

GMA Trucking Request for Information (RFI)

Heavy-duty zero emission freight service pilot procurement opportunity

Overview

GMA Trucking is preparing to launch a multi-year request for proposals (RFP) for Scope 3 zero emission trucking attributes. The goal of this RFP is to utilize a book-and-claim system to unlock funding for carriers to deploy battery electric vehicle (BEV) and fuel cell electric vehicle (FCEV) class 8 heavy duty trucks. Funding will flow from GMA Trucking members to carriers, and in return GMA Trucking members will receive the right to claim toward their climate targets the Environmental Attributes (EAs) that are generated by operating the trucks. [The following RFI](#) provides context on the program and seeks to gather feedback that will help us fine tune the RFP before it is distributed to carriers and other interested parties.

Carriers should be the primary respondent to this scoping document and should review all context materials. Responses may be submitted via email to trucking@gmacenter.org by filling out this document inline or by using [this online form](#). **The deadline for responses is Friday October 11th.**

GMA Trucking will also be hosting a webinar for interested stakeholders from 12-1 EDT on Tuesday September 17th. Register for the webinar [here](#). The webinar will provide additional context about book-and-claim, the structure of the RFI, how to respond to the RFI, and what to expect for the upcoming RFP.

Context

Who is GMA?

The [Center for Green Market Activation \(GMA\)](#) is a US-based, globally focused nonprofit that works with leading companies and NGOs to jump-start new markets in green fuels and materials. Through innovative book-and-claim systems, new and creative procurement approaches, and demand aggregating buyers' alliances, GMA catalyzes and scales the uptake of low-carbon goods and services within carbon intensive industries such as aviation, maritime, trucking, cement and concrete, and chemicals. GMA is the secretariat for the [Sustainable Aviation Buyers Alliance \(SABA\)](#) and the lead technical advisor for the [Zero Emission Maritime Buyers Alliance \(ZEMBA\)](#). Both SABA and ZEMBA have successfully conducted collective procurements that are together driving hundreds of millions of dollars

to support the production of Sustainable Aviation Fuels (SAFs) and Low-Emission Maritime Fuels.

What is GMA Trucking?

GMA Trucking is a demand aggregation buyers' alliance under the GMA umbrella that aims to accelerate the path to a decarbonized trucking sector by driving investment in and adoption of zero emission (ZE) heavy duty vehicles (HDVs). GMA Trucking members, representing more than \$1.5 trillion in market capitalization, have set ambitious sustainability targets, and are committed to decarbonizing their value chains. The program is developing a first-of-its-kind, scalable procurement model focused on getting battery electric vehicle (BEV) and fuel cell electric vehicle (FCEV) trucks on the road.

GMA has partnered with the Smart Freight Centre (SFC) on this initiative to provide additional expertise on road decarbonization and demand aggregation.

Who is SFC?

SFC is an international non-profit organization focused on helping shippers to decarbonize by standardizing methods for emissions accounting and reporting including transportation-focused book-and-claim systems, as well as supporting shippers to select and implement decarbonization strategies. Its work in book-and-claim systems centers on emissions accounting and reporting, providing guidance in its [Voluntary Market Based Measures Accounting Framework](#) as well as its [assurance program](#).

What is the GMA Trucking procurement for?

GMA Trucking will bring shippers with Scope 3 (i.e., indirect value chain) road transport emissions ("GMA Trucking members") together with trucking carriers to accelerate and expand the deployment of zero emission trucks.

GMA Trucking is preparing to launch a multi-year request for proposals (RFP) for Scope 3 ZE trucking attributes. The goal of the program is to help GMA Trucking members procure attributes to make progress towards their greenhouse gas targets and send a strong demand signal to carriers, OEMs, and infrastructure providers to continue investments in zero emission transport services.

GMA Trucking will leverage a “**book-and-claim**” system to generate and purchase attributes. The following section describes how a book-and-claim system is designed for heavy-duty trucking.

GMA Trucking is initiating a competitive process in order to identify cost-efficient opportunities that drive significant reductions for members. The alliance has a preliminary **collective ambition of up to 110 million ton-miles of ZE class 8 trucking service attributes per year**, which roughly equates to 7 million miles with an average weighted payload of 14 tons, or about 140 vehicles operating 50,000 miles per year.

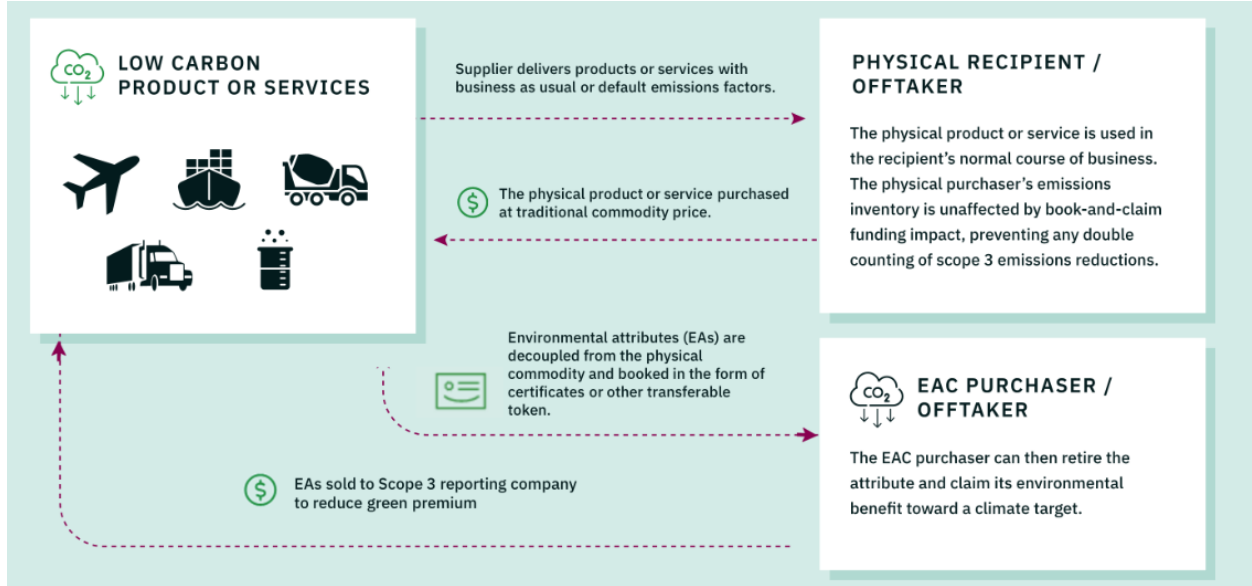
Preliminary parameters to consider for GMA Trucking’s RFP are summarized below.

- **Contract length** that recognizes the dynamic nature of the ZE HDV market, with a likely preference for 3-4 years.
- **Class 8 HDVs operating within the continental United States for any type of freight logistics services** (examples include, but are not limited to, drayage, less than truckload (LTL), full truckload (FTL), mixed, etc.). Vehicles owned and operated for the purpose of internal transportation only will not be considered (e.g., vehicles owned by a large retail company, moving goods for that retail company only).
- **Near-zero emissions trucking services** that consider a well-to-wheel accounting approach and align with GMA Trucking’s preliminary sustainability criteria. (**Appendix A**). Please note the regulations and programs incompatible with the atmospheric benefit principle, namely that bids cannot sell into LCFS programs and carriers may not utilize deployed vehicles for ACF compliance. These stipulations will likely direct the program resources to states other than California, for example.

How does a book-and-claim system work for ZE heavy-duty trucking services?

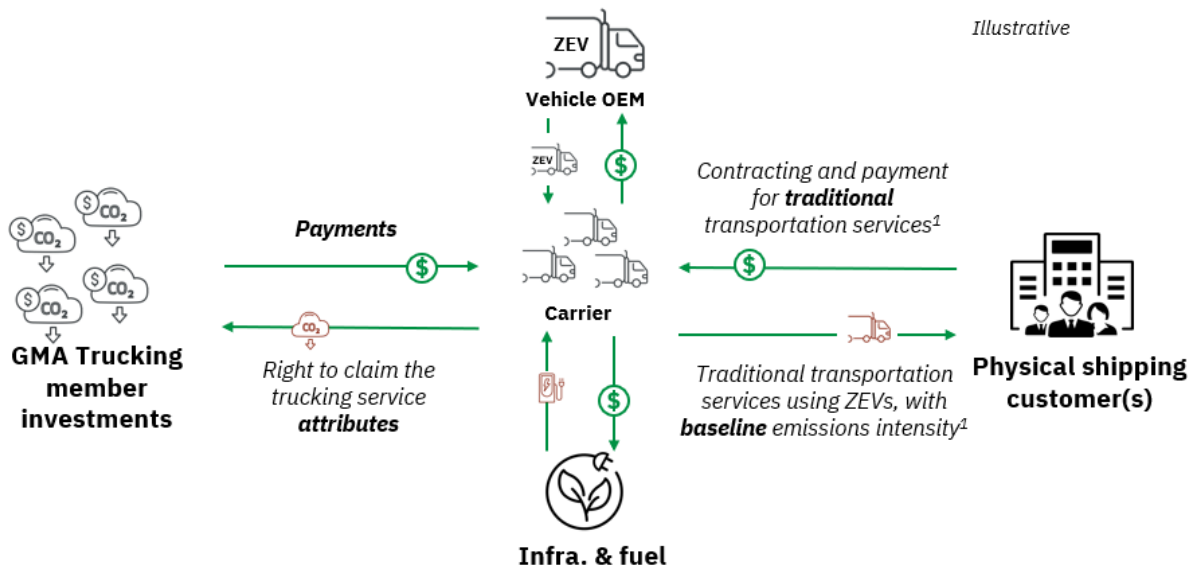
A book-and-claim system decouples the Environmental Attribute (EA) of the low-emission product or service from the physical delivery of the product or service. Book-and-claim systems have been used in other, similar contexts, such as the electricity industry’s use of [Renewable Electricity Certificates \(RECs\)](#) and the aviation industry’s use of [Sustainable Aviation Fuel Certificates \(SAFc\)](#).

Figure 1: An Illustrative Book-and-Claim System



In a book-and-claim system for heavy-duty trucking service attributes, GMA Trucking members will pay for the right to claim the EAs that are generated by a carrier operating ZE HDVs. To generate zero emission trucking EAs, carriers will procure or contract vehicles, infrastructure, energy contracts, etc., as needed to deploy ZE vehicles and operate ZE shipping services for their physical shipping customers. Note, carriers may leverage existing or planned charging or refueling infrastructure, such as charging-as-a-service. They will then calculate the emissions profile of those ZE trucking services on a well-to-wheel basis (in grCO₂/ton-mile) in accordance with the [Global Logistics Emissions Council \(GLEC\) framework](#) and [SFC Market-Based Measures \(MBM\) framework](#). The ZE trucking service profile will then be sold to GMA Trucking members for the volume of activity performed (in ton-mile).

Figure 2: Illustrative ZE Trucking Book-and-Claim Ecosystem



¹Traditional 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

How will the GMA Trucking procurement process run?

GMA Trucking will launch an RFP to identify opportunities to deploy class 8 ZE vehicles and generate EAs based on the pricing and operational details provided by the respondent. GMA will facilitate bilateral contracts between the GMA members and selected RFP respondents. Once contracts are finalized, the carriers will procure and implement any required assets, infrastructure, and fuel/energy with the providers of choice.

Who owns the emission benefits in a trucking book and claim system?

After paying for the EAs, GMA Trucking members will own the Scope 3 emissions profile generated by the carrier. As such, to avoid erroneous double counting of the emissions profile, carriers will not be allowed to pass the emissions profile of the ZE trucking service to the physical shipping customers whose goods were transported on the ZE vehicles. Instead, carriers must pass along a baseline (diesel) emissions intensity that is either representative of the fleet excluding those vehicles whose attributes have been sold or an industry average benchmark. Physical customers may benefit from supporting such a system in other ways, such as by gaining experience with ZE HDVs on their routes for future consideration. The carrier implementing and operating the ZE vehicles may still claim the

Scope 1 emissions reductions that result in reduced diesel consumption towards meeting their own climate targets.

Why does a book and claim system help GMA Trucking members and participant carriers?

A trucking book-and-claim system provides a way for Scope 3 emitters that have limited opportunities for ZE trucking within their own routes due to mileage, payload, or topography, for example, to invest in decarbonization of the sector and take action towards sustainability goals. This model allows carriers to deploy ZEVs where they are most technically, economically, and operationally feasible, regardless of whether the physical shippers on those routes are willing to pay a premium. While most logistics contracts are relatively short term, a book-and-claim attribute offtake can span over several years and provide carriers the assurance needed in order to make the large capital investments for ZEVs.

How is the price determined in a trucking book and claim system?

The price of low emission trucking certificates will be up to the discretion of the vehicle operator to propose and justify. Book-and-claim systems typically price certificates based on the difference of the total cost of ownership (TCO) of the low-carbon products and services above the TCO of the traditional products and services. In the case of heavy-duty trucking, the TCO for ZE trucking service could include costs such as, but not limited to, new vehicle purchase, charging/refueling purchase, charging/refueling infrastructure changes, energy-as-a-service costs, energy/fuel costs, insurance, maintenance, asset residuals (as negative cost), federal or state grants and incentives (as negative cost), among others. For traditional internal combustion engine vehicles, costs could include, but are not limited to, new vehicle purchase, diesel, insurance, maintenance, and vehicle residual, among others. The TCO calculations should be performed by the respondent for the specific route, geography, technology preferences, operational use case, and cost-sharing interest. Publicly available resources and contacts will be provided with the RFP to provide high-level guidance on performing TCO calculations.

The calculated price proposal can then be divided by the expected ton-miles, to produce an approximate cost per ton-mile of ZE trucking service attributes.

Antitrust Compliance Statement:

It is the policy of the Center for Green Market Activation (GMA) to fully comply with U.S. federal and applicable state antitrust and unfair competition laws, and all applicable foreign competition/unfair competition laws (collectively, “Antitrust Laws.”). Respondents are also expected to conduct themselves in strict compliance with Antitrust Laws.

Scoping document questions

Specific questions on each parameter follow in the remainder of the document. Answers you provide will help us understand the feasibility of the parameters and fine tune our request before we distribute the RFP to carriers.

Please attend the webinar outlined above or contact trucking@gmacenter.org for more information or additional guidance.

Introductory questions:

1. Are you familiar with the book-and-claim concept, whether for road transportation or other sectors such as renewable energy, sustainable aviation fuel, or maritime services?
 - a. If not, would you like us to send you more information or set up a session to discuss?
2. Are you interested in responding to the GMA Trucking RFP when published later this year?
3. Carriers/operators may respond to the RFP on their own or partner with infrastructure providers, OEMs, or fuel providers in their response. At this point, do you have a sense of whether you would respond on your own to the RFP or seek a partner?

ZEV details:

4. Do you currently have any heavy duty zero emission vehicles in your fleet?
 - a. If yes, where are such vehicles operating?
 - b. If yes, what were the primary motivations in adding such vehicles to your fleet, e.g., regulation, customer demand, etc.?

- c. If yes, what has been the primary means of covering the premium on vehicle and infrastructure costs? E.g., grants, incentives, shipper contracts, internal R&D budget, operational savings that cover premium costs.
 - d. If yes, are all your vehicles being fully utilized? Are there excess routes or vehicles available? If so, why, and approximately how much supply?

- 5. What are the biggest barriers you have faced in purchasing or deploying ZE heavy duty vehicles and infrastructure?

- 6. Do you currently have any heavy duty ZE vehicles on order that have not yet been received?

- 7. Have you performed an assessment of your operations to determine what routes or geographies could be viable for zero emission vehicles? Are there any states or regions you are focusing on? If so, can you share any details on routes or geographies of focus? GMA Trucking is particularly interested in learning about routes or geographies outside of California.

Green fuels:

8. Does your company have experience procuring renewable electricity? E.g., PPAs, VPPAs, unbundled RECs, utility tariffs, etc.

9. Do you have experience procuring and installing charging infrastructure?

10. If you were to purchase and deploy ZE vehicles, do you have a preference on whether you would install your own charging infrastructure or utilize either public or private charging infrastructure? What informs your preference?

Deal duration and payment:

GMA Trucking members are interested in purchasing attributes at a fixed price over a multi-year period. GMA Trucking members have a general preference for contract lengths of 3-4 years with payment upon delivery of attributes, but are open to considering additional models. Your responses here will help us refine the commercial structure to ensure feasibility for carriers.

11. What length of contract would you be willing to consider for the offtake of trucking service attributes?

12. Would the price you charge for attributes change based on the length of the contract? If so, please explain how the price would change and why.

13. Members prioritize/prefer payment upon delivery of attributes. Are you interested or willing to contract for EA offtake at a predetermined cost per ton-mile and receive payment as vehicles are used?

- a. If no, what payment structure alternatives would you need in place in order to participate? For example, 1) a portion of calculated TCO premium over ICE vehicles paid upfront, 2) fixed payments per year, or 3) other? Please specify.

14. Could you offer fixed pricing through a multi-year contract? If not, why, and what alternative pricing structures would you be open to?

15. Assuming a 3-4 year contract structure, can you provide any indicative cost estimates for what road transport EAs may cost for identified routes/use cases? Do you have any data or analysis available to indicate what costs you would need to charge in order to purchase, deploy, and operate ZEVs for particular use cases? This can be denominated in per ton/mile, per truck, per truck year, etc.

Annual volumes:

Our expected volume of annual ton-miles is approximately 110 million per year. This equates to approximately 7 million miles of ZE moves with an average weighted payload of 14 tons, or about 140 class 8 trucks operating 50,000 miles per year. We are not requiring any one project to meet all of the expected volume, however we do have a preference for projects that can deliver larger quantities of attributes.

16. Considering the total demand for ZE vehicle attributes stated above, how many ton-miles of ZE attributes would you be interested in selling to GMA members if selected in the RFP? If easier to respond in number of vehicles at this point, what

approximate number of zero emission class 8 vehicles would you be interested in deploying through this kind of model at this time?

17. Would you support any of the following options that allow for some year-to-year variation in attribute delivery to better meet contract expectations? (Mark all that apply)

a. Volumes allowed to fluctuate within a pre-determined range, e.g., +/- 10%?

b. Volumes set at a minimum floor with options to purchase more volume, if available?

Aggregate volumes fixed, but annual volumes allowed to fluctuate so long as the aggregate target is hit at the conclusion of the deal term?

18. GMA Trucking anticipates facilitating trucking service attribute transactions on behalf of its corporate customers, but final contracts would be signed by the individual companies with the carrier(s). Is there a threshold number of individual contracts that become unmanageable from an administrative perspective?

Sustainability Attributes:

GMA Trucking is committed to procuring attributes that meet high sustainability criteria. Only RFP responses that meet GMA Trucking’s draft criteria (Appendix A) will be advanced through the RFP process.

19. Do you anticipate being able to meet the listed requirements?

a. If no, what specific provision(s) are the biggest challenges for you and why?

- b. What other comments do you have on GMA Trucking's Sustainability Criteria?

Appendix A: DRAFT GMA Trucking Sustainability Criteria

GMA Trucking is committed to procuring attributes that meet high sustainability criteria. Only RFP responses that meet GMA Trucking's sustainability criteria will be considered. Please note that the below requirements are a draft version of the criteria, and criteria may change before the release of the RFP.

Vehicles

- Trucking service attributes must be generated from the operation of **zero emission (ZE) class 8 trucks**. This includes battery electric and hydrogen fuel cell vehicles. Trucks running on renewable diesel, renewable natural gas, or hydrogen combusted in an internal combustion engine are not eligible at this time.

Energy/Fuel

BEVs

- If generating environmental attributes by operating BEVs, electricity must be backed by **100% renewable energy**. If purchasing [unbundled RECs](#), GMA Trucking has the following requirements:
 - o RECs must be generated by assets on the same [balancing authority \(BA\)](#) as the trucks were charged on.
 - o RECs must have Green-e certification.
 - o Carriers will be required to provide proof of purchase and retired RECs that meet above criteria.

FCEVs

- If generating environmental attributes by operating FCEVs, hydrogen must be **electrolytic that aligns with the highest tier of the proposed [IRA 45V Tax Credit](#)**.¹ This includes, but is not limited to, the following criteria, pending revisions to the regulation in the coming months:
 - o Emissions intensity: between 0-0.45 kgCO₂e/kg Hydrogen.

¹ Given that 45V is currently in draft status, the exact details listed will be changed to reflect the final version of 45V.

- *EA Matching*: Annual matching of renewable electricity inputs to hydrogen outputs prior to 2028, hourly matching after 2028.
- *Deliverability*: Renewable electricity must be generated within the same DOE Region where the hydrogen is produced.
- *Additionality*: Renewable electricity generating facility came online in the last 36 months.
- Carriers will have to obtain documentation from fuel producers to verify the clean hydrogen utilized meets the above criteria. In the absence of any developed certification aligned with 45V prior to attribute generation, fuel producers will be required to provide their [IRS Form 7210 – Clean Hydrogen Production Credit](#) and verification form.

Atmospheric Benefit Principle:

GMA Trucking will ensure an emissions reduction impact from the program by following the Atmospheric Benefit Principle. The Atmospheric Benefit Principle 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. This ensures the intervention creates an atmospheric benefit, meaning it generates an emissions reduction that would not have otherwise occurred.

The following regulations / policies are **compatible** with GMA Trucking’s Atmospheric Benefit Principle. Vehicles purchased and deployed leveraging these policies or under these regulations may be considered in the RFP process.

- US IRC §45V Tax Credit for the production of clean hydrogen
- US IRC §45W Section 13403 Clean Commercial Vehicle Credit
- Bipartisan Infrastructure Law’s National Electric Vehicle Infrastructure Formula Program (NEVI)
- California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)
- EPA Phase 3 Emissions Standards for Heavy-Duty (HD) Vehicles
- Advanced Clean Trucks (ACT)²

² Although GMA Trucking will accept bids that generate attributes from trucks used by an OEM towards ACT compliance, GMA Trucking will place additional preference/higher scoring in the evaluation process to bids that can prove they go beyond ACT requirements or are in non-ACT states.

Tax credits, incentives, grants, etc. for the carrier, OEM, infrastructure, or fuel are generally compatible with the program and the atmospheric benefit principle. The above list is not exhaustive, and additional regulations / incentives will need to be evaluated case-by-case.

The following regulations are **incompatible** with GMA Trucking's Atmospheric Benefit Principle. Use of vehicles deployed through GMA Trucking may not be used to meet compliance with these regulations.

- Low Carbon Fuel Standard (LCFS). Attributes could still be generated in regions with an LCFS program, but to be eligible to participate in GMA Trucking's program, respondents must not generate/sell LCFS credits from vehicle charging.
- Advanced Clean Fleets (ACF). Attributes could still be generated in regions with ACF, but to be eligible to participate in GMA Trucking's program, respondents must demonstrate that they are not a regulated entity under ACF or that vehicles purchased go beyond ACF requirements and will not be used to meet compliance.