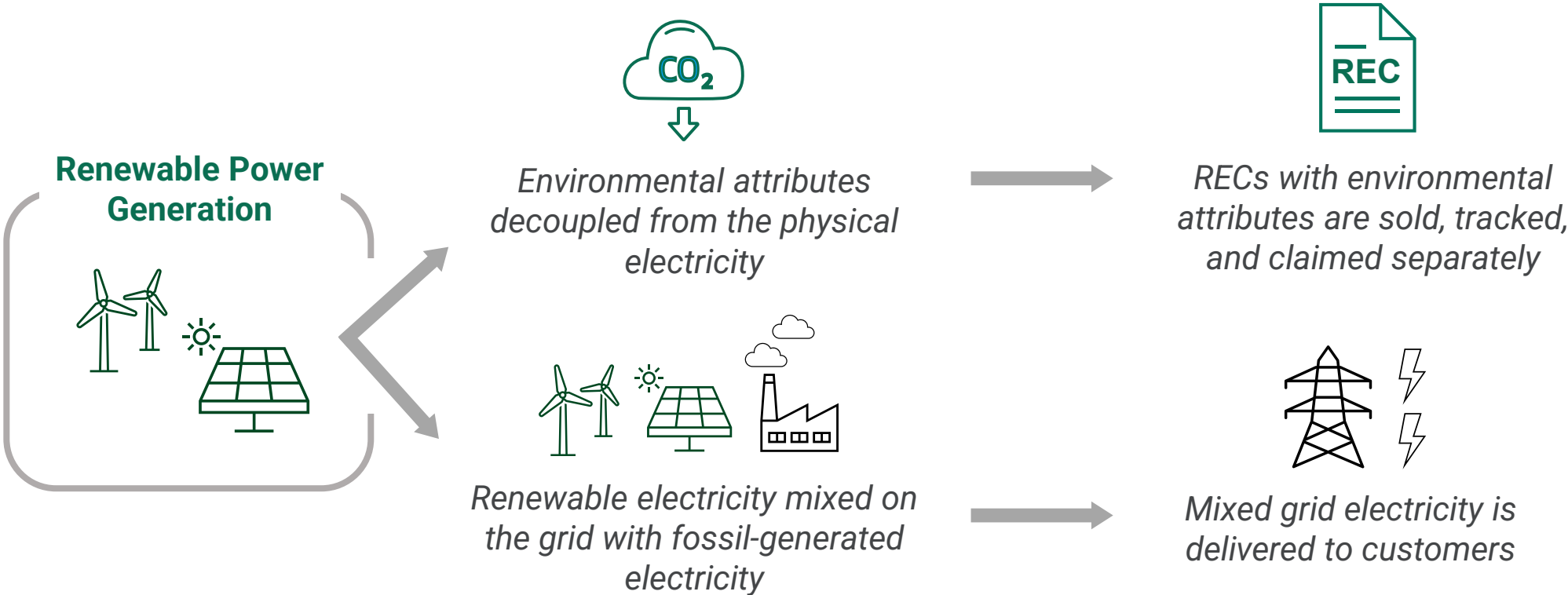


**BOOK** ————— *and* ————— **CLAIM**

# Book and claim in renewable electricity



**Renewable Energy Certificates (RECs)** are the most widely-used book-and-claim instrument today. RECs enable companies to invest in renewable energy – even when they cannot be sure that renewable electrons are delivered to them

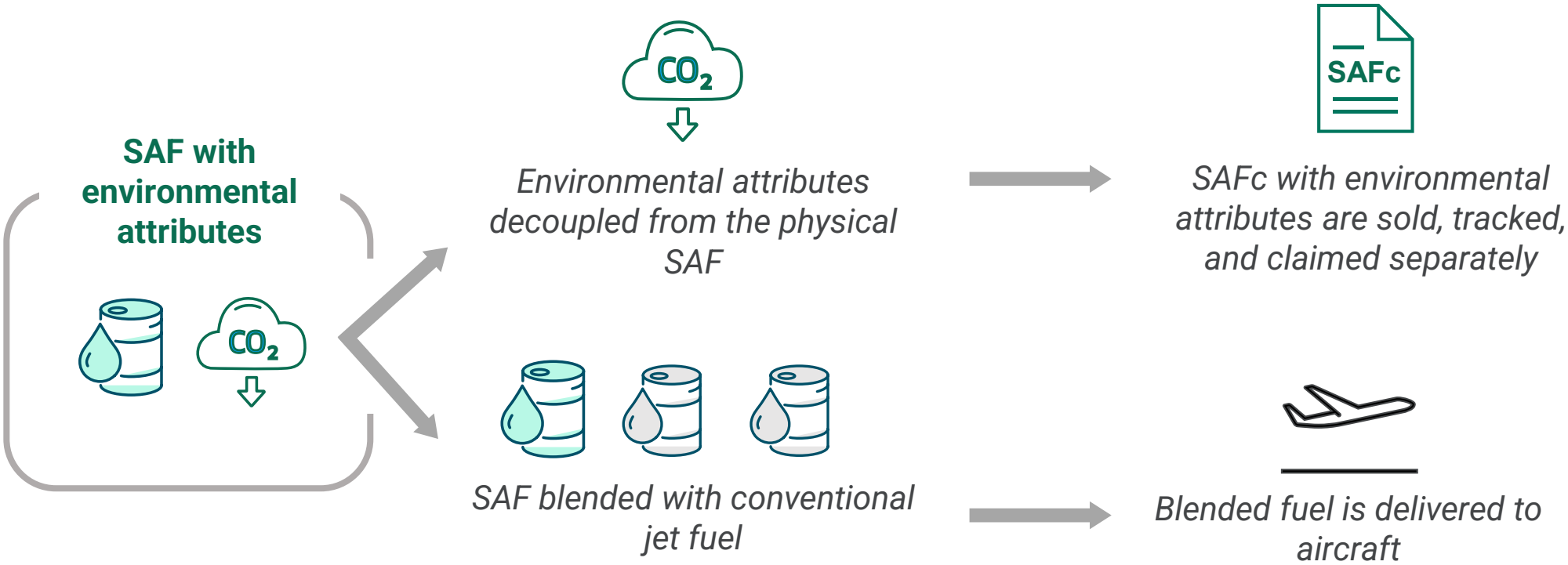


Attribute functional unit: **tCO<sub>2</sub>e per MWh**

# Book and claim in Sustainable Aviation Fuel (SAF)



**SAFc Certificates (SAFc)** are a rapidly emerging book-and-claim instrument. SAFc enables companies to invest in aviation decarbonization – even when they fly or ship goods on flights using conventional jet fuel

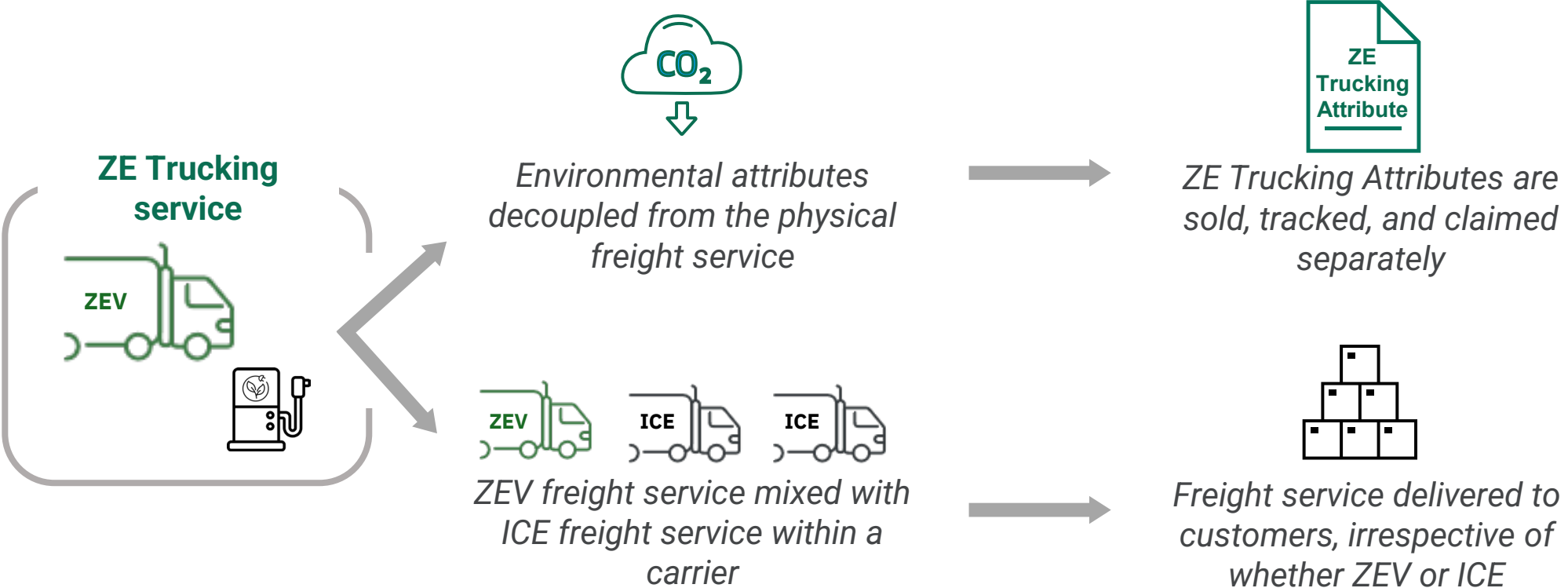


Attribute functional unit: **tCO2e per ton of SAF**

# Book and claim in heavy duty trucking



**ZE Trucking Attributes** will be the book-and-claim instrument for the trucking sector. ZE Trucking Attributes will enable companies to invest in ZE freight moves – even when their physical goods are not being delivered by the zero emission trucks



Attribute functional unit: **kgCO<sub>2</sub>e per ton-mile of trucking service**



# SFC's Market Based Measure Framework outlines the accounting procedure for book and claim in heavy duty road transport



SFC's **Market Based Measures (MBM) Framework** describes how end-user customers can “book and claim” environmental attributes of transport services; SFC builds on the inventory accounting methodology of the GLEC Framework



*You can download the framework for free on their [website](#)*

# Benefits of Book-and-Claim

Shipper

Carrier

OEM/Solutions  
Provider



Unlocks opportunities for shippers to **take action towards incentivizing ZEVs** beyond their specific routes



Drives deployment of ZEVs where they are **most cost effective today**, to drive down costs for tomorrow



**Increases flexibility and stability** for existing logistics contracts where ZEV are not feasible



Drives emissions reductions **to meet scope 3 targets**

# Benefits of Book-and-Claim

Shipper

Carrier

OEM/Solutions  
Provider



Unlocks **new revenue model** for fleet transition and decarbonization



Facilitates **multi-year offtake agreements** that enable large capital investments



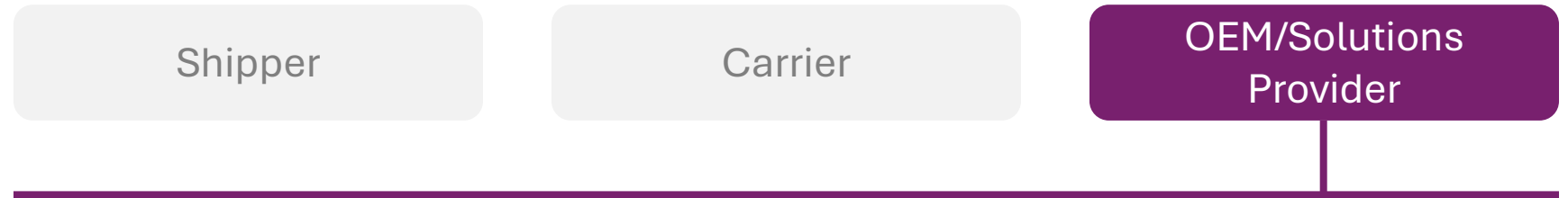
Provides flexibility to deploy vehicles **where most efficient and impactful**



Drives emissions reductions to **meet scope 1 targets**



# Benefits of Book-and-Claim



Drives **sale and use** of ZE technology and infrastructure



Enables streamlined **collaboration between purchasers** to organize larger-scale joint investments



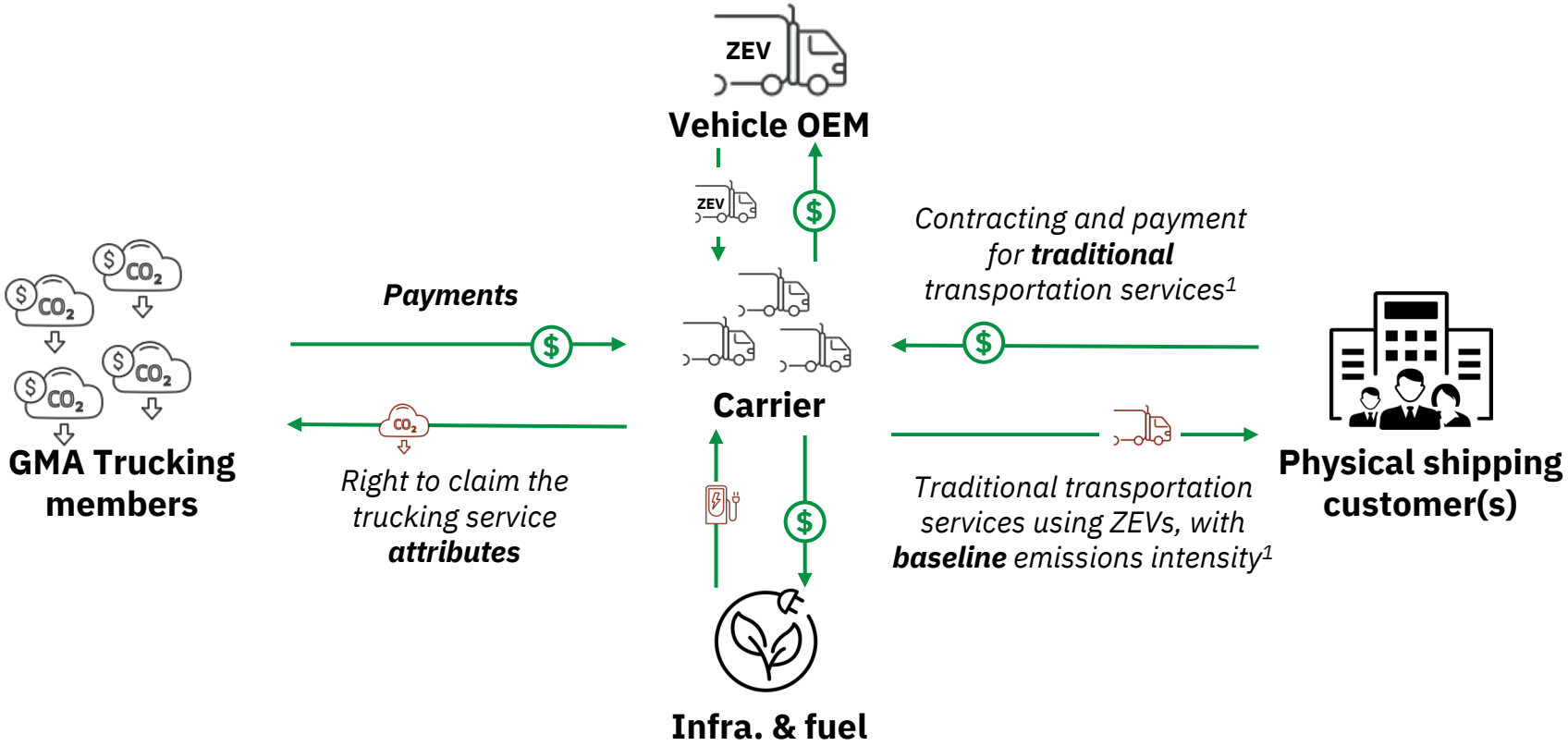
Provides contract structures that facilitate multi-year **infrastructure developments and long-term assets**

An aerial photograph of a two-lane asphalt road winding through a dense, lush green forest. A white semi-truck is driving on the road, moving away from the viewer. The text 'Procurement process Request for Proposal (RFP)' is overlaid in the top left corner in a bold, white, sans-serif font.

**Procurement  
process  
Request for  
Proposal (RFP)**

# The RFP will be directed at carriers, who can work with OEMs, infrastructure providers, and others to submit a response

## GMA Trucking RFP landscape (illustrative)



**Carriers may respond to the RFP either**

- 1** As an **individual organization**, using previously gathered assumptions and information gathered from various potential partners
- 2** As a **consortia**, in coordination with specific providers

<sup>1</sup>Traditional services includes pricing as well as emissions intensity of service; the physical shipper(s) whose goods are being transported on ZEVs funded through this project cannot claim the environmental benefits

# Additional RFP details

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## GMA Trucking commercial structure

*(subject to change by RFP)*

- Final contracts will be **bilateral** between carrier and GMA Trucking member
- Contracts may cover several years of offtake of attributes, with a **preference for 3-4 years**
- Contracts will be signed after negotiations, **payments** will occur upon operation of vehicles and **delivery of attributes** (portion of upfront capital is being considered)

## Vehicle requirements

*(subject to change by RFP)*

- Vehicles must be **Class 8**
- This first RFP will only consider opportunities in **continental US**
- Vehicles must be **battery electric** or **fuel cell electric** technologies
- Energy must be backed by **renewables**, whether electricity or green H<sub>2</sub>

Please review the RFI for more details; several questions relate to these topics and we welcome your feedback so that we may incorporate your perspectives into the RFP

# The key components of the RFP will include volumes, pricing and deployment details

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## Volume

Estimated **ton-miles** that will be generated through use of the ZEVs and sold to GMA Trucking members



## Price

**Price per ton-mile** that carrier requests to sell attribute to GMA members, informed by comparative TCO with traditional diesel vehicles and operations



## Deployment Details

Additional information such as location, charging/refueling plan, physical shipper, among others

Initial member demand is at least **110 million ton-miles per year** and expected to **increase** before RFP launch!



# **Our members are committed to procuring high-integrity attributes; responses to the RFP will only be considered if they align with GMA Trucking's Sustainability Criteria**

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**The Sustainability Criteria aim to ensure projects:**



## **Generate well-to-wheel near-zero emissions**

Which includes the emissions to generate the electricity and/or fuel dispensed to vehicles, such as renewable electricity



## **Align with the Atmospheric Benefit Principle**

Which states that emission reductions being claimed for use toward voluntary climate targets will need to generate emissions reductions beyond those already incentivized by compliance obligations

Refer to Appendix A of the RFI for the draft\* Sustainability Criteria

*\*Subject to change prior to release of RFP*

# Steps for carriers to engage with GMA Trucking pilot RFP

## 1. Identify ZEV opportunity(s)

- Identify suitable routes for ZEVs; work with OEMs, infrastructure providers, and others to scope proposals
- Calculate comparative total cost of ownership (TCO) for zero emission vehicles (ZEV) versus ICE

## 2. Respond to RFP

- Respond to RFP, including key components
  - Volume
  - Price
  - Deployment details

## 3. Contract with GMA members

- If selected, contract with one or more members to sell environmental attributes of ZEV service

## 4. Purchase and deploy

- Purchase necessary vehicles, infrastructure, and equipment, or work with solutions providers to contract equipment

## 5. Operate vehicles

- Deploy vehicles to physical customers, gathering required data to calculate ZEV attributes
- Transfer attributes on registry and receive recurring payments from GMA members

An aerial photograph of a two-lane asphalt road winding through a dense, lush green forest. A white semi-truck is driving on the road, moving away from the viewer. The text 'Procurement process Request for Information (RFI)' is overlaid in the top left corner in a bold, white, sans-serif font.

**Procurement process  
Request for  
Information (RFI)**

# The RFI is designed to gather valuable information from carriers to inform the RFP

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## Objectives of RFI

*Gather perspectives from carriers to inform procurement process*

*Ensure RFP is designed with usability and efficiency at the center*

*Maximize impact and scalability of RFP*

## Response sections of the RFI



ZEV Details



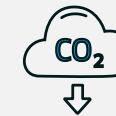
Green Energy & Fuels



Deal Duration & Payment



Annual Volumes



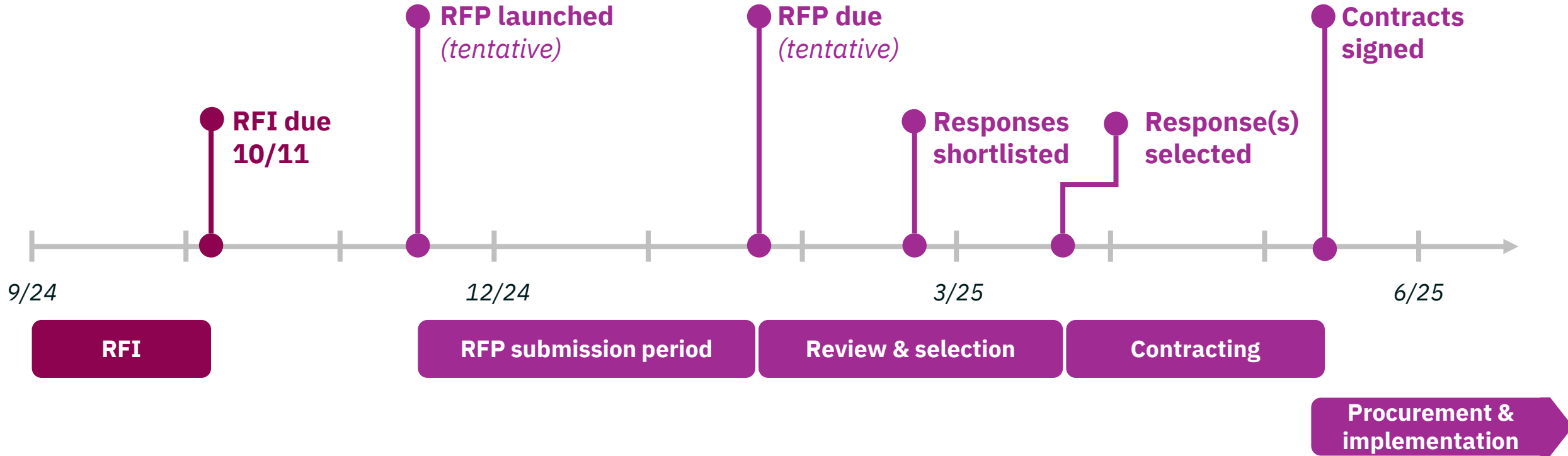
Sustainability Attributes



**The RFI is aimed at  
carriers to gather feedback  
and perspectives**

**If you are a solutions provider, OEM, or other stakeholder in the trucking industry, please share the RFI with carriers of interest and prepare to respond to the RFP with them, if applicable**

# The RFI is due October 11<sup>th</sup>, and the RFP will be launched later this year



## Next steps

- If a carrier, please respond to the RFI and include any additional questions, comments, or feedback
- If a solutions provider, please share the RFI with other carriers interested in this funding mechanism
- Begin preparing for the RFP by identifying applicable routes and deployment opportunities within your operations

# Q&A with today's speakers



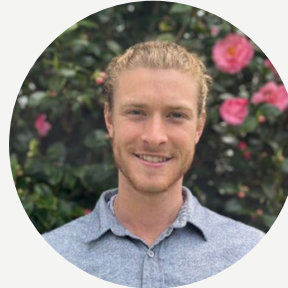
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# Thank You!

For more information or to get in contact, please reach out to [trucking@gmacenter.org](mailto:trucking@gmacenter.org)



# Antitrust reminder

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Today's meeting includes participants that may be viewed as actual or potential competitors interested in participating in buyers groups aimed at supporting the development of a new marketplace aimed at simulating the growth of zero and low emission heavy transport sectors. Buyers alliances, like other buying groups (also known as group purchasing organizations) are subject to antitrust laws. Penalties for violating the antitrust laws are severe, and can include heavy fines, injunctions, civil judgments, and even imprisonment. It is the responsibility of each participating company to follow these laws at all times. Competitors may not agree to unreasonably restrain trade or monopolize any line of commerce, **The guidance we are providing is driven primarily by U.S. law and we encourage you to seek the advice of counsel to ensure that the applicable laws in other jurisdictions in which you operate are also met.**

**Participants in today's meeting should not discuss their own company's non-public, disaggregated, competitively sensitive information nor seek such information from other participants, including the following:**

Recent, current or future pricing and pricing-related terms, including for example any discounts or rebates of any products or services offered by participants.

Current or future plans to bid or not bid for specific projects.

Disaggregated recent, current or anticipated future costs for particular goods or services.

Salaries and wages of employees.

Other competitively sensitive non-price terms of sale in customer or supplier contracts such as most favored nations price clauses, exclusivity, contract duration.

Current or future non-public strategic, marketing, capital development or other business plans of any participants.

Current or future plans to expand or reduce production or capacity in the markets.

Allocating customers, territories or other markets among either (a) suppliers/operators; or (b) buyers who are actual or potential competitors in any downstream markets; and

Which suppliers/operators the buyers will or will not do business with outside of a buyers alliance either before or after it is formally commenced.

Failure to follow these rules during today's meeting may result in your being interrupted by the moderator or expulsion from the meeting.