

Heavy Duty Transport and the Power of Buyers Alliances to Unlock Deep Decarbonization



Today's Speakers



Kim Carnahan

President and CEO,
Center for Green Market Activation

Head of Secretariat, SABA



Ingrid Irigoyen

President and CEO, ZEMBA

Senior Director, Ocean and Climate,
Aspen Institute Energy and
Environment Program



Andre de Fontaine

Senior Director,
Center for Green Market Activation

Head of Procurement, SABA

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

1

System Design & Build



Organize stakeholders; gather perspectives on key design questions



Align on system design elements, e.g. unit of measure, certification requirements, etc.



Establish system, e.g. work with partners to stand up registry, certification process, etc.

2

Demand Aggregation & Execution



Find, on-board and educate buyers' alliance members



Facilitate member choice of procurement criteria e.g., time period, emissions threshold, etc.



Evaluate proposals, negotiate contract terms, facilitate member contracts

We go beyond target-setting to help members **execute on demand through collective procurement.**



Today's Objectives & Agenda

Objectives

- *Learn about how procurement-focused buyers alliances can help your company reduce Scope 3 emissions in hard-to-abate sectors + build new markets for low/zero emission alternatives.*
- *Understand the collective impact, early access to high integrity scope 3 reductions, and economies of scale that can be gained by joining forces with likeminded climate leaders. The session will focus on heavy transport - maritime, aviation, and trucking.*

Agenda

- **12-12:15PM:** Welcome and overview of current challenges and opportunities in decarbonizing heavy duty transport sectors – Kim and Ingrid
- **12:15-12:35PM:** Overview of sector initiatives, including ZEMBA, SABA, and GMA Trucking – Ingrid and Andre
- **12:35-1:00PM:** Q&A

Customers across different transport sectors are struggling to reduce their supply chain (Scope 3) emissions.

What we hear from our members across aviation, maritime, trucking ...

Need practical, flexible approaches that recognize business reality without compromising on sustainability

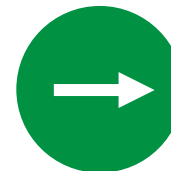
Desire to work together collaboratively with peers to maximize collective impact

Need clarity that environmental attribute certificates (EACs) will count towards ambitious climate targets

Want standardized systems to reduce learning curve across sectors and ease contracting

Willing to pay premium to kickstart transition, but need to see cost reductions overtime

Seek trusted, mission-driven advisors with sector-specific and procurement expertise



SABA
SUSTAINABLE AVIATION BUYERS ALLIANCE

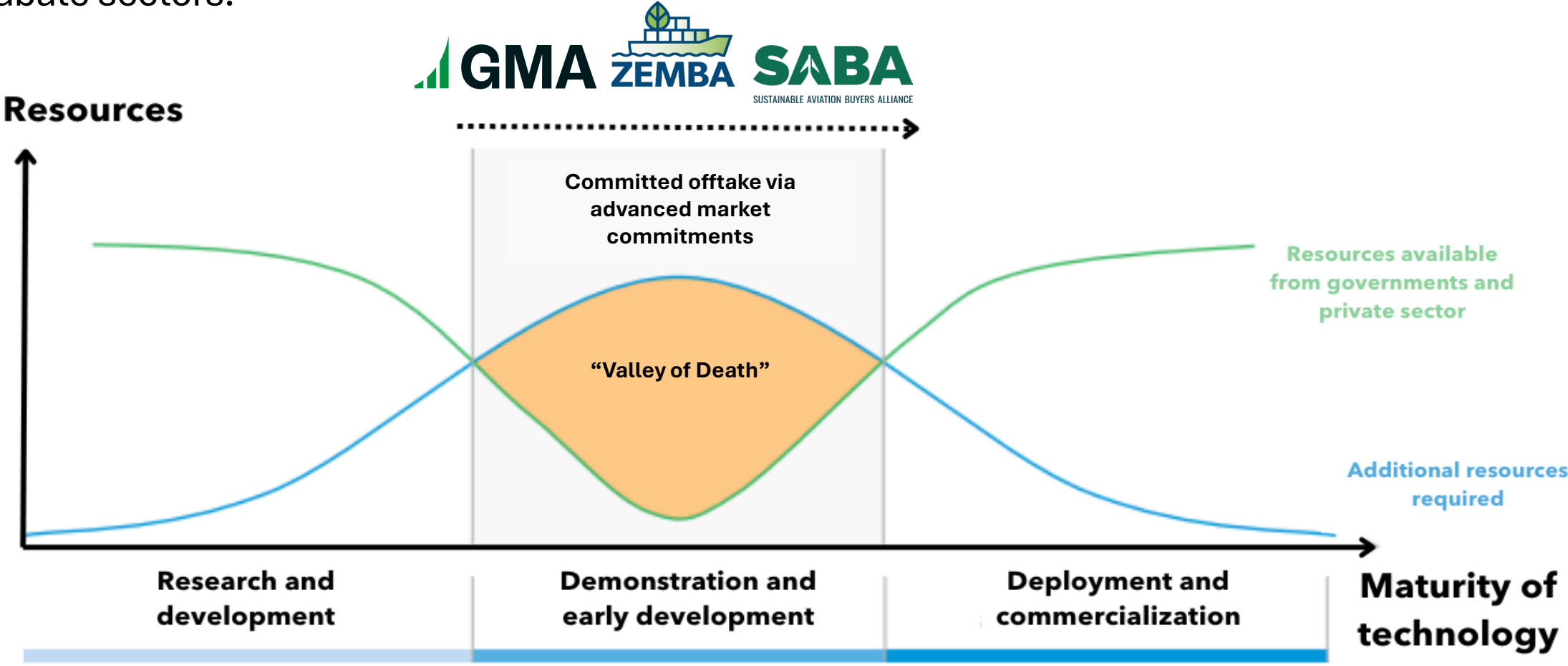
GMA | TRUCKING



Our buyers alliances are designed *with* buyers to meet these needs

Buyers alliances help bridge the “Valley of Death” by kickstarting markets for low and zero emission alternatives.

The faster we cross the bridge to scale, the sooner cost per unit declines. This is true for many hard to abate sectors!



Adapted from First Movers Coalition and Boston Consulting Group report, “Harnessing Purchasing Power to Drive Decarbonization Through the First Movers Coalition”, 2023.

The buyer alliances we'll be discussing today have several commonalities. Principal among them: **BIAS FOR ACTION**

Our impact is measured in **signed bilateral contracts** for real **in-sector emissions reduction** and **verified adoption of scalable alternative fuel and technology solutions** necessary for meeting GHG reduction targets in the **hardest-to-abate sectors**.

Aligned missions:

Accelerate **deployment of low and zero-emission solutions**, create access to high integrity environmental attributes (emissions reductions)

Enable **economies of scale** for buyers and suppliers, especially for fuels and tech with potential to scale and decrease in cost over time

Maximize **emissions reduction potential** beyond what any one buyer could accomplish alone

We work across five key areas to activate and accelerate green markets in each sector.



B&C SYSTEM DEVELOPMENT

We work with standard setters, expert partners and stakeholders across each sector's value chain to establish metrics, baselines, and rules needed to ensure a credible, transparent book-and-claim system



REGISTRY DEVELOPMENT

We co-develop public-facing, universally accessible registries with NGO partners, to drive transparency and standardization in environmental attribute certificates (EACs) markets



SUSTAINABILITY STANDARDS

We develop robust sustainability requirements to ensure our members support investments in only the highest quality climate solutions



ACCOUNTING GUIDANCE

We help write detailed guides for companies on how to calculate and report the impact of their investments in climate solutions



COLLECTIVE PROCUREMENT

We attract suppliers, evaluate proposals, negotiate terms, and ensure smooth execution of contracts to help companies meet their climate targets

Why are these alliances using book and claim systems?

- The **environmental benefits of a green product or service are separated from its physical delivery** in the supply chain, carefully tracked and documented, and delivered to the willing buyer to credibly claim.
- Allows corporate end customers and suppliers of green services to **enter into offtake agreements** for emissions reductions, even if they don't normally have a direct commercial relationship.
- **Allows investment to flow** to the best new alternatives unconstrained by physical logistics and other operational challenges.

How it works

 LOW CARBON
PRODUCT OR SERVICES



The green product or service's **environmental features and associated claims** are codified in an “environmental attribute certificate” (EAC)



The **physical product or service** is delivered into the supply chain as usual

Book-and-claim “**decouples**” the physical product or service from its environmental benefits, for the first time giving many companies the opportunity to invest in these solutions without changing their logistics

MARITIME

Zero Emission Maritime Buyers Alliance (ZEMBA)

MISSION STATEMENT

Accelerate commercial deployment of zero-emission (ZE) shipping solutions, enable economies of scale for freight buyers and suppliers, and help cargo owners maximize emissions reduction potential beyond what any one freight buyer could accomplish alone.

ZEMBA aggregates freight buyer demand and runs procurements for zero-emission shipping on behalf of our members.



Secretariat:



Collaborating closely with:



ZEMBA is an independent 501(c)3 which operates as a membership-based organization.

The Aspen Institute serves as the secretariat of ZEMBA, with technical support from GMA.

30+

cargo owner and freight forwarder members
& counting...

amazon



Electrolux



Tchibo



greenworldwide[®]
SHIPPING

reckitt[®]

patagonia[®]

Meta



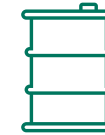
The maritime sector has unique challenges that we have specifically designed ZEMBA to tackle head on.



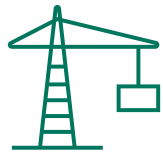
90% of cargo is shipped across the ocean. Maritime freight is essential to our economy but is an incredibly diverse sector that requires **targeted solutions**.



The shipping industry emits **1bn tons** of greenhouse gas (GHG) annually – could rise by 250% by 2050 under BAU.



99% of **current maritime fuels are fossil**. 1% is biodiesel.



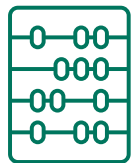
Sector requires significant **infrastructure development** to enable a zero-emission future.



Maritime is facing a **multi-fuel future** and a current **lack of clarity** on the most viable and “greenest” pathway.



Most sustainable bio-based fuels **not scalable**, projected to rise in price – e-fuels are the **long-term solution**.



Transport emissions **vary considerably** by ship size, route, speed, operation - need for a **nuanced, focused carbon accounting** approach.



Global maritime GHG regulations under debate – **closing window of opportunity** to influence.



Real opportunity to achieve **credible emissions abatement** and greater transparency for corporate customers.

In April 2024, completion of ZEMBA's inaugural tender marked the first-ever collective multi-year offtake commitment for near-zero GHG shipping. An entirely new clean fuel alternative has entered the market as a result!

17

Cargo owner and freight
buyer members signed
bilateral contracts

>90%

Emission reduction
over fossil fuels on a
lifecycle basis

82k

mt CO₂e avoided

Next Round:
Scalable, sustainable e-fuel-powered shipping services
launching Q1 2025



ZEMBA and GMA partner with to support design of the first nonprofit Maritime Book & Claim (MBC) system



Mærsk Mc-Kinney Møller Center
for Zero Carbon Shipping

+



- Maritime Book & Claim (MBC) system allows:
 - **Fast and cost-efficient processing** of emission reduction claims
 - **Proper transparency, tracking, and safeguards** toward emissions reduction efforts
- MBC will be ready for deployment of ZEMBA's first deal and has been designed with input and testing from our members.
- ZEMBA relies on a combination of **existing best-in-class fuel certification systems**, along with a bespoke **third-party audit by a selected class society** to assure the accuracy of fuel deployment information.
- ZEMBA provides **expert carbon accounting guidance** that aligns with GLEC, SBTi, and GHGP and will evolve with new guidance on EACs



AVIATION

Sustainable Aviation Buyers Alliance (SABA)

MISSION STATEMENT

SABA is committed to **accelerating the path to net zero air transport** by driving investment in high quality SAF, catalyzing new SAF production and technological innovation, and supporting member engagement in SAF policymaking.

Founding partners:



SABA operates as a membership-based organization.

SABA is a joint non-profit initiative of EDF and RMI, with GMA serving as the Secretariat.

30+

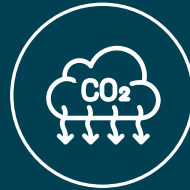
corporate air transport customers and providers in membership & counting...



Getting customers involved is a key step in unlocking Sustainable Aviation Fuel



If **aviation** were a country, it would be the **fourth-greatest-emitting country** in the world



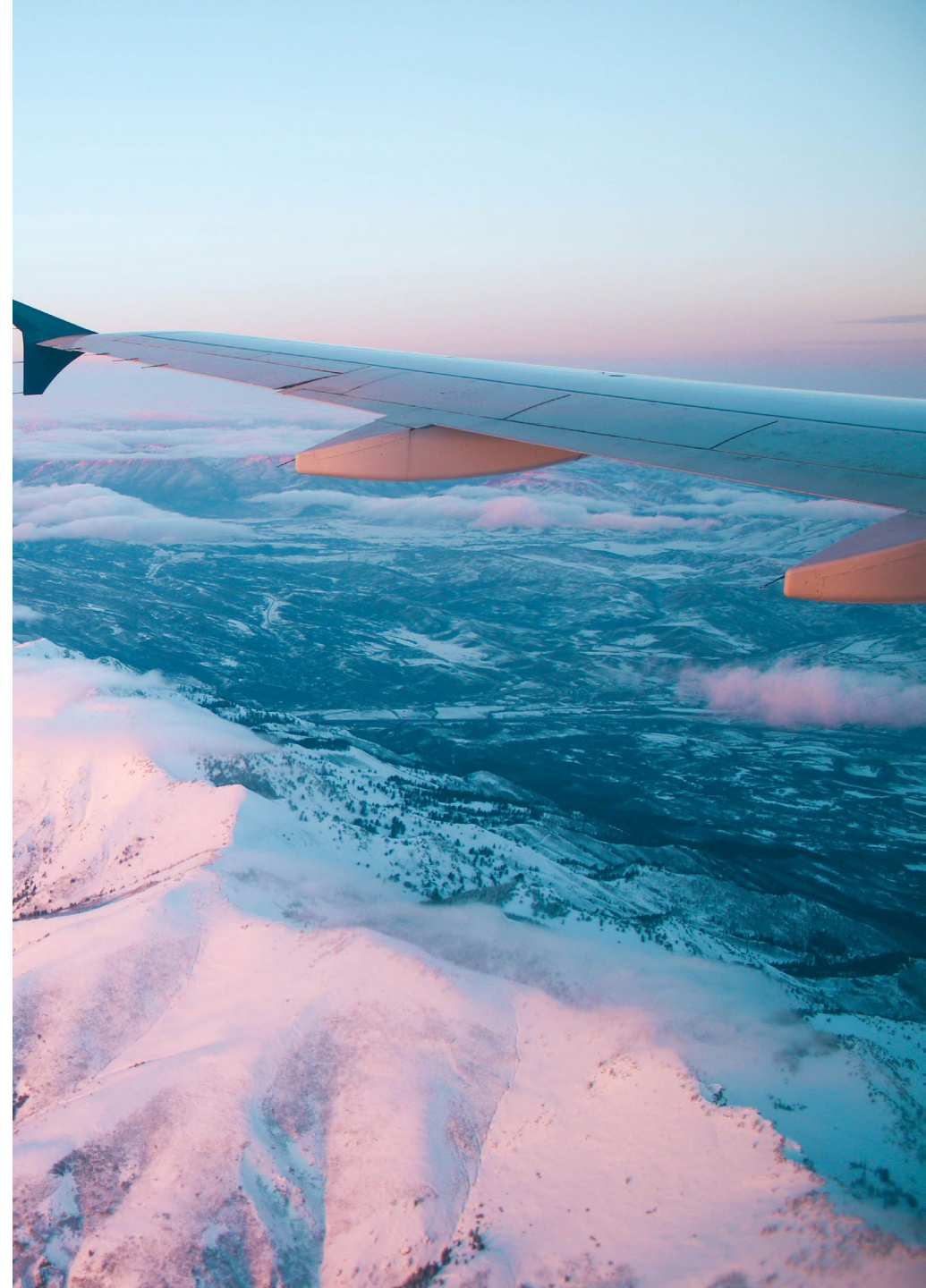
SAF is the best near-term option to reduce CO2 emissions from aviation, yet it constitutes less than 0.5% of total jet fuel supply today – largely because of the cost differential between fossil-jet and SAF



Major airlines compete on slim margins. Significantly scaling their use of SAF will likely remain dependent on government policy support and **finding customers willing to pay the premium**

What makes aviation unique and how we are tailoring to it

- Heavily consolidated global industry
- Drop-in fuels required for medium-long term
- Transport emissions relatively more consistent across aircraft, less variability than maritime
- More consumer-facing carriers than maritime with greater interest in reputation/brand



The SABA Multi-Year RFP brought together a diverse array of partners to channel about \$200 million into the SAF market

20

CORPORATE AVIATION
CUSTOMERS

4

FUEL
PROVIDERS

3

MAJOR
AIRLINES

50

MILLION GALLONS
HIGH-INTEGRITY SAF*

SUSTAINABLE AVIATION BUYERS ALLIANCE
ANNOUNCED **HISTORIC AGREEMENTS TO PURCHASE
SUSTAINABLE AVIATION FUEL CERTIFICATES**
TO GROW INVESTMENT IN CLEAN FUEL TECHNOLOGIES

*Including the first agreements of this kind for e-fuels

SABA

HEAVY-DUTY TRUCKING

GMA Trucking

MISSION STATEMENT

GMA trucking seeks to design and stand up an innovative book-and-claim system that enables a wide array of shippers to fund innovative zero emission trucking projects, helping them reduce their Scope 3 emissions from on-road logistics and catalyze decarbonization in this hard-to-abate sector.



Our nascent membership is growing quickly.

... several others in process

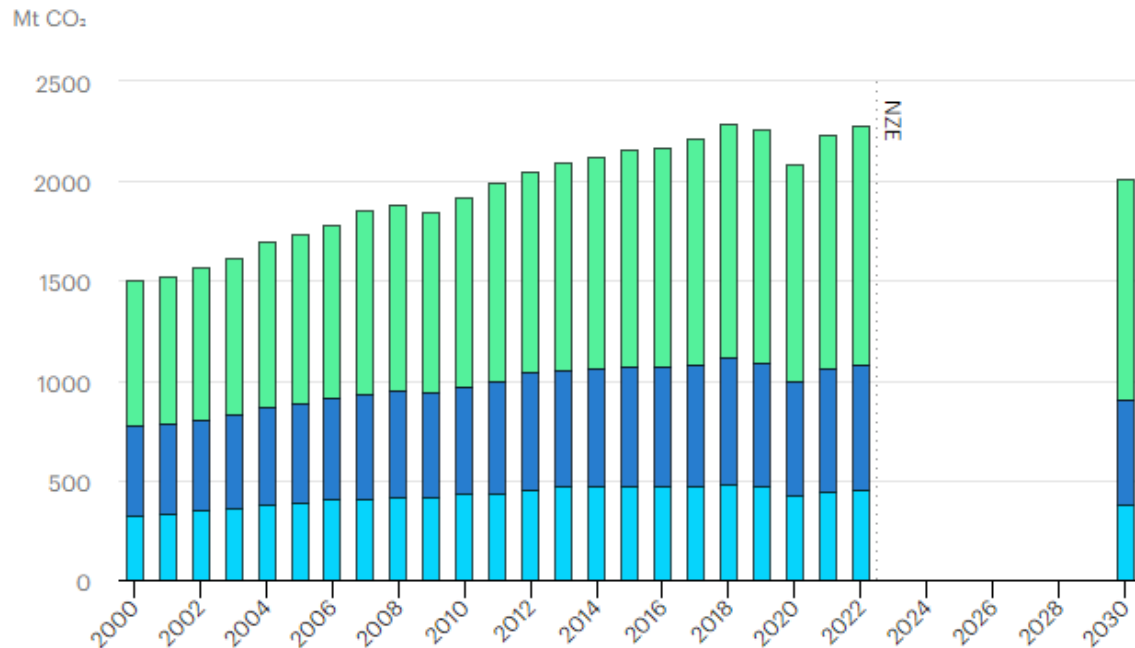
In partnership with



**Figures shown for GMA Trucking are targeted totals based on estimated demand from companies*

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

● Bus ● Medium freight truck ● Heavy freight truck

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 trucks sales were electric in 2022, with ~0.1% fuel cell electric (FCEV)¹

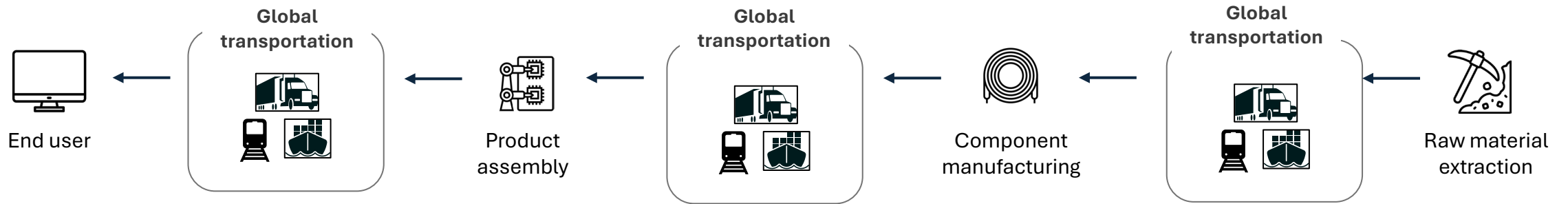
2-3x

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

Climate goals for heavy-duty trucking today are out of reach for most companies due to overlapping challenges

Almost all companies, across all industries have significant emissions from heavy-duty trucking

Example value chain for electronics



Challenges to decarbonizing trucking emissions today

1



Trucking is often contracted or **managed** by third party logistics providers (**3PLs**)

2



Significant emissions are embodied **further back in the value chain**

3



Trucking contracts are complicated and **change frequently**

4



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

GMA Trucking's pilot RFP set to launch later this fall

EST. 140

ESTIMATED NUMBER OF TRUCKS WITH CURRENT MEMBERS ALONE*

UP TO 200k

TONS OF CO₂e REDUCED

3-4

YEARS EXPECTED TERM LENGTH

CURRENT RFI IS BEING USED TO ASSESS CARRIER DEPLOYMENT OPPORTUNITIES, VOLUMES, AND CONTRACT PREFERENCES

*Membership is expected to grow by RFP issuance

GMA | TRUCKING

What's next

 GMA | TRUCKING

 SABA
SUSTAINABLE AVIATION BUYERS ALLIANCE

 ZEMBA

**GMA Trucking RFI released; RFP to launch
Fall 2024**

Third SABA RFP will go live early 2025

Second ZEMBA RFP will go live early 2025

Along with the above, additional “beyond transportation” programs are in progress. Stay tuned!

**All organizations are seeking new members ahead of next procurements –
secure your slot now**

Join us for Green Markets Day at New York Climate Week!

- September 24th
- Program: 2-7 pm
- Reception: 7-8 pm

Email info@gmacenter.org
for registration link





Q&A with today's speakers



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Head of SABA Secretariat



Ingrid Irigoyen

Senior Director, Ocean and
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and Environment Program
President and CEO, ZEMBA



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Join us!



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