GMA | TRUCKING

Aggregating demand to accelerate decarbonization of heavy-duty road transport

RFI Webinar – September 17th, 2024

Today's Speakers

Andre de Fontaine
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Center for Green Market Activation

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Smart Freight Centre

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Program Manager,
Center for Green Market Activation

Sam Pearl Schwartz
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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

GMA

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

SABA
SUSTAINABLE AVIATION BUYERS ALLIANCE

GMA serves as secretariat
In partnership with RMI and EDF

Maritime

ZEMBA

GMA works closely with
Aspen Institute on ZEMBA

Trucking

GMA 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

Smart Freight Centre

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

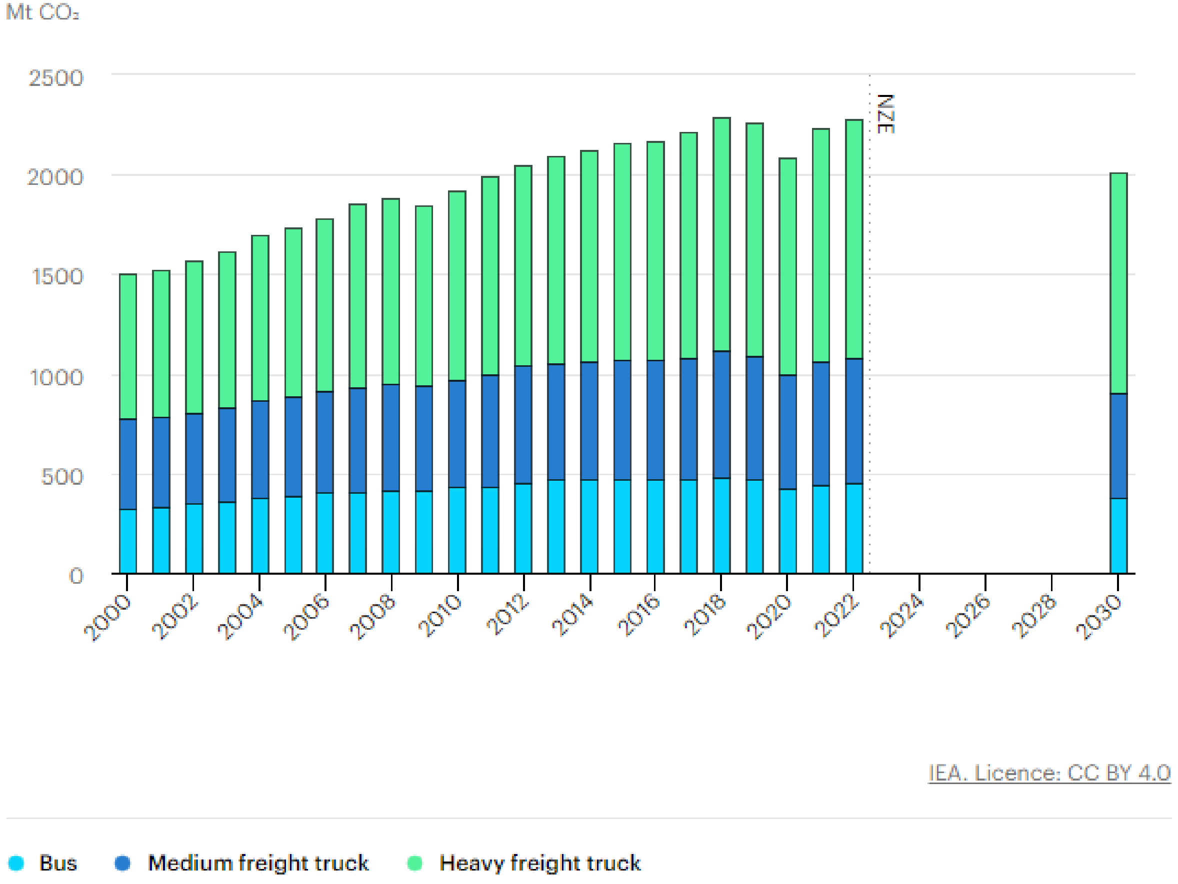
By **shaping collaborative initiatives for action,** focusing on high impact scalable decarbonization levers, that require joint action across the logistics ecosystem

FLEET ELECTRIFICATION COALITION

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



1.2 GtCO2

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)[1]

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*

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

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

Move the deployment of ZE 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**

GMA | TRUCKING 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 procurement

BOOK AND CLAIM SYSTEM DESIGN

Develop and refine book and claim guidance and infrastructure to ensure credible accounting and tracking of attributes

PROJECT IDENTIFICATIO N

Through a competitive RFP process, identify zero-emission road transport service funding opportunities

CONTRACT FACILITATION

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

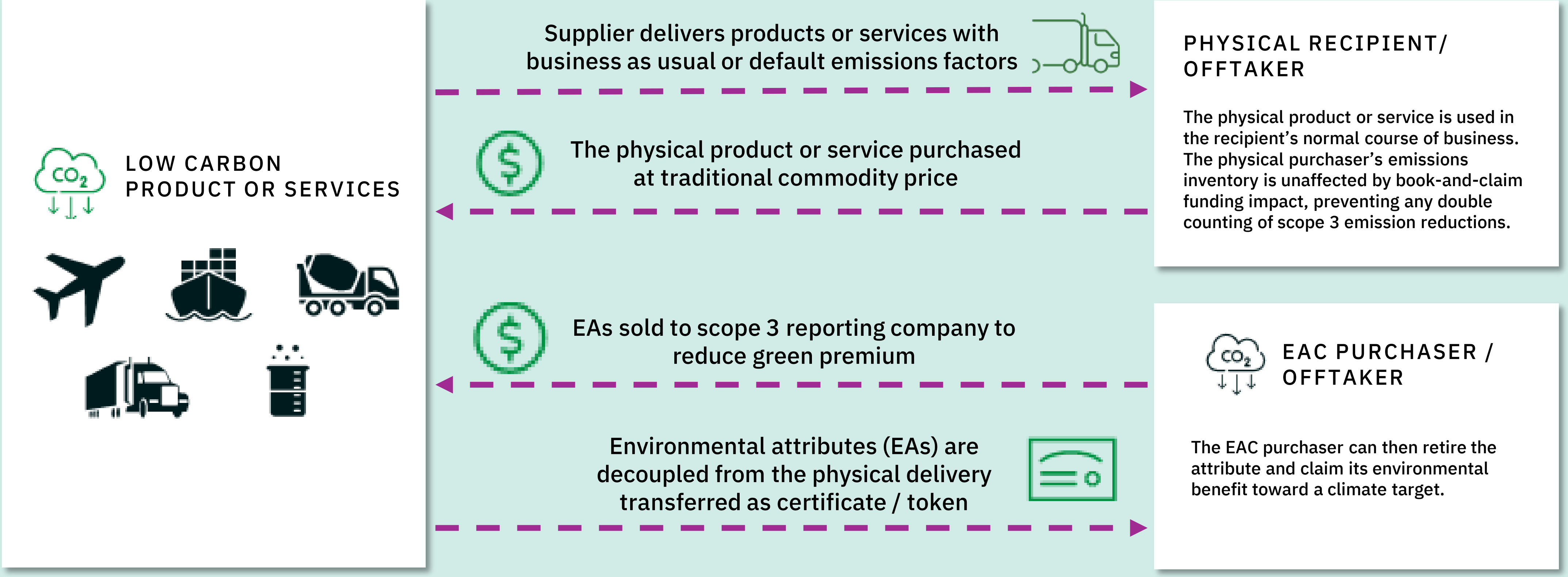
GMA Trucking Members:

PEPSICO | Meta | REI co-op | greenworldwide SHIPPING | ebay | Etsy

... with several others in

Book and Claim in Heavy Duty Road Transportation

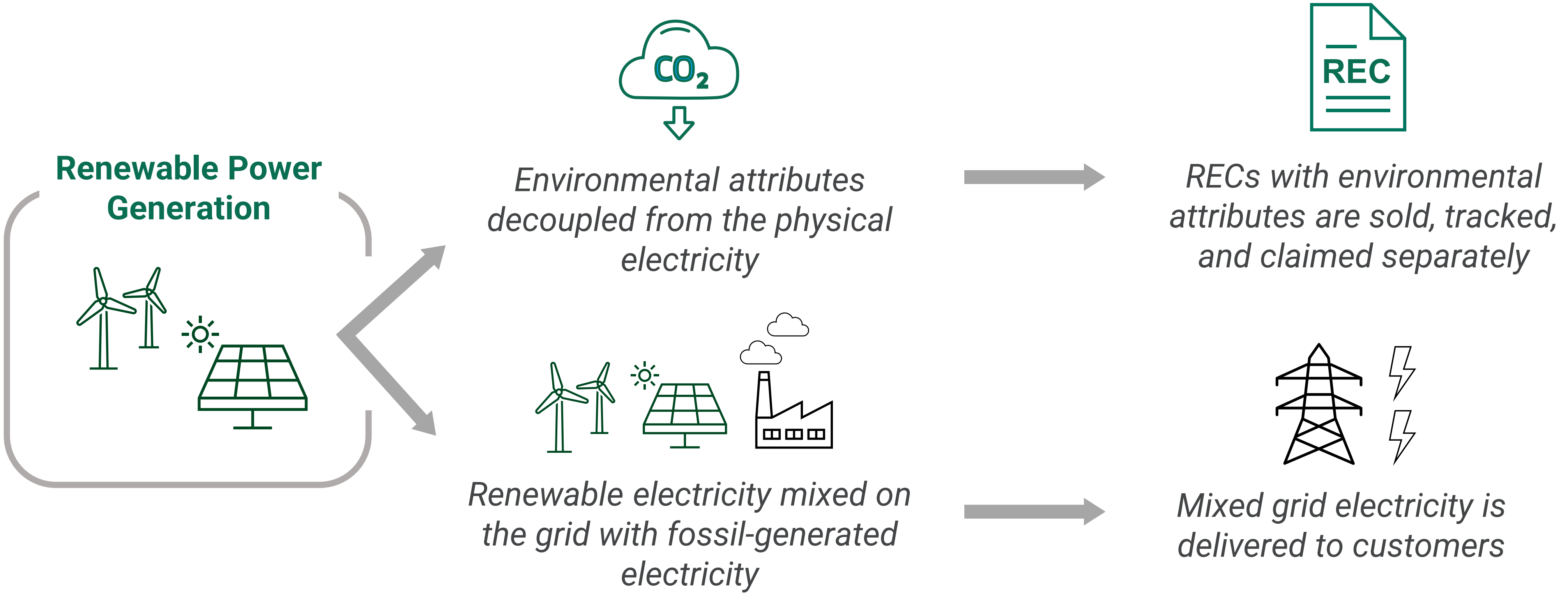
Book and claim systems disaggregate the emissions profile from the physical product or service, allowing a different “end user” to incentivize the decarbonization



BOOK *and* CLAIM

Book and claim in renewable electricity

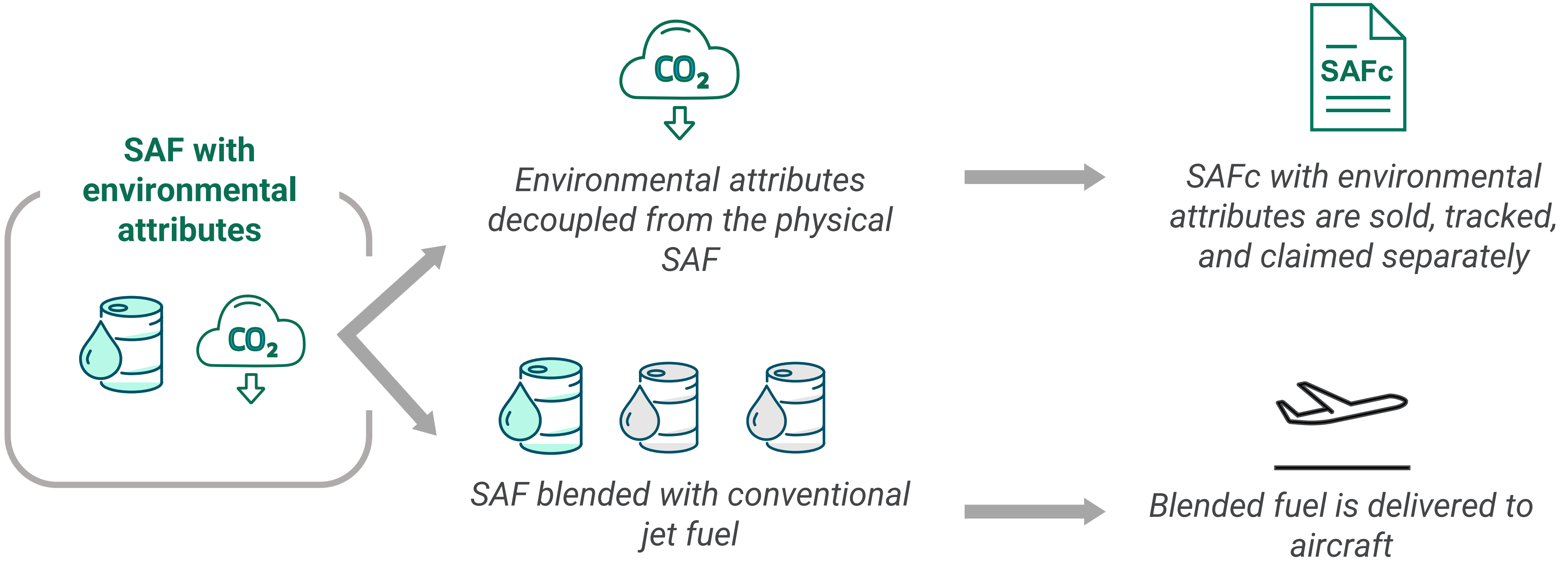
Renewable Energy Certificates (RECs) are the most widely-used book-and-claim instrument today. RECs enable companies to invest in renewable energy – even when they cannot be sure that renewable electrons are delivered to them



Attribute functional unit: **tCO2e per MWh**

Book and claim in Sustainable Aviation Fuel (SAF)

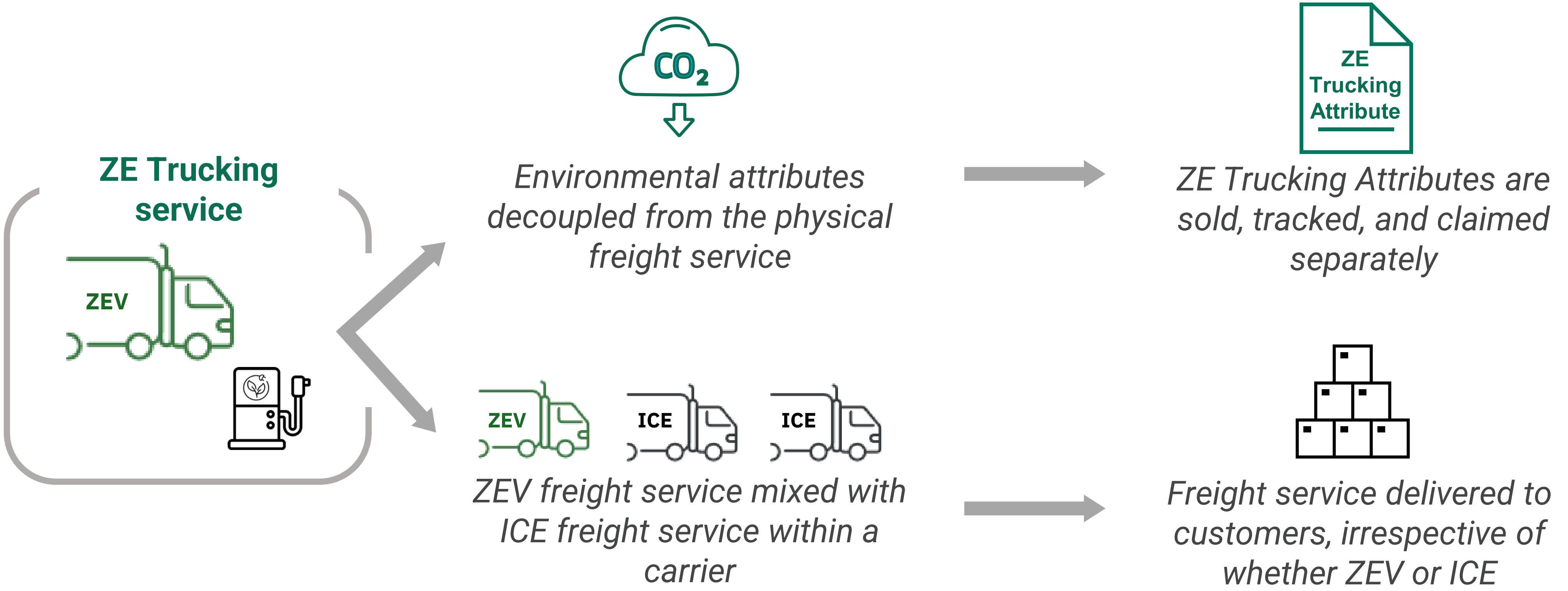
SAF Certificates (SAFC) are a rapidly emerging book-and-claim instrument. SAFc enables companies to invest in aviation decarbonization – even when they fly or ship goods on flights using conventional jet fuel



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: **kgCO2e 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

GLEC GLOBAL LOGISTICS EMISSIONS COUNCIL

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

Shipper

Carrier

OEM/Solutions Provider

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

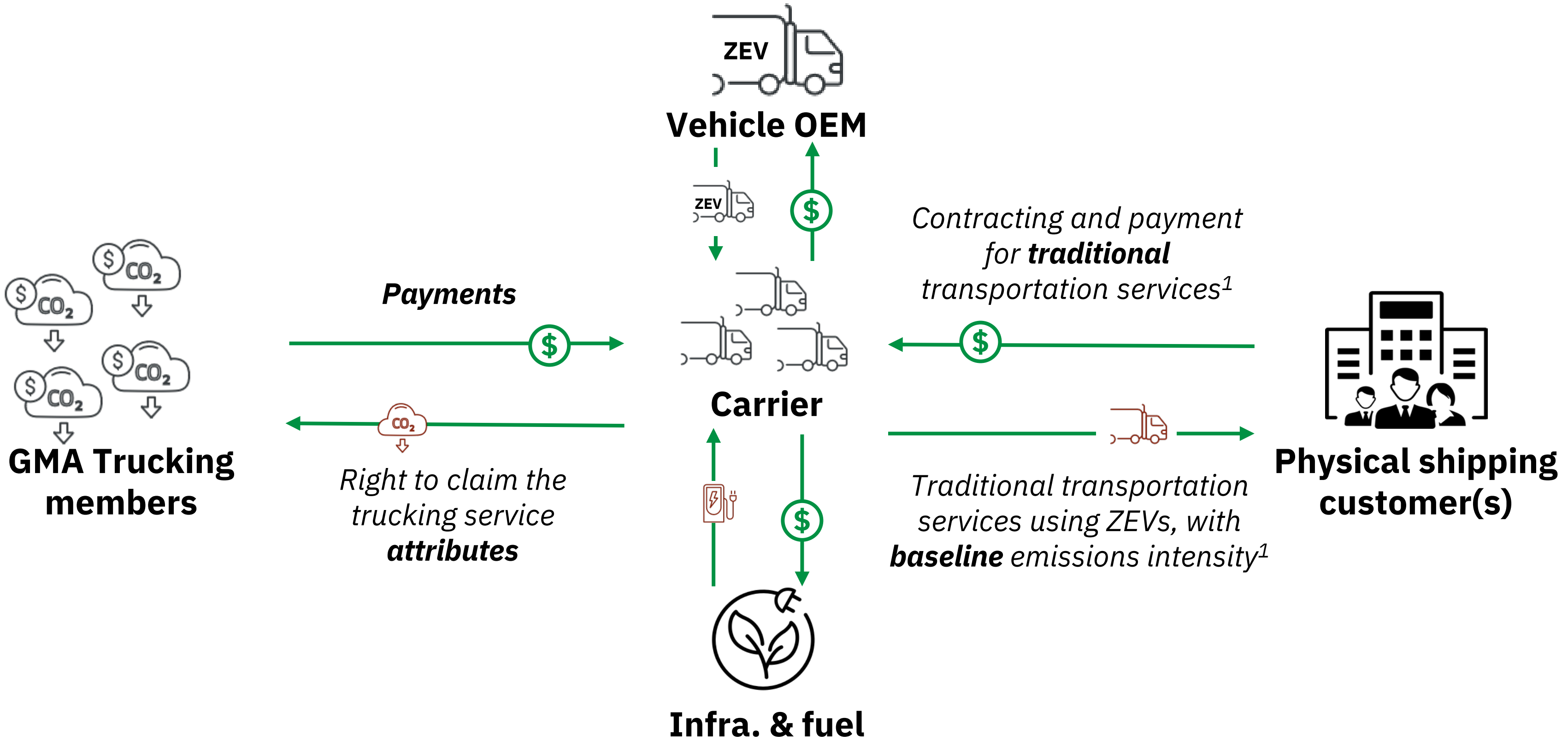
Enables streamlined **collaboration between purchasers** to organize larger-scale joint investments

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

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

[1]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

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_2

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

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

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

Procurement process Request for Information (RFI)

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

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

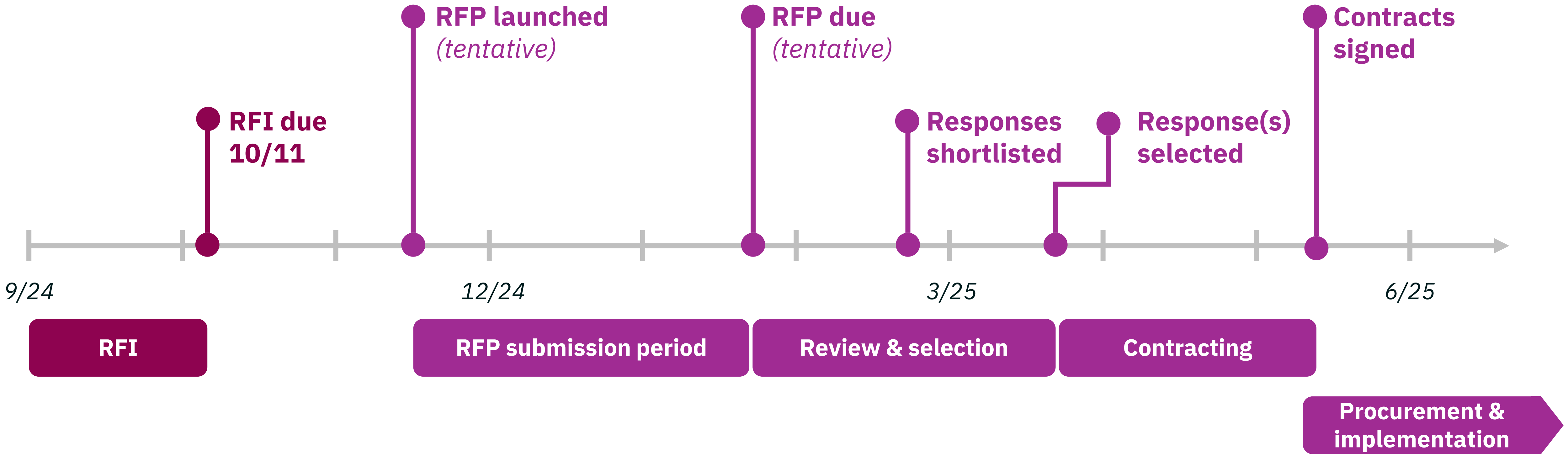
Response sections of the RFI

- **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 11th, 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

GMA Smart Freight Centre

Q&A with today's speakers

Andre de Fontaine
Senior Director,
Center for Green Market Activation

Cristiano Façanha
Director,
Smart Freight Centre, Head of Road Freight Electrification

Clayton Gerber
Program Manager,
Center for Green Market Activation

Sam Pearl Schwartz
Program Associate,
Center for Green Market Activation

Thank You!

For more information or to get in contact, please reach out to trucking@gmacenter.org

Antitrust reminder

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.