

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No.: 9D
Meeting Date: November 4, 2025

DATE: October 27, 2025
TO: Managing Members
FROM: John Wolfe, CEO

Sponsor: Jason Jordan, Senior Director, Environmental & Planning Services

Project Manager: Steve Nicholas, Senior Manager, Air Quality & Sustainable Practices

SUBJECT: Memorandum of Understanding (MOU) with Korean ports of Ulsan & Busan to strengthen cooperation on green shipping corridors, maritime decarbonization, and accelerated access to alternative marine fuels

A. ACTION REQUESTED

DUAL ACTION NWSA MANAGING MEMBERS & HOMEPORTS: Request the Managing Members of The Northwest Seaport Alliance (NWSA) authorize its CEO or his delegate, and that the Port of Seattle and Port of Tacoma Commissions Authorize their respective Executive Directors or their delegates, to execute the “Memorandum of Understanding between the Busan Port Authority, The Northwest Seaport Alliance, the Port of Tacoma, the Port of Seattle, and the Ulsan Port Authority on Cooperation Regarding Green Shipping Corridors, Maritime Decarbonization, and Accelerated Access to Alternative Marine Fuels” in substantially the same form as presented.

B. SYNOPSIS

The NWSA has been working with myriad partners for nearly three years on the US-Korea Green Shipping Corridors Project, the goal of which is to study the feasibility of accelerating the transition to zero or net-zero (ZNZ) marine fuels in the trade lanes between the NWSA gateway and the Korean ports of Ulsan and Busan.

To advance this goal, the five port entities involved in this project – NWSA, Port of Seattle, Port of Tacoma, Ulsan Port Authority, and Busan Port Authority – have developed an MOU to strengthen communication, coordination, and collaboration in the following areas: maritime decarbonization and port emission reduction initiatives; green shipping corridor development and implementation; standardization of low-

carbon marine fuel use and bunkering; related digitization/data-sharing processes; and associated marketing/business development opportunities.

Staff across the five participating port entities developed the MOU, a non-binding document intended to “express the desire to share information and work together towards accelerating access to alternative marine fuels and coordinate industry engagement on the deployment of fuel use and technology.” A delegation of Korean partners – including the presidents of the Ulsan and Busan port authorities – are visiting the NWSA gateway November 3-6 for a series of meetings and tours to advance the goals of the Green Shipping Corridors Project – including an MOU-signing ceremony.

C. BACKGROUND

US-Korea Green Shipping Corridors Project (GSCP): The project was initiated in December 2022 by the US Government and the Republic of Korea. A one-year pre-feasibility assessment phase, completed in December 2023, identified as the two most-promising green cargo shipping corridors a RoRo/car-carrier corridor between Ulsan and Tacoma and a container ship corridor between Busan/Ulsan and Seattle/Tacoma.

Since then, project partners have been working on a detailed study examining the feasibility, opportunities/benefits, and challenges/costs of accelerating the transition to zero/near-zero (ZNZ) fuels in those two corridors. The studies are exploring: projected demand for ZNZ fuels; emerging ZNZ fuel supply chains on both ends of the trade lanes and globally; ZNZ fuel storage and bunkering capacities (current and potential future); safety and other regulatory frameworks; and ZNZ costs – including an assessment of the “total cost of ownership” of ZNZ fuels, the estimated price differential compared to existing fuels, and strategies for bridging that gap. The Maersk McKinney Moller Center for Zero Carbon Shipping is leading the feasibility assessment for the green car-carrier corridor, with Wallenius Wilhelmsen as the core commercial partner.

The feasibility assessment for the green container ship corridor has two elements: a Korea-focused element led by the Korean Register and involving HMM as the core commercial partner; and a US-focused element led by RMI and involving Swire Shipping and green methanol producers with US-based production plans, including C2X and HIF.

The next steps for the GSCP are:

Complete the feasibility study	By the end of 2025
Develop an implementation roadmap featuring actionable strategies to: 1) make ZNZ fuels more available and affordable in the trade corridors between Seattle-Tacoma and Ulsan-Busan; 2) develop the necessary ZNZ fuel storage and bunkering capacity on both ends of those corridors; and 3) get in place the necessary safety protocols and regulations on both ends of those corridors	By the end of 2026
Compete an initial deployment/demonstration of green methanol-fueled car carrier vessels and container ships in the trade corridors between Seattle-Tacoma and Ulsan-Busan	By the end of 2027

Multi-Port Memorandum of Understanding MOU: The idea of a multi-port MOU originated in 2024, during a visit to Korea by Commissioner Cho and others. The goal is to strengthen direct relationships, communication, coordination, and collaboration across the five port entities working to advance green shipping corridors. Staff from all five ports iterated for more than a year to create the final draft of the MOU, which is attached. A delegation from the NWSA and the ports of Seattle and Tacoma—including CEO John Wolfe and commissioners Cho, Hasegawa, and McCarthy—traveled to Busan, Korea in April 2025 for a series of meetings, including one with the presidents of the Korean ports of Busan and Ulsan to discuss and resolve remaining issues regarding the draft MOU. During that meeting, the five port leaders agreed that the NWSA and the ports of Seattle and Tacoma would host a delegation from Korea later in the year for an MOU signing ceremony and other meetings to advance the goals of the project.

South Korea and “green shipping: South Korea is a leader in the global “green shipping”/maritime decarbonization movement, pioneering green shipping corridors, investing significantly in zero-emission vessel technology, and working toward a sustainable fuel supply chain with a focus on green methanol and green ammonia. In December 2020, for example, they launched Greenship-K, a comprehensive national strategy to accelerate the transition to eco-friendly shipping. In February 2025, they announced a \$1.8 billion investment in the shipbuilding sector, with a focus on developing technologies for next-generation, zero-emission vessels. In August 2025, South Korea pledged \$150 billion to help revive the US shipbuilding industry – part of a larger, \$350 billion investment in US industries embedded in a new trade agreement. In addition to the US-Korea Green Shipping Corridors Project, South Korea is engaged in green shipping partnerships with Australia and Europe.

Green methanol already is being bunkered at the Ulsan Port Authority, and the government is actively investing in infrastructure to support the scaling of these operations, prioritizing the development of green methanol and green ammonia fuel supply chains.

Korean Delegation Visit to Seattle-Tacoma: An 11-member delegation from Korea is slated to be in the Seattle-Tacoma region November 3-6. The delegation will consist of representatives from the Busan Port Authority, Ulsan Port Authority, and Korean Register.

The goals of the visit are to: organize a MOU signing ceremony and meet to discuss/agree on next steps for the MOU; organize additional meetings to advance the goals of the U.S.-Korea Green Shipping Corridors Project; and continue to develop relationships, communication, and trust to bolster the near-and long-term success of the U.S.-Korea Green Shipping Corridors Project. Highlights of the visit will include: a focus on the US-Korea Green Shipping Corridors Project and the Multi-Port MOU at the November 4 Managing Members meeting in Tacoma (with the Korean delegation present); an MOU-signing ceremony in Seattle on November 5; tours of port facilities in both the Seattle and Tacoma harbors.

D. FINANCIAL IMPACT

The US Korea Green Shipping MOU has no direct financial impact to the NWSA, nor any financial commitment beyond the use of staff to support the program.

E. ATTACHMENTS TO THIS REQUEST

- Final draft of the MOU
- Draft goals and itinerary for the Korean delegation visit

F. PREVIOUS ACTIONS OR BRIEFINGS

- May 29, 2025 – Environmental Working Group briefing
- April 17, 2025 – Environmental Working Group briefing
- March 20, 2025 – Environmental Working Group briefing
- November 7, 2023 – Managing Members briefing
- October 3, 2023 – Environmental Working Group briefing

MEMORANDUM OF UNDERSTANDING

between the Busan Port Authority, the Northwest Seaport Alliance, the Port of Tacoma, the Port of Seattle, and the Ulsan Port Authority

on cooperation regarding green shipping corridors, maritime decarbonization, and accelerated access to alternative marine fuels

The Busan Port Authority, hereafter referred to as BPA, represented by its CEO & President Sang-keun SONG, the Northwest Seaport Alliance, hereafter referred to as NWSA, represented by its CEO John Wolfe, the Port of Tacoma, hereafter referred to as PoT, represented by its CEO Eric Johnson, the Port of Seattle, hereafter referred to as PoS, represented by its Executive Director Stephen Metruck, and the Ulsan Port Authority, hereafter referred to as UPA, represented by its CEO & President Jae-young BYEON, hereinafter collectively referred to as the 'Parties' and separately as 'Party',

Acknowledging their roles as major gateway ports in their respective regions, in order to cooperate and share information in the areas of maritime decarbonization, support the implementation of green shipping corridors, improvement of emission reduction schemes and infrastructure at their Ports, and to collaborate to standardize low-carbon marine fuels and bunkering technologies among the Parties, BPA, NWSA, PoT, PoS, and UPA have jointly drafted and negotiated this Memorandum of Understanding ("MoU") under the following terms and conditions:

The cooperation under this MoU will include, but is not limited to, the following areas:

- 1.1 Cooperation on maritime decarbonization and in-port emissions reduction schemes and infrastructure improvements and agree to align strategies in support of these activities, recognizing differences among the Parties' ability to influence or overcome challenges such as influence over vessel operations, vessel orders, vessel fuel choice, fuel supply chains, fuel purchasing practices, and bunkering infrastructure and operations.
- 1.2 Collaboration to support the implementation of green shipping corridors,
- 1.3 Collaboration on the standardization of low-carbon marine fuel use and bunkering, engaging in capacity building and developing a strategy around industry engagement.
- 1.4 Collaboration on digitization (data sharing) processes in this regard,
- 1.5 Sharing of green practices, bunkering initiatives, business development opportunities, and marketing cooperation.
- 2.1 The parties pledge to communicate challenges which they encounter and share best practices and solutions for these common issues among each other.

This MoU is non-binding in nature and is not intended to commit any Party financially or to any certain performance or participation. The Parties intend with this MOU is to express their desire to share information and work together towards accelerating access to alternative marine fuels and coordinate industry engagement on the deployment of fuel use and technology. It comes into effect as of the date of signing and continues to stay effective until terminated by a party, giving the others written notice ninety (90) days in advance of its intention to terminate the MoU.

Item No.: 9D
Meeting Date: Nov. 4, 2025

MOU with Ports of Ulsan and Busan to Advance the US-Korea Green Shipping Corridors Project



**THE NORTHWEST
SEAPORT ALLIANCE**

SEATTLE + TACOMA

Steve Nicholas
Senior Manager, Air Quality & Sustainable Practices

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US-Korea Green Shipping Corridors Project

- Launched December 2022 @ COP27
- Goal: Study feasibility of accelerating transition to ZNZ (zero/near-zero) fuels in trade lanes between NWSA gateway and Korean ports of Ulsan and Busan
- Key Partners: Republic of Korea, ports, HMM, WWL, MMMC, RMI, others
- Status: Feasibility assessments for car carrier and container ship corridors nearing completion; draft roadmap developed
- Next steps: Complete studies; develop implementation roadmap by end of 2026; achieve initial deployment of green methanol-fueled vessels in corridors by end of 2027



Multi-Port Memorandum of Understanding (MOU)

- Non-binding agreement to enhance cooperation in five areas:
 - Green shipping corridor development and implementation
 - Maritime decarbonization and port emission reduction initiatives
 - Standardization of low-carbon marine fuel use and bunkering
 - Digitization/data-sharing processes
 - Marketing/business development opportunities
- Developed by staff at participating ports
- Discussed and finalized at in-person meeting in Busan in April 2025



South Korea: a leader in the global “green shipping” movement

- Strong national commitment to green shipping
- Engaged in multiple green shipping corridor projects
- Comprehensive national strategy to accelerate transition to eco-friendly ships (GreenShip-K)
- Recently pledged \$150B investment in revival of US shipbuilding industry



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Korean Delegation Visit: Goals and Highlights

Goals:

- Sign Multi-Port MOU and organize additional meetings and tours to advance the goals of the U.S.-Korea Green Shipping Corridors Project
- Continue to strengthen relationships, communication, and collaboration

Highlights:

- Managing Members meeting on November 4th
- MOU signing ceremony on November 5th
- Tours of port facilities in Tacoma and Seattle harbors
- Meetings to advance the goals of the US-Korea Green Shipping Corridors Project



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