



Totem Ocean Trailer Express





Saltchuk Resources, Inc.

SHIPPING & LOGISTICS

MARINE RESOURCES

PETROLEUM DISTRIBUTION

NORTHWEST REAL ESTATE

AIR CARGO



FOSS

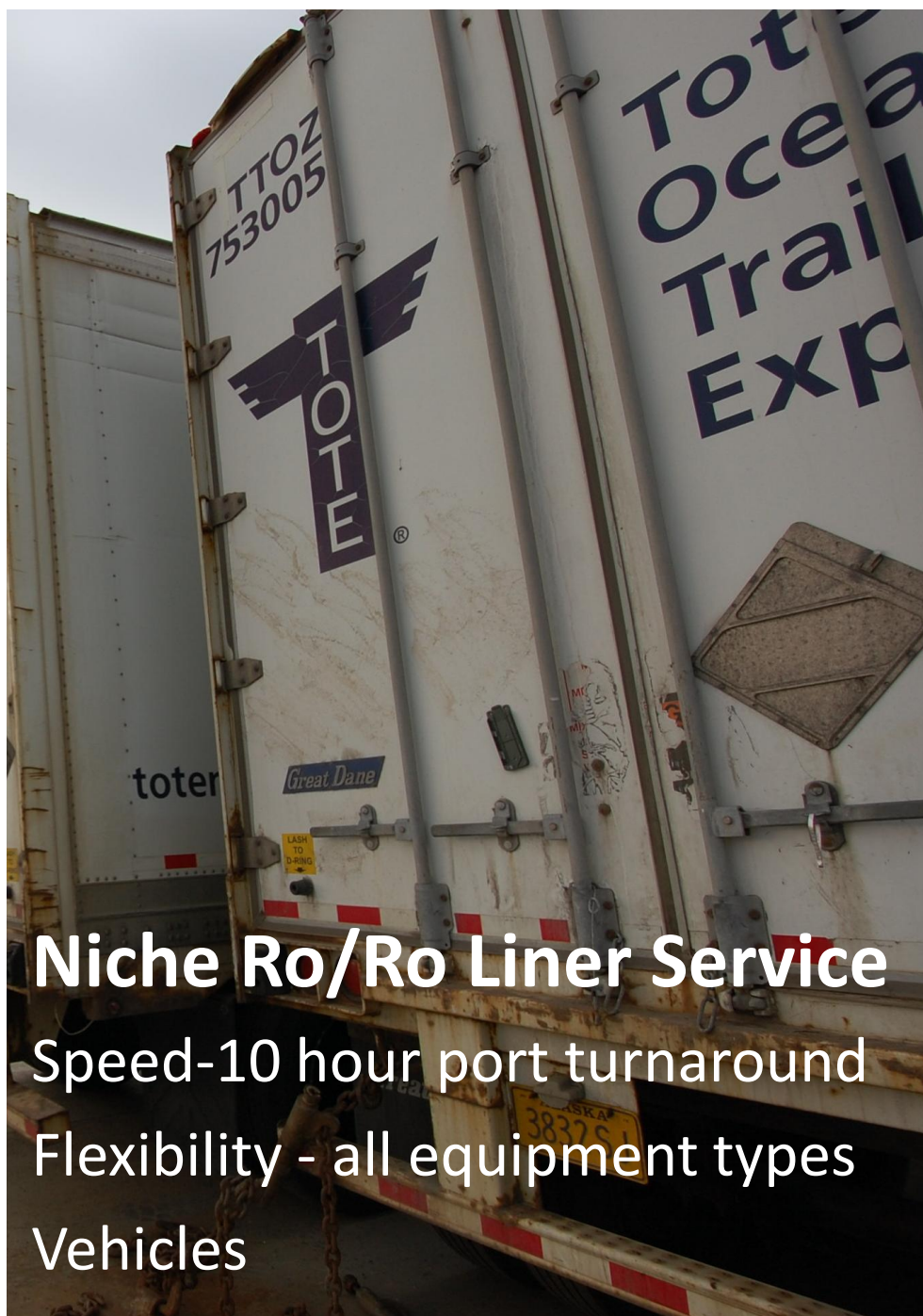


ROCHE HARBOR RESORT & MARINA



ALTA LOGISTICS





Niche Ro/Ro Liner Service
Speed-10 hour port turnaround
Flexibility - all equipment types
Vehicles





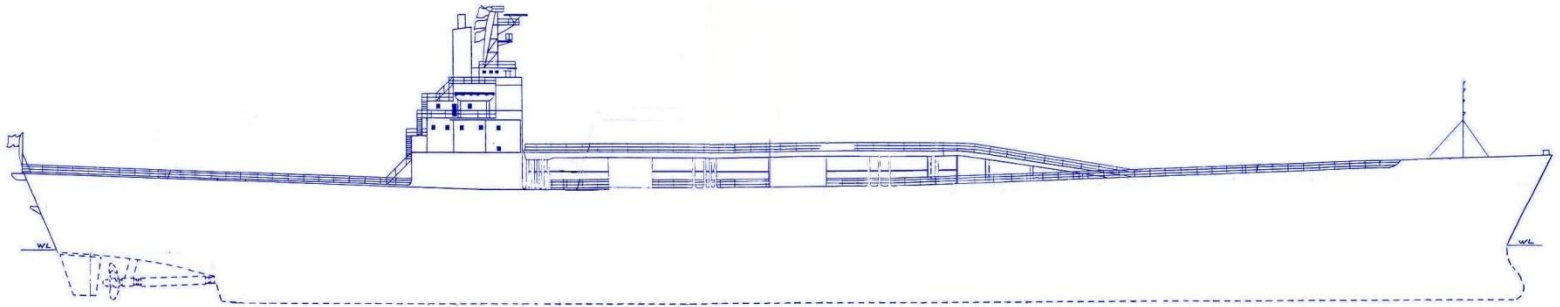
Dedicated Service

- Dedicated service between Washington and Alaska
- Highway and rail connections throughout greater Alaska and Lower 48/Canada

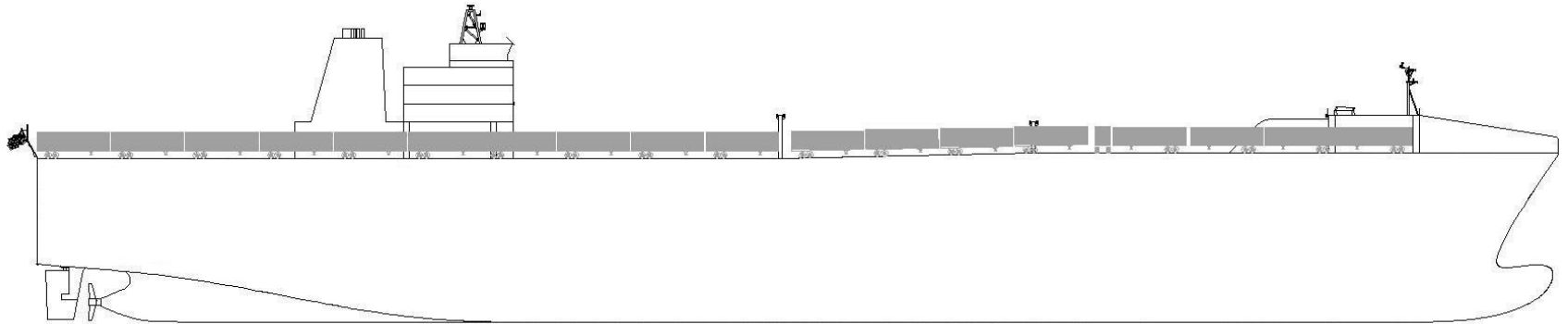




Vessel Profiles



Original TOTE Ponce Class Ship

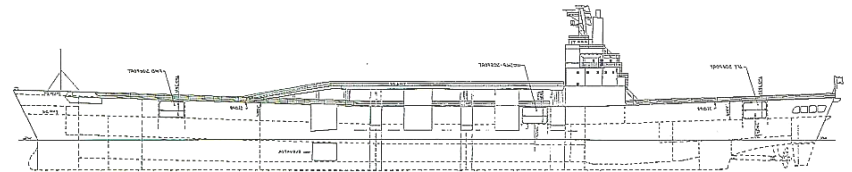
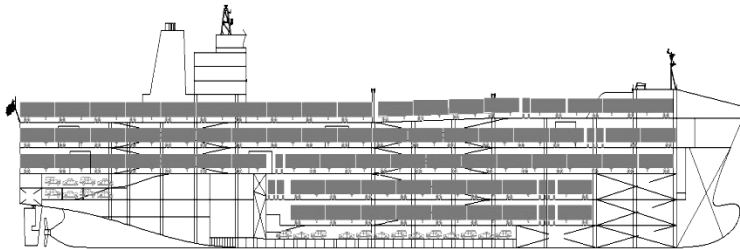


Orca Class Ship



Vessel Comparison

	<u>Orca</u>	<u>Ponce</u>
Length	839 feet	790 feet
Beam	118 feet	105 feet
Speed	24 knots	24 knots
Propulsion	Diesel Electric	Steam Turbine
Cargo	550 trailers + 300 autos	385 trailers + 110 autos
Internal Ramps	12	5





Orca Class Inboard Profile





TOTE Cargo Mix Flexibility



**Stretch
Flatbed**

70 foot



Reefers

53 foot

48 foot

45 foot

40 foot



Dry Cargo

53 foot

48 foot

45 foot

40 foot

30 foot Pups

Increased Control and Flexibility







Streamlined Operations

- Combined terminal and vessel operations
- Ship staffed by SSA, long-time partner
- Vessel maintenance done in-house
- Ship sails with Alaska pilot onboard
- Bridge electronic technician on staff
- No pre-stowing of cargo



Alaska Railbelt Freight



67%
Liner
Vessel



26% Barge



7%
Overland



Alaska Transportation Challenges

1,450 nautical miles one way (Tacoma-Anchorage)



Seas to 60 feet



Wind gusts to 100 knots



Port of Anchorage





Ice Choked Harbor



Cook Inlet

- Ice choked 6 to 7 months per year
- 36 foot tidal range



Low Tide



High Tide





Expansion Plans

- Extend Port 400 feet
- Diversify and expand business
- 10 years behind and \$700 million over budget





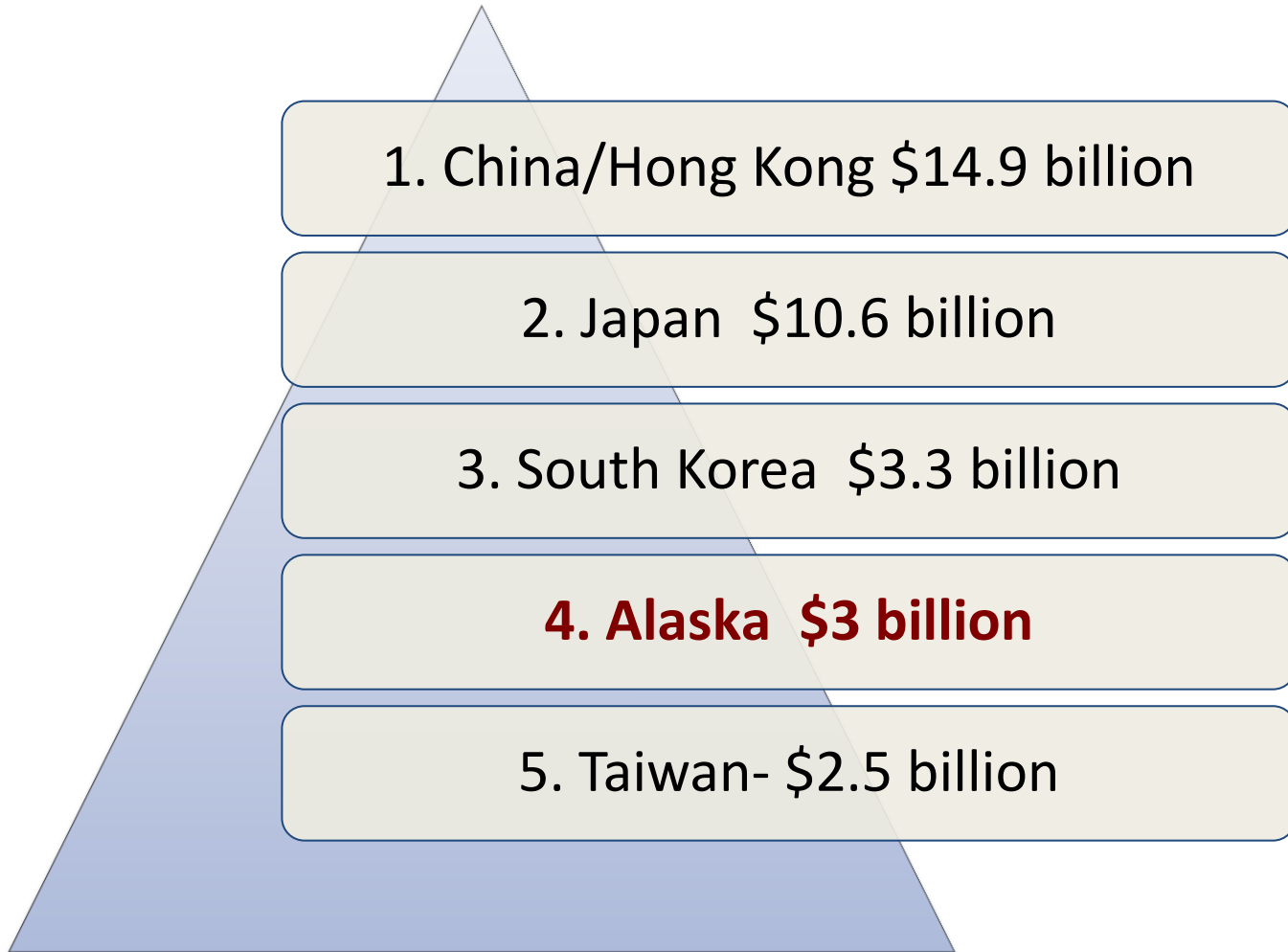
Port of Tacoma





Port of Tacoma's Top Trading Partners

(based on value of 2011 two-way trade, in U.S. dollars)



Gateway to Alaska

- Trade with AK is about 1/3 of the Port of Tacoma's container business
- Port of Anchorage estimates that 90% of all goods used by Alaskans west of Cordova comes through Port of Tacoma
- 35% of all goods consumed in Alaska are shipped aboard TOTE vessels





TOTE Terminal

96% On Time Since 2003



Protecting Alaskan Waters





2012 Puget Sound Champion - Puget Sound Partnership

2012 Port of Tacoma - Environmental Stewardship Award

2010 Port of Tacoma Community Vitality Partner Award

2010 Environmental Excellence Awards – Midnight Sun, North Star, Westward Venture & Great Land - Chamber of Shipping of America

2009 Best Award – Citizens for a Healthy Bay

2009, 2008 Environmental Excellence Awards for 3 vessels

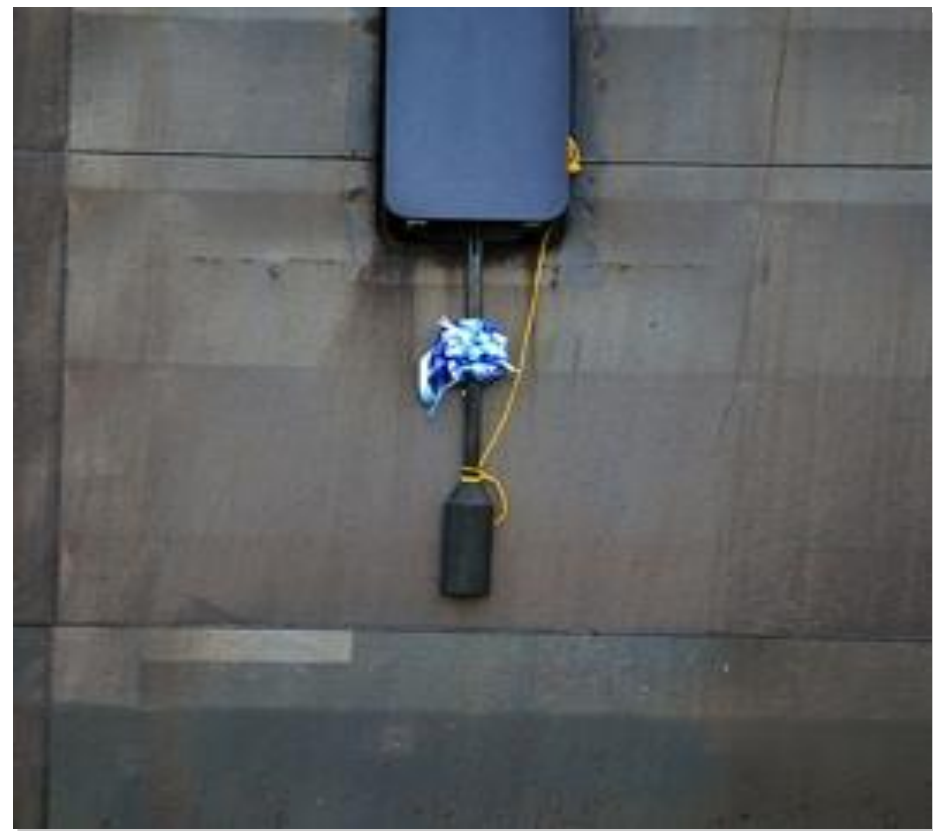
2008 WA State Recycling Association Recycler of the Year

2007 14001:2004 Certification Completed

2007 Tahoma Environmental Award

2005 WA State Governor's Award for Pollution Prevention and Sustainable Practices

Shorepower



TOTE RAIN GARDENS



These rain gardens are designed to filter out pollutants from the terminal and buildings that would otherwise flow into Commencement Bay. They are the first industrial rain gardens in the South Sound, and will treat over a quarter million gallons of stormwater each year. Filtering out heavy metals helps us meet our NPDES permit requirements and protect wild salmon. Several partners and sponsors made this project possible, including more than 75 volunteers who helped plant 800 plants in April of 2011.

What is a Rain Garden?

A rain garden is a shallow depression planted with a variety of flowers, shrubs and grasses that “don’t mind getting their feet wet.” Rain gardens help soak up polluted runoff from rooftops and paved surfaces while protecting our local waterways. When planted with the right types of plants, rain gardens also attract birds, butterflies and bees.

Benefits

- Reduce flooding
- Filter oil, grease, and toxic materials
- Recharge the aquifer
- Provide beneficial wildlife habitat

1

Stormwater collects pollutants from the roof and paved surfaces



Native plants or other hardy plants

2

Rain garden absorbs and filters runoff through amended soil layers and deep native plant roots

ponding depth
6" to 12"

mulch layer

overflow lower
than inflow

rain garden soil mix

level unlined bottom

The Alternative

Without a rain garden, this polluted stormwater would drain untreated into Commencement Bay

3

Rain gardens help our fish and other wildlife enjoy cleaner water

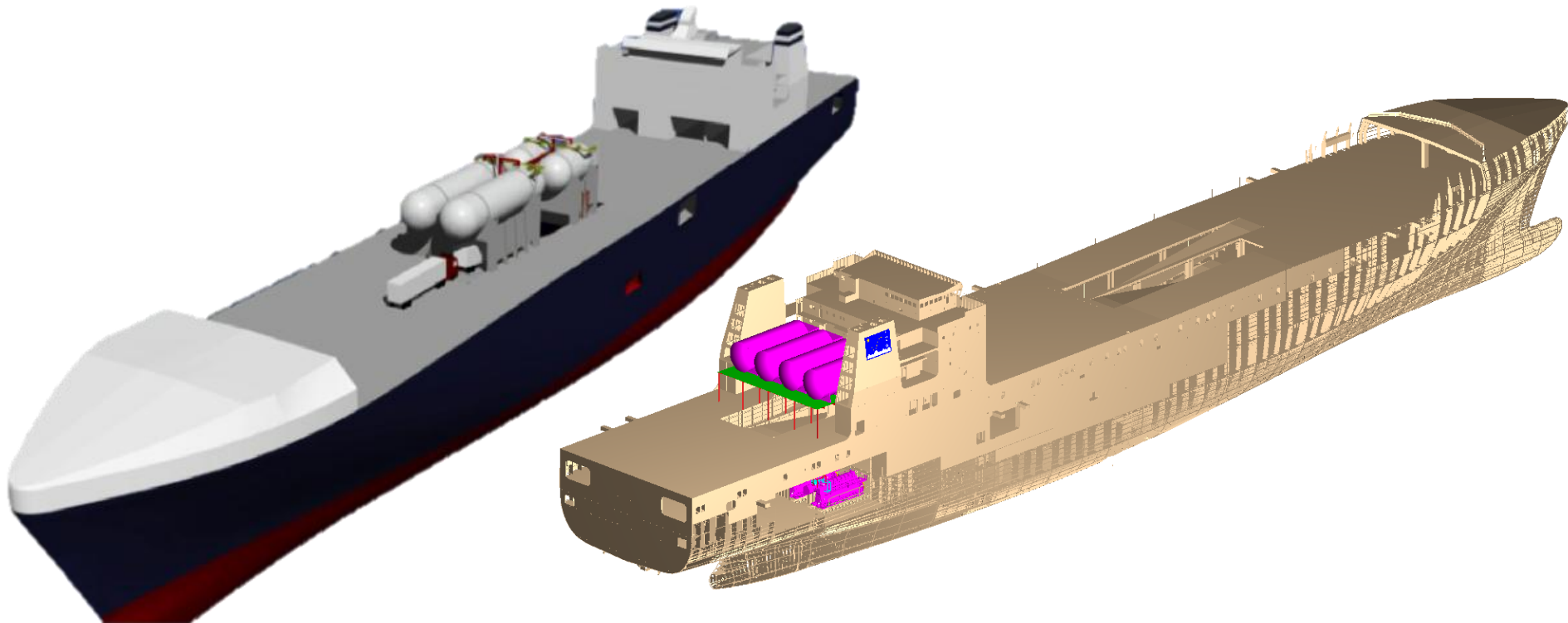


Puget Sound
Starts Here



LNG

The Future of Domestic Shipping



Low Cost Energy

- LNG costs 41% less than IFO-380

Stable Pricing

- Large fixed capital costs
- Low feed-stock costs
- Domestic sourcing reduces volatility from geopolitical impacts

Benefits of LNG

Clean

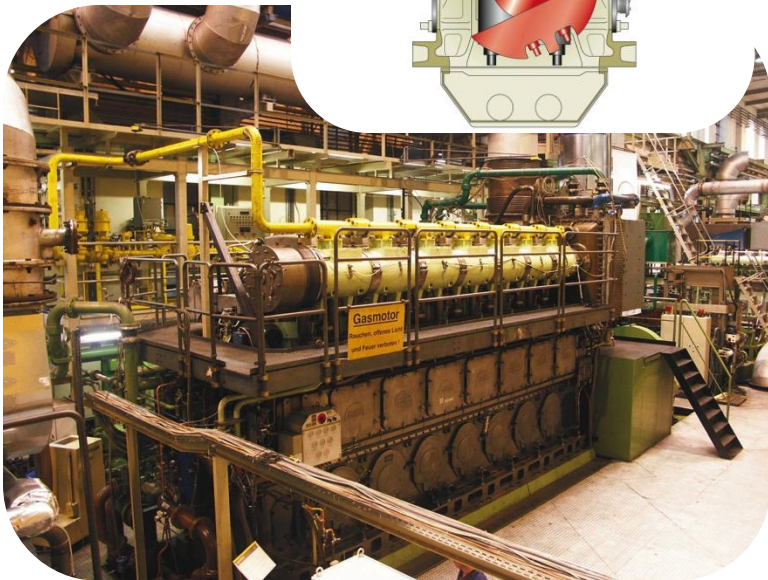
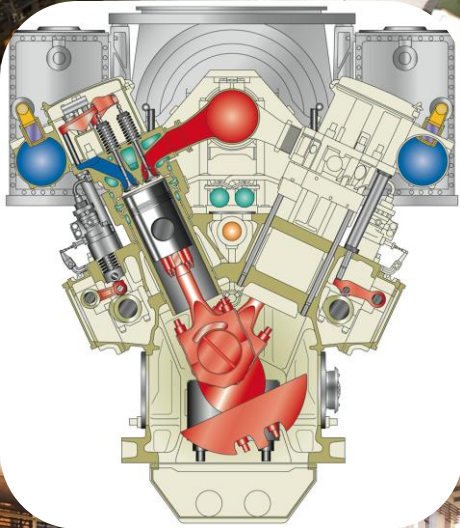
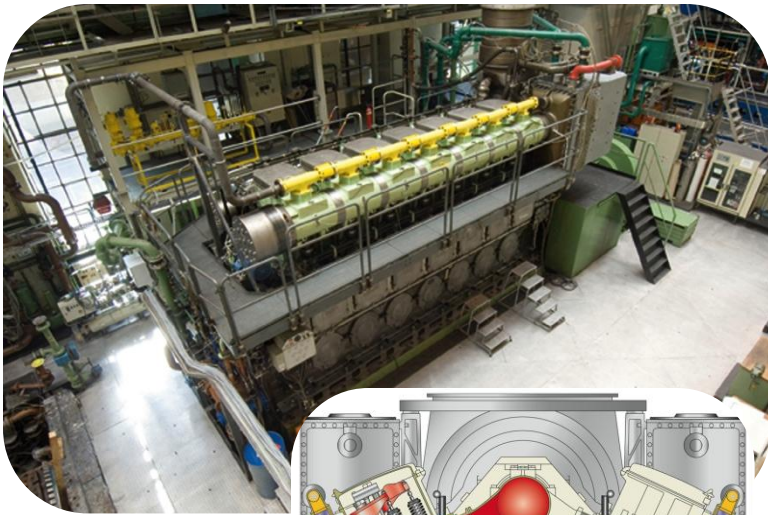
- Sulfur Oxide (SOx) emissions are 95% lower than ECA limits
- Reduces SOx, Particulate Matter (PM) and Nitrous Oxide (NOx) by almost 100%

Safe

- Zero fatalities over the 40-year life of the industry

Project Overview

- First conversion in the world of vessels of this type
- Six MAN engines will be converted to dual fuel diesel – LNG propulsion
- 5 year estimated timeline
- Estimated \$80+ million budget





Phased Project

35-40% of work will be conducted underway, limiting the out of service time to regular dry docking schedule

Structural components built during regulatory dry docking in Q1 2014

Use of regularly scheduled single-sailing weeks

LNG available for in-port use in Q2/3 2014



EPA & USCG Partnership

- Aug. 2012 - limited waiver from North American ECA during conversion to LNG
- First permit issued under Annex VI, Reg. 3
- Required completion Sept. 2016





Shoreside Capacity

- Project helps establish long-term supplies of LNG for use by other sectors of the transportation industry in the Puget Sound





Breaking Barriers

- Environmental benefits will extend throughout the region
- Break through supply barriers that have constrained the growth of LNG in the transportation industries



Commitment to Community



1% of gross revenues
donated back to communities



Thank you

Questions?

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LNG & the Future of the U.S. Domestic Maritime Industry

Phil Morrell

Vice President, Marine & Terminal Operations



📄 LNG Conversion of Two Orca Class Vessels in Alaska Trade



📄 Two new 3100 TEU LNG-Powered containerships for the Puerto Rico Trade



The North American Emission Control Area – Challenge and Opportunity





Possible Solutions

- **Do nothing:** Cost of 1% compliant IFO 380 is 30-40% higher with further increases expected in 2015
- **Install exhaust gas cleaning system:** Scrubbers use existing fuel with added costs
- **Convert to Natural Gas:** Meet all current and future emissions requirements, cleanest of all options

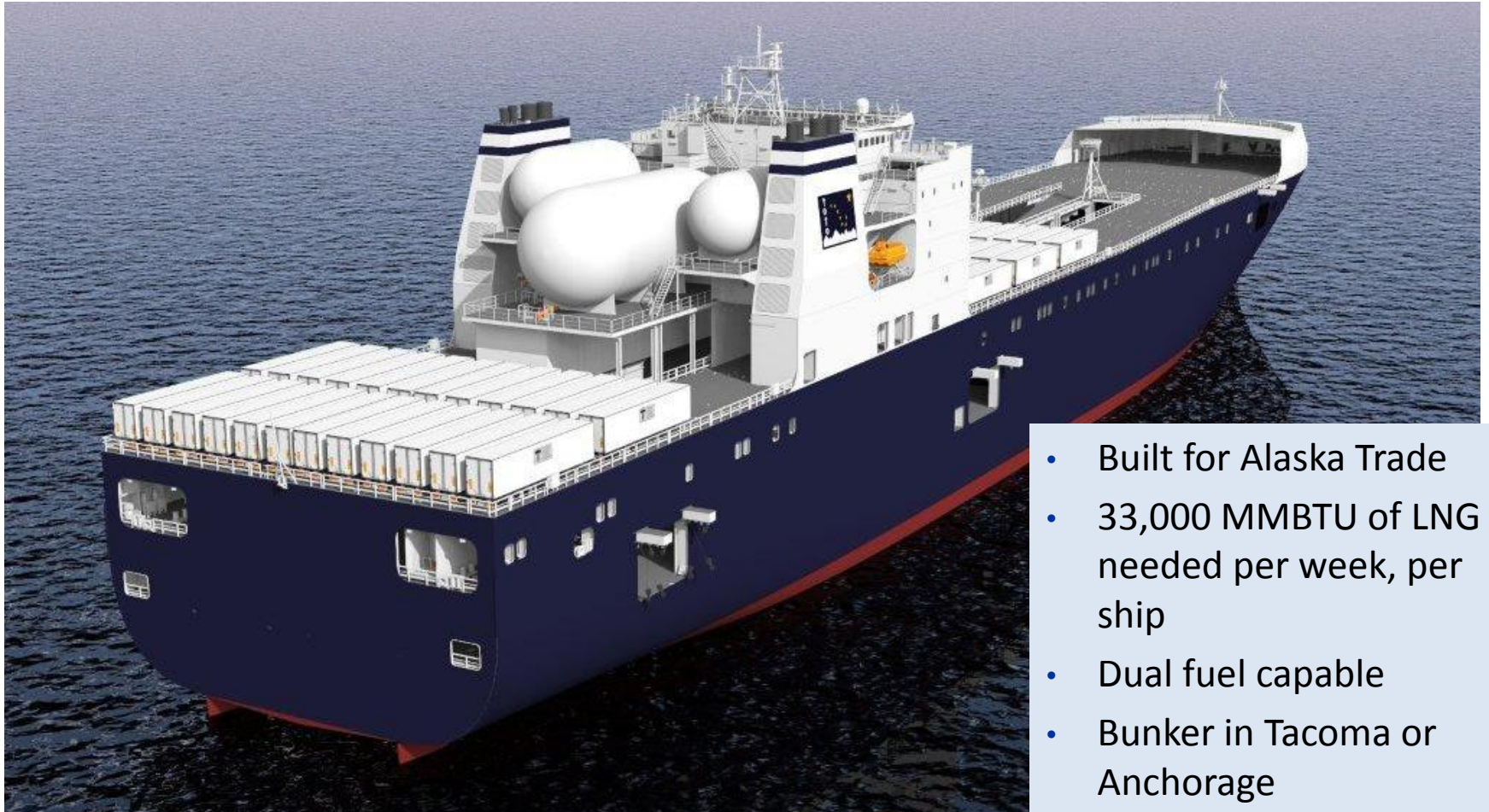


Clean & Safe Fuel

- Conversion to natural gas will reduce ship emissions 95% below even the most world's most stringent air quality standards that are outlined in the North American Emissions Control Areas
- LNG will virtually eliminate Sulfur Dioxide (SO_x), Particulate Matter (PM), Carbon Dioxide (CO₂) and Nitrous Oxide (NO₂) and far exceeds any other fuel source for environmental safety



Orca Conversion



- Built for Alaska Trade
- 33,000 MMBTU of LNG needed per week, per ship
- Dual fuel capable
- Bunker in Tacoma or Anchorage
- Minimal out of service time during conversion



New LNG Ships



- Puerto Rico service
- 3100 TEU
- First LNG container ships in the world
- Dual fuel capable
- Bunker in Jacksonville or San Juan
- First delivery in late 2015



Jones Act Playing a Significant Role in U.S. Maritime Innovation

Advantages

- Dedicated trade lanes
- Long-term capital investments
- Consistent weekly bunkering requirements





Now is the Time

- Clear window of opportunity to develop LNG supply infrastructure for maritime industry
- For vessels spending a third of their time or more in the ECA, LNG is a viable alternative
- We predict a boom in the construction of dual fuel, LNG powered vessels