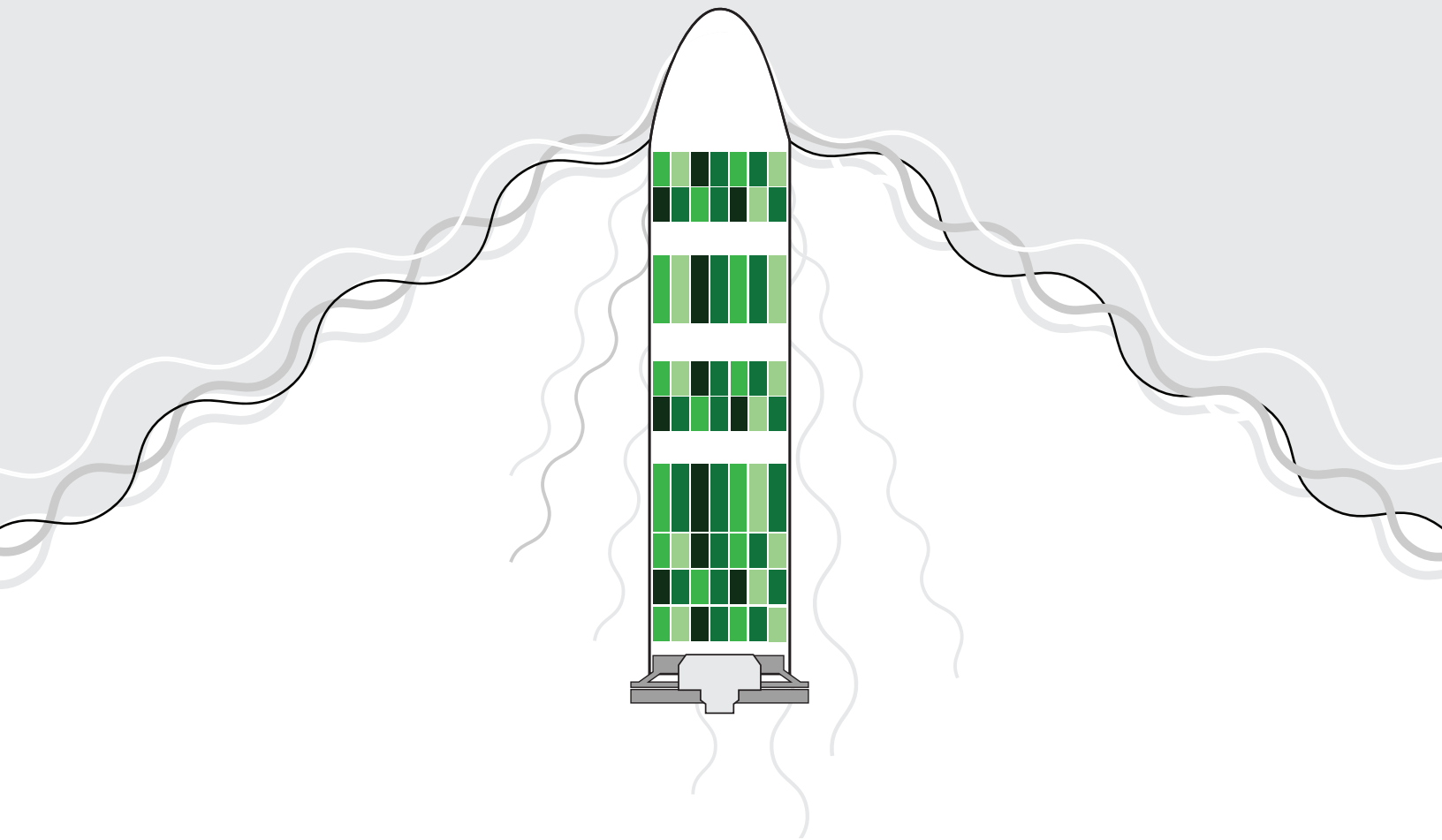


Port of Los Angeles — Port of Long Beach — Port of Shanghai

# GREEN SHIPPING CORRIDOR PARTNERSHIP

Annual Progress Report 2024



EVERGREEN LINE



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**Abbreviations & acronyms**

Abbreviation	Definition
BCO	Beneficial Cargo Owners
CalSTA	California State Transportation Agency
CWG	Carriers Working Group
CCS	China Classification Society
ESWG	Energy Supply Working Group
ESI	Environmental Ship Index
FMC	Federal Maritime Commission
GSC	Green Shipping Corridor
GSCIP Outline	Green Shipping Corridor Implementation Plan Outline
HSC	Harbor Safety Committee
IMO	International Maritime Organization
LA-LB-SH GSC	Los Angeles - Long Beach - Shanghai Green Shipping Corridor
MTCC - Asia	Maritime Technology Cooperation Center - Asia
NDA	Non-disclosure agreement
ONE	Ocean Network Express
POLA	Port of Los Angeles
POLB	Port of Long Beach
PWG	Ports Working Group
SIPG	Shanghai International Ports Group
SMTC	Shanghai Municipal Transportation Commission



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# 1. Introduction

The Los Angeles - Long Beach - Shanghai Green Shipping Corridor (GSC) is a first-of-its kind voluntary partnership of leading maritime stakeholders. Announced in January 2022, the Partnership agreed to establish the GSC to decarbonize goods movement between the largest ports in the United States and China, on one of the world’s busiest container shipping routes. The GSC aims to showcase cutting-edge goods movement technologies, decarbonization applications, and best management practices to enhance efficiency, and catalyse technological, economic, and policy efforts to progressively decarbonize shipping and port-related activities.

The partnership was jointly initiated by the Port of Los Angeles (POLA), the Shanghai Municipal Transportation Commission (SMTC), and the C40 Cities Climate Leadership Group, and is jointly led by the POLA, the Port of Long Beach (POLB), and the SMTC. Participating partners include the City of Los Angeles, A.P. Moller - Maersk, CMA CGM, COSCO Shipping Lines, Ocean Network Express (ONE), Evergreen,


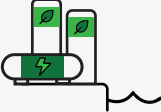





Shanghai International Ports Group (SIPG), China Classification Society (CCS), and the Maritime Technology Cooperation Centre (MTCC) – Asia.

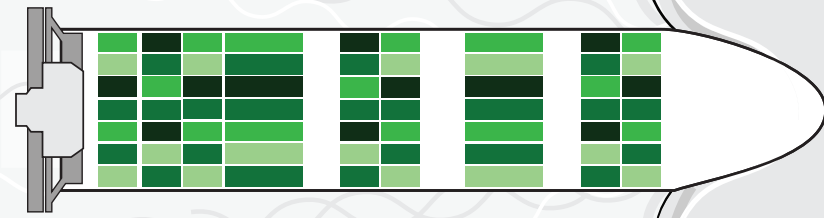
In September 2023, during the North Bund Forum in Shanghai, the GSC Partnership unveiled its Implementation Plan (GSCIP) Outline which detailed the scope of the Green Shipping Corridor, key definitions used by the Partnership, as well as its goals. As part of the historic plan, the carrier partners will begin deploying reduced or zero lifecycle carbon emission capable ships on the corridor by 2025, and work together to demonstrate the feasibility of deploying the world’s first zero lifecycle carbon emission container ship(s) by 2030. Participants of the GSC Partnership also committed to taking steps to reduce carbon emissions and harmful pollutant emissions impacting air quality, through methods such as expanding the use of shore power and supporting the development of clean marine fueling infrastructure. The partners will work together to develop metrics to track decarbonization progress.

# Voyage to 2030







In 2024 the Partnership made steady progress towards the goals defined in the GSCIP Outline

## Progress in 2024

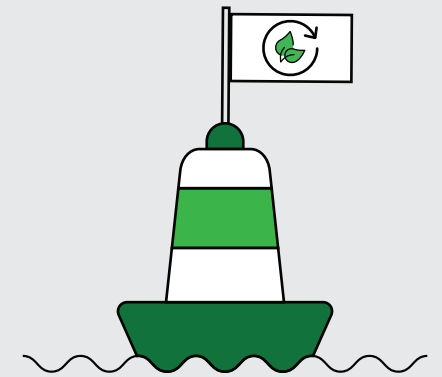
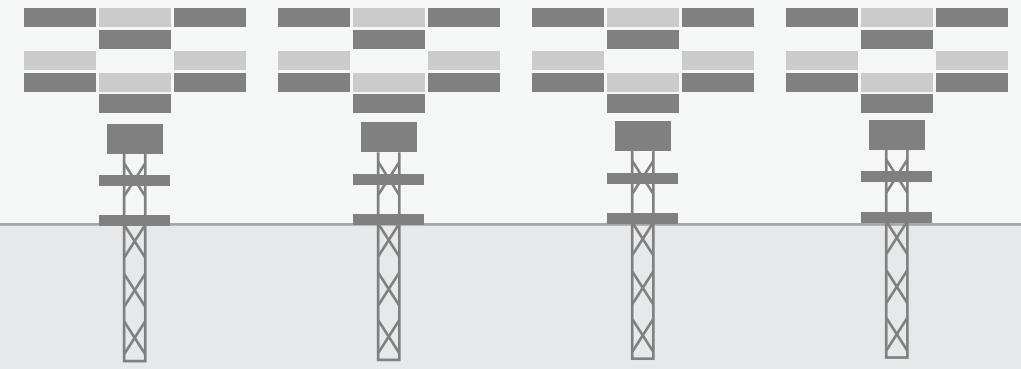
-  Expanding SMTC's shore power facilities
-  Enhancing the Port of Shanghai's clean energy refueling capacity
-  Engaging with POLA/POLB fuel and bunkering service providers
-  Developing the Corridor alternative fuel demand/supply status
-  Developing a timeline for the planned vessel, fuels, and technology launches
-  Nominating carrier services that will be part of the Corridor
-  Collecting the carriers' low carbon emission fleet development roadmap



## Next steps

-  Improve bunkering service efficiency in Shanghai
-  Develop a framework for metrics and monitoring
-  Address questions about fuel standards and supply, carbon intensity, and availability
-  Establish a production/supply schedule or the Corridor fuel demands
-  Establish a fuels standard within the Corridor framework
-  Aligning POLA/POLB incentive programs to meet Corridor needs

PORT OF SHANGHAI

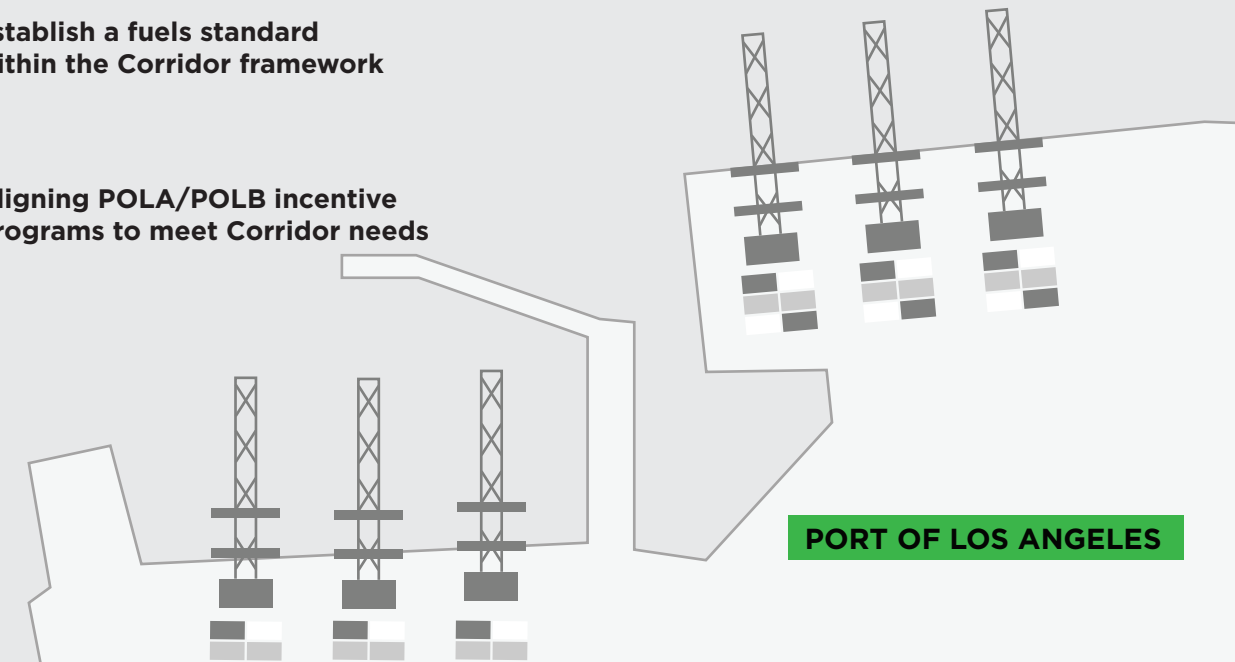


2030 Objective

Zero lifecycle carbon container ship(s)

PORT OF LOS ANGELES

PORT OF LONG BEACH



## 2. Partnership Progress in 2024

In 2024 the Partnership made steady progress towards the goals defined in the GSCIP Outline.

### 2.1 First in-person Partnership meeting

For the first time since the start of the project, in June 2024 the partners met in person in Shanghai, co-hosted by C40 and the Shanghai Municipal Transportation Commission. A two-day collaborative meeting reaffirmed the partners' consensus on the Corridor goals and Implementation Plan Outline.



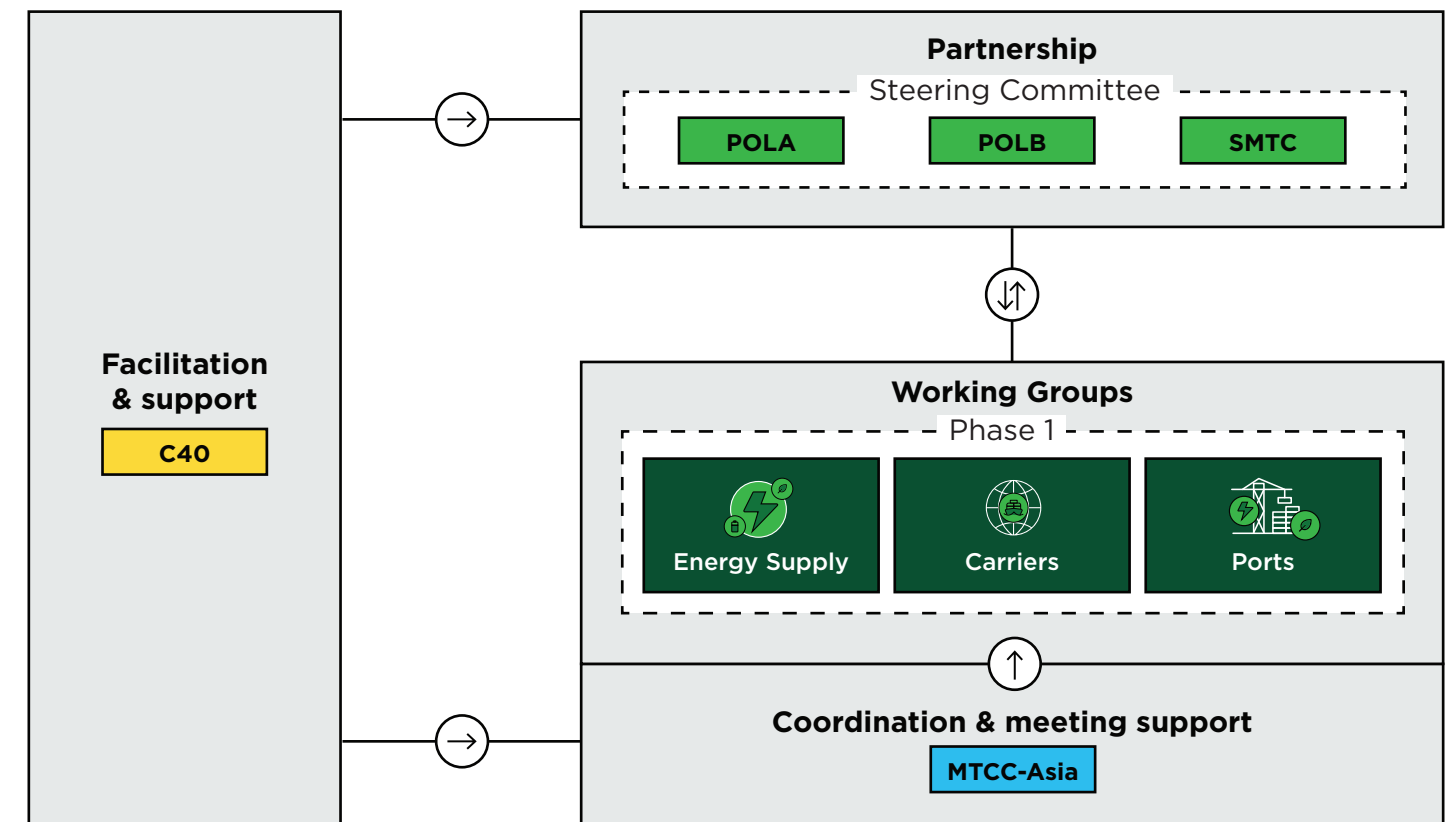
Photos:  
LA-LB-SH GSC  
in-person Partnership  
meeting,  
Shanghai, June 2024

### 2.2 Working structure

As the Partnership moves from planning to implementation, it was important to define how it should be organized going forward to ensure that:

- Partnership decisions can be made effectively and efficiently;
- Corridor leadership and members understand their roles, expectations, and responsibilities;
- Reporting and communication within and between the groups are defined;
- Information can be shared between partners with confidence.

Figure 1: High-level overview of the Corridor Partnership Structure



The decision-making process was defined as follows:

- Working group-level decisions require agreement from the Working Group only and do not require escalation to the wider Partnership.
- Partnership consensus approval is required for decisions that impact the direction of the partnership. For consensus approval, a due date is established to provide comments.

**Table 1: Roles and Responsibilities within the Partnership**

Stakeholder group	Roles and responsibilities
<b>Steering Committee</b>	<ul style="list-style-type: none"> <li>• <b>Overall Green Shipping Corridor coordination</b></li> <li>• Hold regular Steering Committee meetings</li> <li>• Preside over All-partnership meetings, rotating between Ports</li> <li>• Lead on external communications and partnership-wide stakeholder engagement</li> <li>• Outreach to and solicitation of new corridor members</li> <li>• Establish new Working Groups</li> <li>• Review and monitoring of overall corridor progress against strategic goals and objective</li> </ul>
<b>C40 Cities</b>	<ul style="list-style-type: none"> <li>• <b>Facilitate and support the overall GSC</b></li> <li>• Lead on Working Structure, stakeholder engagement strategy, and communications strategy</li> <li>• Communication, coordination, and meeting support for partnership meetings</li> </ul>
<b>Corridor Members</b>	<ul style="list-style-type: none"> <li>• <b>Agree to the corridor goals and objectives as per the Implementation Plan Outline</b> (or more recent document), and any other agreed-upon processes, working structures, or documents</li> <li>• Attend and participate in all-partnership meetings</li> <li>• Allocate suitable resources, including a dedicated point of contact with sufficient capacity, authority, and expertise to make decisions</li> <li>• Contribute to at least one working group of their choice</li> <li>• Commit to share information regarding any supporting work led by their organization related to the corridor</li> </ul>

Stakeholder group	Roles and responsibilities
<b>Working Group Leaders</b>	<ul style="list-style-type: none"> <li>• <b>Overall coordination of Working Group projects</b></li> <li>• Establish specific working group activity scope, aims, objectives, milestones and deliverables</li> <li>• Chair regular working group meetings</li> <li>• Coordinate with other working group leaders</li> <li>• Engage with external stakeholders on working group specific issues as required</li> <li>• Prepare a monthly status report or “tickler” to be shared with the Partnership</li> </ul>
<b>Working Group Members</b>	<ul style="list-style-type: none"> <li>• <b>Day-to-day execution of Working Group activities</b>, discussion and negotiation of workflows for respective topics, coordination of meetings, and development of materials, deliverables, and summaries</li> <li>• Ensure Working Group is cross-cutting, interdisciplinary, and representative of the whole value chain</li> <li>• Attend and participate in working group meetings</li> <li>• Fully consider the legal and regulatory requirements of relevant countries and adhere to applicable confidentiality agreements</li> </ul>



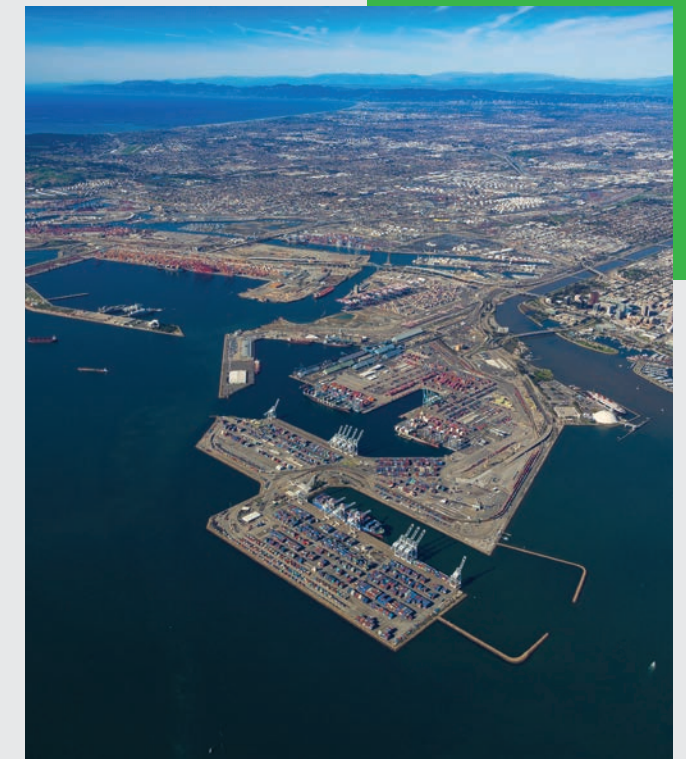
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# 3. Working Group Updates

## 2024 work plan & launch of the working groups

Based on the GSCIP Outline, in January 2024 the Corridor partners agreed on the 2024 workplan framework, which detailed the Partnership’s proposed activities.

To advance the 2024 workplan activities and the GSCIP Outline goals, the Partnership launched three working groups:



**Energy Supply Working Group** addresses the development of reduced and zero lifecycle carbon fuel supply capabilities and identifying infrastructure requirements for new fuels.



**Carriers Working Group** works on developing a deployment plan for reduced and zero lifecycle carbon emission-capable ships from 2025 to 2030 on the Green Shipping Corridor.



**Ports Working Group** focuses on supporting the needs and availability of bunkering services, developing shore power infrastructure and other emission reduction facilities/technology in the port areas.



## 3.1. Energy Supply Working Group

The Energy Supply Working Group (ESWG) includes governments, carriers, ports, energy suppliers, and consulting organizations. The ESGW established rotating leadership, with COSCO serving as chair in the first rotation.

### The ESGW identified its annual objectives and key tasks as follows:

- Identify alternative fuel demand and supply status on the Corridor;
- Define fuel standards that will meet the Corridor goals and requirements;
- Analyze the core elements in developing an alternative fuel supply system on the Corridor.



**By the end of 2024, the Working Group expects to achieve the following outcomes:**

- Establish a fuel production and supply schedule to match the fuel demands of the Corridor.
- Establish a standard for low-carbon and zero-carbon fuels within the Corridor framework.



### 3.2 Carriers Working Group

The Carriers Working Group (CWG) includes carriers, ports, and consulting organizations. The objective of the group is to define participating carriers' vessel launching and deployment plans, the resulting fuel needs, and other carrier challenges and needs to enable successful implementation of the GSC.

#### Activities to date:

- Defined the CWG membership and established rotating leadership. Maersk served as chair and CMA CGM as co-chair in the first rotation. The group is currently chaired by CMA CGM and supported by COSCO as co-chair.
- Established a competition policy to enable the five carriers to work together and addressed sensitivity of information and confidentiality needs.
- Developed a timeline to illustrate announced vessel launches and planned fuels and technologies.
- Collected the low carbon emission fleet development roadmap for each carrier and nominated services that are likely to participate in the LA-LB-SH GSC.
- During the June 2024 GSC Partnership meeting in Shanghai, discussed and shared the following:
  - Specific requests for the Energy Supply Working Group and the Ports Working Group (PWG).
  - Identified challenges the carriers will face in implementing the LA-LB-SH GSC.

#### Next steps include:

- Update the vessel/service information and fuel needs every 6 months.
- As needed, work with the ESWG to address questions about fuel standards and supplies, carbon intensity, and availability.
- Develop metrics for the corridor. Evaluate the use of existing IMO metrics for the GSC and track the development of IMO and other regulations and incentives to align metrics for successful GSC implementation.
- Communicate progress to the Partnership and through them to other stakeholders.



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### 3.3 Ports Working Group

The Ports Working Group (PWG) consists of relevant government authorities and major port operators from the Port of Los Angeles, Port of Long Beach, and Port of Shanghai. It is focused on supporting stakeholders in the GSC to carry out port-to-port cargo transportation in the cleanest and lowest carbon manner. This initiative aligns with global trends of energy diversification and decarbonization, promoting green transformation of the shipping industry.

#### Activities to date:

In 2024, the members of the Ports Working Group engaged in effective communication and exchanges both online and offline, through regular and ad-hoc meetings. The Chinese and American ports focused on the development of goals defined in the GSCIP Outline and, based on their respective port resources and different stages of infrastructure development, implemented a series of pragmatic measures:

- Facilitate and support investment in and development of clean marine fueling infrastructure and supply by relevant stakeholders in order to support future deployments of reduced or zero lifecycle carbon emission ships by or before 2025.
- Continue to reduce carbon emissions from terminal operations.
- Work to ensure current incentive programs support the deployment of reduced or zero lifecycle carbon emission ships in this corridor.
- Facilitate the use of shore-based power for at-berth ships.

#### Port of Shanghai

- Organizing research on port development strategies and the preparation of overall planning, consolidating, and optimizing the layout of hub ports, enhancing the capacity for port collection and distribution, improving operational efficiency, and increasing the comprehensive service effectiveness of the ports.
- Continuously improving the coverage ratio of port shore power facilities, diversifying the types and configurations of shore power equipment, and implementing a comprehensive set of management and incentive measures to rapidly increase the total usage of shore power.
- Rapidly enhancing the port's capacity for clean energy refueling, continuously diversifying the types of fuel bunkering, and steadily expanding the size of the bunkering fleet. Exploring ways to broaden the service area and improve bunkering service efficiency, while simultaneously implementing supporting policy measures.

### Port of Los Angeles, Port of Long Beach:

- The two Ports are engaging with potential fuel and bunkering service providers regarding their plans to meet the demands of the GSC. The Ports also presented information about future fuels to the Los Angeles/Long Beach Harbor Safety Committee (HSC) in June 2024 and requested HSC support in the development of Clean Marine Fueling Guidelines and Standard Operating Practices. The Ports are scheduled to present more in-depth information regarding future fuels with the Navigational Subcommittee of the HSC in October 2024.
- Both Ports are considering modifications to their vessel incentive programs in order to encourage adoption of cleaner marine fuels. Additionally, the Ports are partnering with the California State Transportation Agency (CalSTA) on a proposed in-person forum with policymakers to identify GSC supportive strategies that may be implemented at the state and/or federal level.
- The Ports are developing a framework for metrics and monitoring, acknowledging data sensitivity and a preference to leverage data that carriers are already reporting to other agencies.
- The Ports submitted responses to the port specific ESWG questionnaire regarding infrastructure development, fuel storage, bunkering, challenges, and support needed.
- With support from C40, the Ports have conducted outreach at meetings/ events on the objectives and progress of the GSC. A robust stakeholder engagement plan that includes outreach to community members and beneficial cargo owners is under development.



#### Next steps

Going forward, the members of the PWG will continue to maximize information sharing. The PWG will support the development of clean marine fueling infrastructure and supply, reduce carbon emissions from terminal operations, facilitate the use of shore-based power for at-berth ships, and align current incentive programs with the goals of this corridor. The PWG will collaboratively address new trends and demands in the industry’s development, actively plan for the future of port development, and persistently promote the decarbonization of shipping and port activities.

## 4. Identified challenges and future activities

**The corridor made significant progress in 2024, as described above.**

Going forward, a number of challenges still remain to be addressed and overcome. These include, but are not limited to:

-  Quantity, quality and price of green fuels.
-  Clear and globally consistent set of rules governing the use of green fuels by shipping.
-  Community engagement to support the transport of cargo by low-carbon emission vessels.
-  Determination of cost recovery for mitigating additional costs of the energy transition.
-  Need to build sufficient expertise and capacity to support the decarbonization transition.
-  Establishing a Corridor-wide protocol for sharing confidential information.
-  Developing a framework for metrics and monitoring to track the decarbonization progress.



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In addition to the activities described above, the Partnership is currently conducting stakeholder mapping with the goal of building its stakeholder engagement strategy.

Active stakeholder engagement is expected to start in 2025.



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# GREEN SHIPPING CORRIDOR PARTNERSHIP

## Project Leadership



## Core Partners

