



**First Movers**  
Coalition



**WORLD  
ECONOMIC  
FORUM**

# **FMC COP 28 Impact Brief**

November 2023

# Executive Summary: First Movers Coalition is catalyzing the world's largest private sector clean demand signal

**FMC's Mission:** By 2050, 50 percent of emissions reductions needed to achieve net-zero are expected to come from technologies not yet available at scale. Building early market demand for such technologies by 2030 will be critical to help scale and catalyze their mainstream adoption for carbon-intensive sectors.

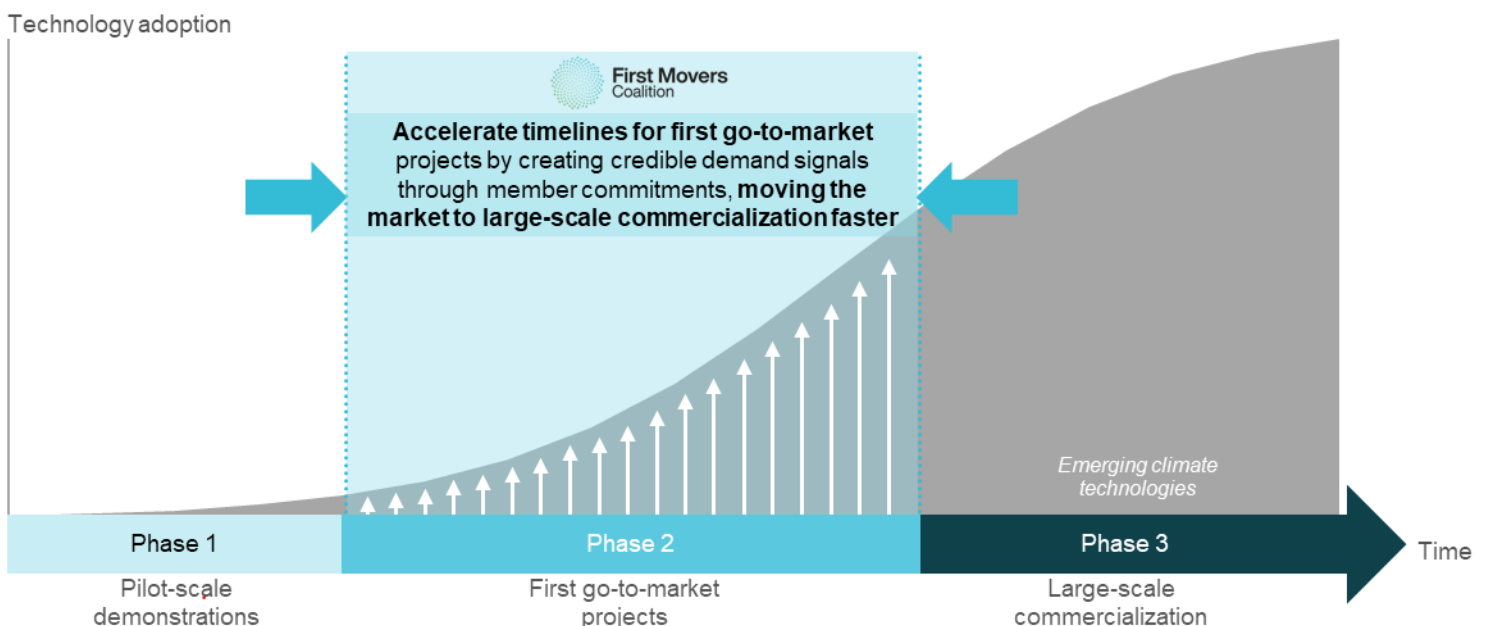
The First Movers Coalition ("FMC") advances the most critical emerging climate technologies required to decarbonize the world's heavy-emitting sectors. By translating member purchasing commitments into the world's largest, credible demand signal and connecting them with qualified suppliers, the FMC can accelerate first-in-market projects that deliver offtake and enable members to achieve green procurement commitments.

**Impact of FMC's demand signal:** In the two years since its inception, FMC has become the world's largest private sector clean demand signal. Today, members are moving from commitment to action: signing offtake agreements to purchase new, clean technologies, driving demand within global decarbonization initiatives, and fostering collaboration with global partners.

When FMC was launched at COP26, it had only 35 members. As of today, FMC includes 95 members who have made a total of 120 commitments. By 2030, these commitments will represent an annual demand of \$15 Billion for emerging climate technologies and 29 million tonnes (Mt) CO<sub>2e</sub> in annual emissions reductions.

For emerging technologies, this early demand is catalytic. For example, FMC commitments represent 0.5-1 Mt in annual

## FMC provides early uplift to emerging climate technologies



## FMC has become the largest clean demand signal from the private sector



**\$6B**

2030 annual demand

**35**

members

**44**

commitments

**1**

government partners



**\$12B**

2030 annual demand

**67**

members

**89**

commitments

**10**

government partners



**\$15B**

2030 annual demand

**29 Mt**

2030 CO<sub>2</sub>e abated

**95**

members

**120**

commitments

**13**

government partners

**94**

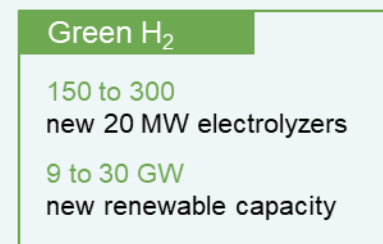
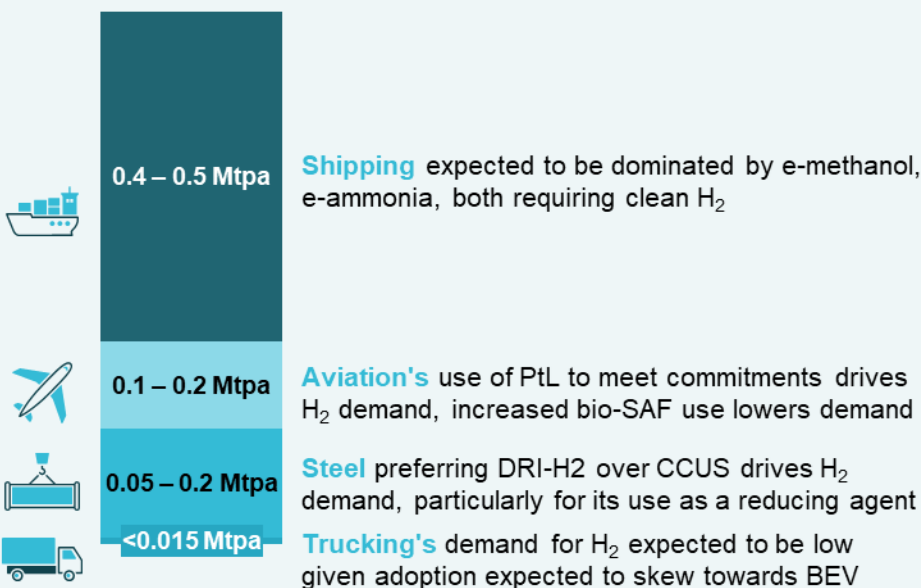
bankable offtake agreements with supply

Today

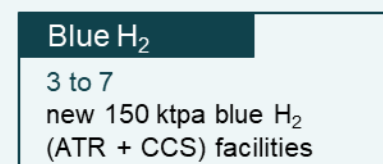
clean H<sub>2</sub> demand by 2030. For green H<sub>2</sub>, this translates to an estimated 150-300 new 20 MW electrolyzers (assuming 100% utilization) and 9-30 GW of new renewable electricity capacity. Alternatively, for blue H<sub>2</sub>, this demand symbolizes 3-7 new 150 kilotonnes per annum (Ktpa) facilities.

**From commitment to action:** Demand signals themselves are not enough to push a market forward – they must be coupled with execution. In 2023 alone, FMC members collectively signed 29 offtake agreements that secured carbon reductions across all seven sectors, bringing the total number of offtake agreements signed in

## FMC commitments represent a significant hydrogen demand signal



or



support of FMC commitments to 94. Some FMC members have also participated in collaborative efforts across multiple sectors, pooling demand to further accelerate progress. FMC and its members helped the launch of four global collaborative procurement efforts that directly connect FMC demand to suppliers across shipping, aviation, CDR, and steel

sectors (ZEMBA, SABA, NextGen, Near-zero 2030 Steel Challenge with RMI). FMC has additionally worked with a large network of implementation partners, governments, standards authorities, and more to further accelerate innovation in the most carbon-intensive sectors.

## Table of Contents

Executive Summary: First Movers Coalition is catalyzing the world’s largest private sector clean demand signal..... 2

Table of contents..... 4

FMC members mobilize action in 2023 ..... 5

    Across sectors, FMC members are pursuing collaborative procurement to source supply..... 5

    Investments and Deals: Members sign offtake agreements and invest across seven sectors.. 5

Supporting Commitment Delivery: FMC partnerships help members move from commitment to action ..... 8

    FMC partners with global initiatives to create an enabling environment for offtake ..... 8

    FMC surfaces local supply through in-country workshops (ICWs)..... 8

# FMC members mobilize action in 2023

## Across sectors, FMC members are pursuing collaborative procurement to source supply

FMC members are leveraging collaborative procurement as a strategy to amplify their demand signal for emerging, clean technologies and more easily identify qualified supply to purchase. By

collaborating to pool their purchasing power, members can attract more supply and drive an improved procurement process that results in shared learnings.

Today, FMC members are actively partnering with each other and other leading implementation partners to procure near-zero emissions technologies. In 2024, FMC and its members are focused on continuing this momentum.

### FMC members have led four major collaborative procurement efforts

 Aviation

 Shipping

 CDR

 Steel

**Collaborative procurement**

     	  RFP in progress	   商船三井	 RFI in progress
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## Investments and Deals: Members sign offtake agreements and invest across seven sectors

FMC members have also taken meaningful action through individual initiatives, procurement strategies, and investments. These initiatives allow members to secure bankable, green offtake and progress on commitments while demonstrating impactful leadership in their respective sectors. Additionally, by collaborating with fellow members—including with some who are suppliers—to execute deals and projects, members expedite the fulfillment of commitments through an organic alignment of supply and demand for near-zero-

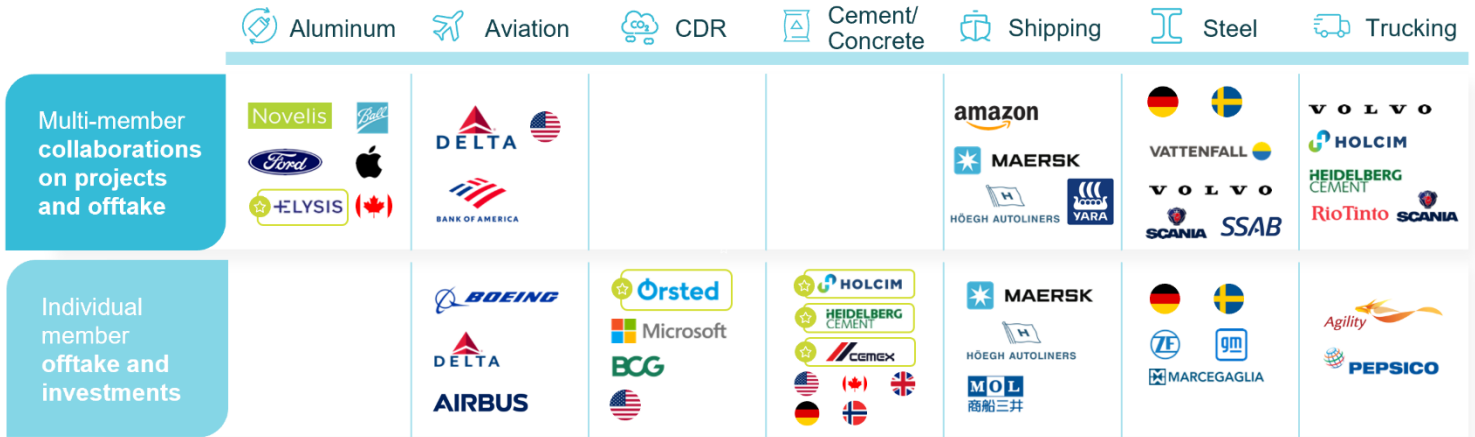
emission products and services. This generates both demand signals that inspire future supply and tangible investments in decarbonization projects today.

### Aluminum

Eight new members joined the First Movers Coalition and made primary aluminum commitments within the aluminum sector in 2023: Coca-Cola, Companhia Brasileira de Alumínio, Danfoss, Speira, General Motors, Logitech, Norsk Hydro, and VELUX. This commitment entails purchasing at least 10 percent of primary aluminum as near-zero by 2030. Of these new members, Speira and Danfoss also made the optional commitment to increase the purchasing of secondary aluminum to at least 50% of their total aluminum use by 2030.



## In 2023 alone, FMC members signed 29 offtake agreements with suppliers



Did not make a sector-specific commitment, but supplied and/or partnered with another member in the sector

FMC aluminum members have already started translating their commitments into offtake and action with five offtake agreements and investments since 2022.

To read more about the latest FMC news in the aluminum sector, visit the latest agenda blog: [Aluminum demand will rise 40% by 2030. Here's how to make it sustainable.](#)

### Aviation

Five new members have joined the First Movers Coalition and made commitments within the aviation sector in 2023: Lufthansa, Boom, Choose, Eni, and the University of Michigan. Members with an aviation commitment have set a target of replacing at least 5% of their jet fuel demand with sustainable aviation fuels (SAFs) that reduce life-cycle emissions by 85% or more when compared with fossil jet fuel, and / or use zero-carbon emitting propulsion technologies. FMC aviation members have already started translating their commitments into offtake and action with 23 offtake agreements and investments since 2022.

To read more about the latest FMC news in the aviation sector, visit the latest agenda blog: [Aviation must make these changes to meet long-term emissions goals.](#)

### Cement and Concrete

FMC launched the brand-new cement and concrete sector in November 2022. In just one year, seven FMC members have committed that at least 10 percent of the cement/concrete procured for their new facilities and projects annually will meet or exceed the FMC's definition for near-zero emissions. In 2023, ZGF Architects and Consolidated Contractors Company joined the FMC as new members within the sector.

To read more about the latest FMC news in the cement and concrete sector, visit the latest agenda blog: [Why near-zero cement and concrete are crucial building blocks to reach net-zero.](#)

## Carbon Dioxide Removal (CDR)

Capgemini and Drax joined the FMC as new members in 2023 with a CDR commitment: 50 Kt or \$25M of durable and scalable net CO<sub>2</sub> removal to be achieved by the end of 2030. FMC CDR members have already started translating their commitments into offtake and action with 7 offtake agreements and investments since 2022. Currently, FMC members and implementation partners represent more than 80% of all engineered CDR credits purchased globally to date.

To read more about the latest FMC news in within carbon dioxide removal, visit the latest agenda blog: [Why carbon dioxide removals are crucial to tackling hard-to-abate emissions.](#)

## Shipping

Four new FMC members have made commitments within the shipping sector in 2023: Logitech, Neutron Holdings (Lime), DP World, and Hanwha Ocean. Members with a Carrier focused shipping commitment have set a target to power at least 5% (on an energy basis) of their deep-sea shipping with zero-emission fuels by 2030 whereas members with a Cargo owner focus have set a target to ensure that at least 10% of their volume of goods shipped via deep-sea shipping will be on ships using zero-emission fuels by 2030. Many FMC shipping members have already started translating their commitments into offtake and action with 19 offtake agreements and investments signed since 2022.

To read more about the latest FMC news in the shipping sector, visit the latest agenda blog: [3 ways unique partnerships are decarbonizing shipping.](#)

## Steel

Six new members have joined the FMC in 2023 with steel commitments: Consolidated Contractors Company (CCC), Iberdrola SA, Alfa Laval Corporate AB, Bharat Forge Ltd, EGUI SA, and GE Vernova. CCC has made commitments in both steel and cement / concrete sectors. Members with a steel commitment set a target that at least 10 percent of their annual steel procurement volumes will meet or exceed the FMC definition for near-zero emissions by 2030. FMC steel members have already started translating their commitments into offtake and action with 19 offtake agreements and investments since 2022.

To read more about the latest FMC news in the steel sector, visit the latest agenda blog: [4 breakthrough actions to decarbonize steelmaking.](#)

## Trucking

Two new members joined the FMC with trucking commitments in 2023: Norge Mining and Toll Group. Truck owners and operators with a trucking commitment have set a target to ensure at least 30% of their heavy-duty and 100% of their medium-duty new truck purchases to be zero-emission trucks by 2030 whereas retailers and manufacturers making a commitment require the same of their service providers. FMC trucking members have already started translating their commitments into offtake and action with 10 offtake agreements and investments since 2022.

To read more about the latest FMC news in the trucking sector, visit the latest agenda blog: [How to scale up and accelerate the supply of zero-emissions trucks.](#)

## FMC and its members collaborate with implementation partners to drive offtake

	Mobility: Aviation, Shipping, Trucking	Materials: Aluminum, Cement, Steel	CDR
FMC drives collaborative procurement with partners	 		
FMC members drive collaborative demand initiatives	   	 	 
FMC drives shared goals with initiatives	       	     	    

## Supporting Commitment Delivery: FMC partnerships help members move from commitment to action

### FMC partners with global initiatives to create an enabling environment for offtake

FMC actively partners with global implementation organizations to magnify and enable member impact. By actively connecting members with other global initiatives, FMC ensures members are supported in translating their commitments into action. Some partners (such as standard-focused organizations) clarify technical requirements for clean technologies while others (such as industry alliances) provide forums for members to engage with the broader industry on decarbonization topics. FMC's broader partnership network has grown to include various leading organizations and NGOs. These partners amplify impact and contribute to the enabling environment for

emerging technologies via their expertise, solutions, network, and technology, both sector-specifically and across sectors.

### FMC surfaces local supply through in-country workshops (ICWs)

As global demand, driven by FMC members' purchasing commitments, for low and zero-emission technologies grows, it's crucial to surface local supply. By organizing a series of in-country workshops (ICWs), FMC aims to bolster local supply chains and foster the adoption and expansion of clean technologies within all sectors: aluminum, aviation, cement / concrete, shipping, steel, and trucking.

These workshops convene domestic suppliers, FMC member companies,



technology experts, government partners, financial entities, nonprofits, academia, and the public. Their agenda is to exchange knowledge and insights on emerging clean technologies within the host country, pinpoint best practices, and craft cooperative strategies that reinforce the local market for low and zero-emission technologies.

In 2023, FMC held ICWs in Brazil, India, and Singapore across aluminum, aviation, cement and concrete, and steel sectors. The Brazil ICW counted 80+ attendees in total, representing industry, academia, the public sector, and more. Nine supplier organizations were in attendance from

aluminum, aviation, and steel sectors. The India ICW ([\*Surfacing Supply of Near-Zero Emissions Fuels and Materials in India\*](#)) had a total attendance of 95+, including multiple government stakeholders, 10 supplier organizations, and five financing organizations. The Singapore ICW ([\*How Singapore can lead the way on scaling up sustainable aviation fuels\*](#)) was attended by 17 representatives including four supplying organizations, one civil body, and three financing organizations

In 2024, FMC will continue to host In-Country Workshops and work with our government partners to advance and surface credible supply for our members.