Port of Seattle

Exploring a Green Corridor for Cruise from the Pacific Northwest to Alaska

AAPA Environment Committee July 19, 2023

Ryann Child Environmental Program Manager, Port of Seattle (She/Her)



Alaska

PORT OF SEATTLE

ECONOMIC IMPACT

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Area Jobs
121,100
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Capital Project Plan ('20-'24) \$4.4 Billion

ECONOMIC ACTIVITY

SEA Airport \$22.5 Billion

Maritime Industry \$18.6 Billion Northwest Seaport Alliance



Seattle-Tacoma Airport



Cruise Seattle Largest Cruise Port on the U.S. West Coast **Commercial Fishing**



BELL STREET CRUISE TERMINAL Pier 66

SMITH COVE CRUISE TERMINAL Terminal 91

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Toward the Greenest and Most Energy Efficient Port in North America

GHG REDUCTION TARGETS		NORTHWEST PORTS CLEAN AIR STRATEGY	Port of Seattle
Port Controlled (scope 1, 2)	50% reduction by 2030 Net Zero by 2040		
Port Influenced (scope 3)	50% reduction by 2030 Carbon Neutral by 2050		CHARTING THE COURSE TO ZERO Port of Seattle's Maritime Climate and Air Action Plan



Port of Seattle Maritime-Related GHG Emissions



by the Northwest Seaport Alliance

The Opportunity

Royal Caribbean Sets 'Destination Net Zero,' Green Goals For Ships

Norwegian Cruise Line Holdings Commits to Pursue Net Zero Greenhouse Gas Emissions by 2050

Carnival Corporation Sets 2050 Net-Zero Emissions Target

CLIA NEWS | APRIL 26, 2022

Cruise Industry is Sailing Toward a Better Future Are Cruise Ships Crushing Seattle's Climate Goals?

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IMO Under Pressure to Tackle CO2 Emissions

Posted by Joseph Keefe April 9, 2018

US Environmental Protection Agency (EPA) Announces \$4 Billion For Clean Port Upgrades

April 21, 2022 9:40am EDT

By MI News Network | May 8, 2023 | Shipping News

CRUISE · DECARBONIZATION

Norway challenges the cruise industry to operate emission free

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Environmental regulations are tightening up everywhere, but nowhere faster or firmer than in Norway's World Heritage Fjords. The Norwegian parliament has decreed that the country's UNESCO-protected fjords shall be free from cruise and ferry emissions no later than 2026.



What is a Green Corridor?

A shipping route where low and zero greenhouse gas emission solutions are demonstrated and supported through collaboration across sectors to accelerate maritime decarbonization



- 1. Shanghai- LA
- 2. Alaska, British Columbia, Washington
- 3. Chilean Green Corridor Network
- 4. Great Lakes- St. Lawrence
- Antwerp-Montreal
- 6. Halifax-Hamburg
- 7. Clean Tyne Corridor

- 8. Dover-Calais/Dunkirk
- 9. Gothenburg-North Sea Port
- 10. H2 powered North Sea Crossing
- 11. Gothenburg-Rotterdam
- 12. European Green Corridor Network
- 13. Nordic Regional Corridors
- 14. Decatrip

- 15. Green Corridors Spain
- 16. Rotterdam- Singapore
- 17. SILK Alliance
- 18. Aus-Asia Iron Ore
- 19. QUAD Shipping Taskforce
- 20. Gulf of Mexico
- 21. Los Angeles-Long Beach-Singapore

Indicative - ports and routing not necessarily representative

Considerations for a Green Cruise Corridor







Progress and Next Steps



Thank you!



www.portseattle.org

VYLAND

Subscribe to our Green Corridor Newsletter: bit.ly/PNW2AK

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Alaska Context and Port Decarbonization Efforts by City and Borough of Juneau

Alexandra Pierce, Tourism Manager July 19, 2023



Juneau and Alaska Ports

- Ports of call typically do not bunker fuel for cruise and other large vessels
- Remote areas many ports do not currently have capacity for shore power
- Seasonal industry Juneau will see nearly 1.7 million visitors between April and October 2023
- Impacts from shore excursions beyond scope of Green Corridor effort – buses, aircraft, small vessels
- Juneau is the largest port in the region (size and visitation) with 32,000 residents



Decarbonization Efforts in Juneau

- First port in the world to install shore power for cruise ships (2001)
- Shore power to two additional berths underway
- Partnering with Alaska Department of Environmental Conservation to monitor ship emissions and supports enforcement of violations
- Negotiated an agreement setting a limit of five large cruise ships per day effective in 2024
- Negotiated an agreement with cruise industry to stop offloading garbage to the Juneau landfill and to divert waste to ports with more recycling capacity and less carbon intensive disposal





Phasing out emissions: The role for green corridors

Christine Rigby Manager, Climate Action and Air Quality

July 19, 2023



Interconnectedness of shipping and ports





Sources: Comer et al. (2017) and Olmer et al. (2018): <u>http://theicct.org/black-carbon-emissions-global-shipping-2015</u> and <u>https://www.theicct.org/publications/GHG-emissions-global-shipping-2013-2015</u>

Growing demand + lack of supporting policies/regulations

Air pollutant emissions and cargo throughput, 2010-2030

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■ Total emissions → Marine → Rail → On-road
 → Non-road → Administrative → Cargo throughput

GHG emissions and cargo throughput, 2010-2030



Well-rounded approach

- Northwest Ports Clean Air Strategy
- Climate and Air Quality Action Plan
- EcoAction Program + Blue Circle Award
- Shore power
- Non-Road Diesel Emissions Program
- Drayage truck emission requirements
- Low Emission Technology Initiative
- Pacific Northwest to Alaska Green Corridor
- Energy Action Initiative
- Air monitoring
- International collaborations





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