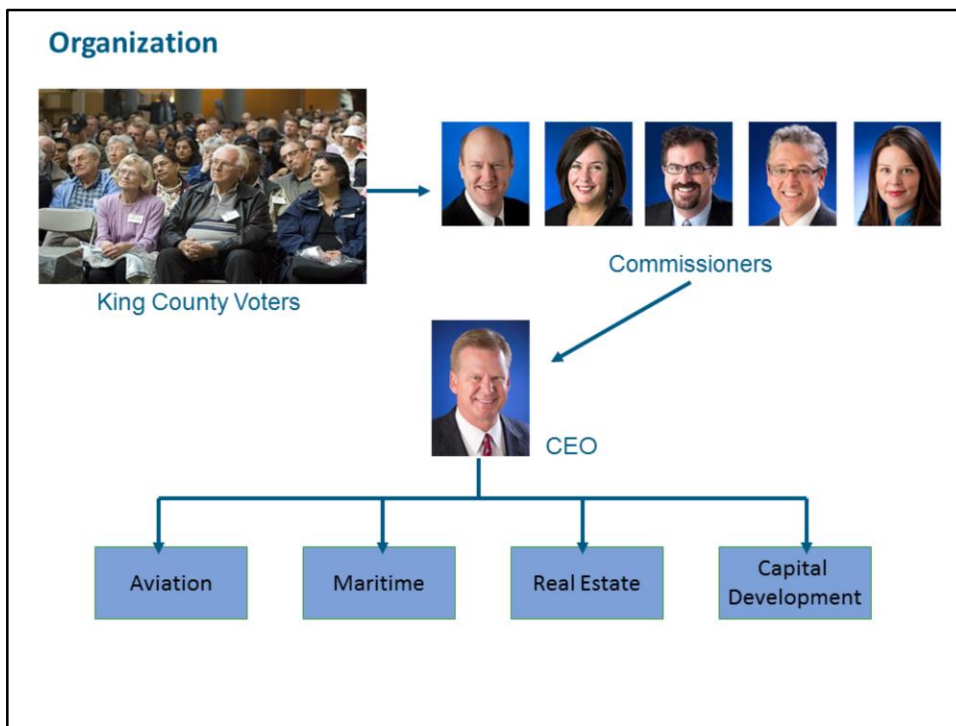


Regional Roundtable on Energy Port of Seattle

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Director, Maritime Environmental and
Sustainability



Port
of Seattle®



- Washington's ports are municipal corporations, that is special purpose governments. We are a separate agency, not part of the state, county nor city.
- Our jurisdiction is King County. King County citizens vote for the five commissioners.
- The Commissioners hire the Chief Executive Officer, who is responsible for the day to day operations of the Port.
- Because we were not deeded land by the city or state when the Port was established, we levy a tax on the property owners of King County. We purchase property at full market value to expand our facilities.
- The Port reduced the amount of its tax levy from \$75.9 million to \$73.5 million for the first time since 1991.
- 2012 tax levy will raise \$73.0 million – just over 23 cents on the tax dollar paid to King County – to be used for bond debt service, freight mobility, Seaport and Real Estate environmental projects, capital improvements, Office of Port Jobs.
- The five-year capital improvement program is \$1.5 billion, which reflects the Port's continuing commitment to promoting regional economic activity through the investment in the development, expansion and renewal of Port facilities that supports the Port's Business Plan and Green Initiative.

Port Lines of Business: Sea, Air, Land



Diverse Port; one of the few ports that operates both an airport and a seaport
4 container terminals, 2 cruise terminals, 3 recreational boat marinas, airport, grain terminal, fisherman's terminal, world trade center, and an international conference center
22 parks and public access areas.



**4 container terminals, 500+ acres
2 with on-dock rail.**

Both RR's intermodal yards within a mile of the terminals.

Naturally deep harbor (over 200 feet). 50 feet (15 meters) at berth.

The Port has invested over \$1.2 Billion in the last decade to upgrade the terminal facilities.

Our Terminal improvements are complete.

Can handle 3 million TEU, and handled over 2M in 2010 and 2011.

Expansion capacity to 5 million with further improvements in road, rail and terminal operations infrastructure.

Century Agenda

Over the next 25 years we will add 100,000 jobs through economic growth led by the Port of Seattle, for a total of 300,000 port-related jobs in the region, while reducing our environmental footprint.

Position the Puget Sound Region as a premier international logistics hub

Advance this region as a leading tourism destination and business gateway

Use our influence as an institution to promote small business growth and workforce development

Be the greenest and most energy efficient port in North America

www.portseattle.org

The Century Agenda

- Starting in 2008, the Port of Seattle began creating a Century Agenda, building a comprehensive vision and strategic plan that focuses on the port's next quarter-century of business and operations.
- Our mission: The Port of Seattle is a public agency that creates jobs by advancing trade and commerce, promoting industrial growth, and stimulating economic development.
- Our Values: We create economic opportunity for all, steward our environment responsibly, partner with surrounding communities, promote social responsibility, conduct ourselves transparently and hold ourselves accountable. We will leave succeeding generations a stronger Port.
- Over the next 25 years, we will add 100,00 jobs through economic growth led by the Port of Seattle, for a total of 300,000 port-related jobs in the region, while reducing our environmental footprint. In order to accomplish this we will:
 - see four boxes
 - We will use the Port's real estate, capital assets and financial capabilities to accomplish our Century Agenda goals. We regard these as tools to thoughtfully steward, rather than areas well suited for specific 25-year goals.

***Be the greenest and most energy
efficient port in North America***

- Meet all increased energy needs through conservation and renewable sources
- Meet or exceed agency requirements for storm water leaving Port owned or operated facilities
- Reduce air pollutants and carbon emissions, specifically:
 - Reduce air pollutant emissions by 50% from 2005 levels
 - Reduce carbon emissions from all Port operations by 50% from 2005 levels and reduce aircraft-related carbon emissions at Sea-Tac by 25%
- Anchor the Puget Sound urban-industrial land use to prevent sprawl in less developed areas
- Restore, create, and enhance 40 additional acres of habitat in the Green/Duwamish watershed and Elliott Bay



Orca from Seattleaquarium.org
Southwest photo from Southwestair.com

Energy Actions

Conservation

- Complete detailed energy baseline
- Implement energy efficiency projects
- Help tenants become energy efficient



Renewable

- Use renewable natural gas (e.g. from landfills, dairy farms, treatment plants)
- Deploy solar energy panels



Leading innovation and change

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Conservation

A1. Develop baseline of energy use

The Port will develop a single baseline of energy use. The aviation division has calculated its energy use and is assisting the maritime and real estate division with a Portwide energy inventory.

T1. Complete energy inventory for the airport for 2015, and provide spreadsheets and procedures to sea-port staff to estimate their energy use.

- Document 2011 through 2015 baseline electrical energy and natural gas and liquid fuel consumption for maritime properties.
- Also identify the % renewable in each category.
- Clarify utility account and distribution relationships between port, shared and tenant

T2. Combine energy estimates into one spreadsheet, and examine major sources.

Affirm highest energy sources/users.

- Clarify utility account and distribution relations

T3. Develop technical requirements to identify energy efficiency opportunities leading to implementation for both aviation and maritime divisions

A2. Implement cost effective energy efficiency projects

T1. Identify opportunities areas to optimize equipment performance or change operations and maintenance or occupant behavior that would result in decreased energy consumption through energy audits and evaluation of consumption data.

T2. Provide environmental and financial budget analyses for energy efficiency projects

to determine prioritized projects where strategies meet goals

T3. Implement, manage, monitor and report on progress

A3. Assist tenants to implement cost effective energy efficiency projects

T1. Institute communication program with tenants to save efficiency measures, technological improvement, information on rebates and incentives that could lead to tenant sponsored energy reduction projects

T2. Consider financial strategies to fund or incentivize energy reduction projects on tenant leased property, such as ESCOs

T3. Consider adoption of energy efficient leasing policies for new and modified leases

T4. Pilot a project with a tenant to implement energy efficiency project with project funding is repaid with guaranteed energy savings through an Energy Services Contract.

Renewable

A1. Renewable natural gas from landfills and/or dairy farms for heating

T1. Meet with Klickitat PUD to review financials and identify any risks in entering into legal agreement with Klickitat

T2. Meet with UW to introduce Port economic development director and answer technical questions about landfill, gas scrubbing, pricing, etc.

T3. Develop contract with pricing terms, timeline, and roles and responsibilities among the parties. Determine nature of agreement with gas-line owners/operators

T4. Implement contract. Assist Klickitat in developing scrubber project.

T5. Receive, monitor and report on RNG

A2. Solar energy panels

T1. Complete energy inventory for the airport for 2015, and provide spreadsheets and procedures to sea-port staff to estimate their energy use. Conduct initial PV feasibility analysis at 2 to 4 Port locations. Determine suitability of facilities, approximate costs, and potential pay-back periods. Also estimate environmental benefits, if any

T2. Evaluate results, provide recommendation to move forward or not through a briefing to senior management

T3. Implement recommendation.

Carbon/Diesel Actions

- Implement Northwest Ports Clean Air Strategy (Maritime)
- Develop and implement Green Fleet Strategy
- Source Renewable Natural Gas
- Provide aviation biofuels (airport jet fuel)



Partnerships are fundamental to success

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A1. Reference NWSP Clean Air Strategy

A2. Green Fleet Strategy Low carbon fuel (Port fleet)

- T1. Conduct research on low carbon fuel options applicable to the Port's fleet, as well as fleet utilization and replacement cycles (total cost of ownership).
- T2. Develop Green Fleet Plan based on research conducted
- T3. Implement Green Fleet Plan (5 year)

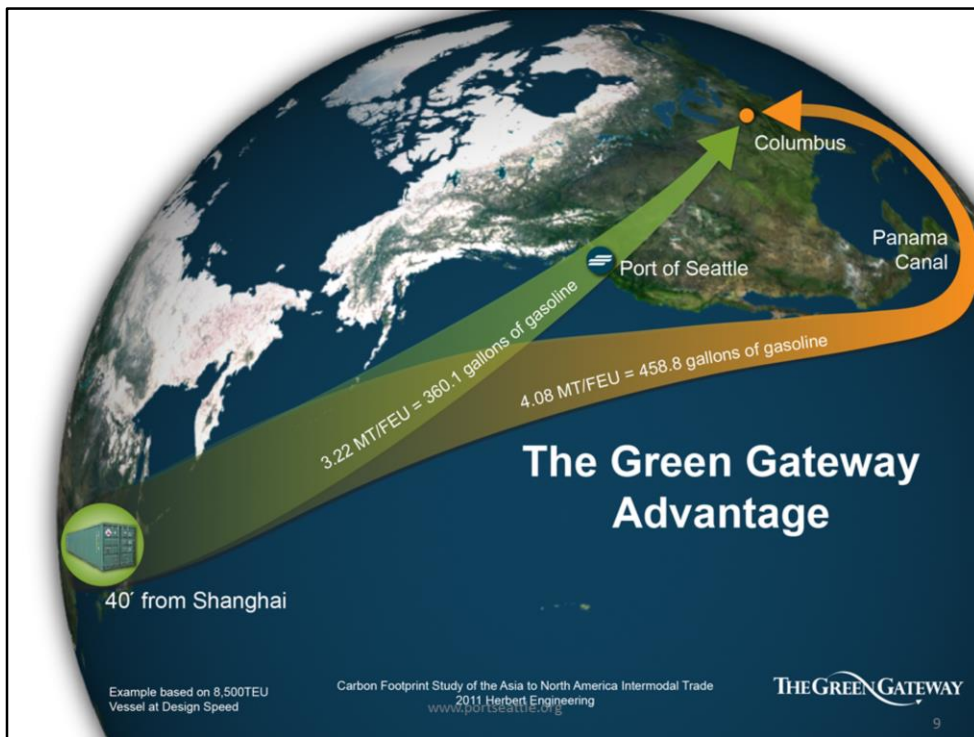
A3. Reference RNG strategy under Energy - Renewable natural gas from landfills and/or dairy farms for heating

- T1. Meet with Klickitat PUD to review financials and identify any risks in entering into legal agreement with Klickitat
- T2. Meet with UW to introduce Port economic development director and answer technical questions about landfill, gas scrubbing, pricing, etc.
- T3. Develop contract with pricing terms, timeline, and roles and responsibilities among the parties. Determine nature of agreement with gas-line owners/operators
- T4. Implement contract. Assist Klickitat in developing scrubber project.
- T5. Receive, monitor and report on RNG

A4. Aviation Biofuels (Airport jet fuel)

- T1. Get CPO to initiate the consultant selection process, finalize scope of work.

- T2. Select consultant, finalize contract. Implement scope of work.
- T3. Finalize study. Report findings to Commission.
- T4. Implement study recommendations
- T5. Track and evaluate emerging opportunities to support production of aviation biofuels in the Pacific Northwest (PNW).



- The Port of Seattle is the Green Gateway.
- In a report released in May 2009, Herbert Engineering, a ship design, engineering and transportation consulting firm commissioned by the Port of Seattle, analyzed carbon footprints of trade routes between Singapore, Hong Kong and Shanghai, and the U.S. distribution hubs of Chicago, Columbus and Memphis.
- The findings stated that the Ports of Seattle and Tacoma are closer to Asia than any other U.S. port, resulting in shorter ocean transit times and lower fuel consumption on the ocean leg of the journey.
- Carbon emissions for cargo moving by ship from Asia to Puget Sound and by rail to eastern U.S. are lower than on routes through the Panama Canal, Savannah, Norfolk, New York and California.
- Most of our cargo, about 70% goes to points east, all on rail. Most of our customers are in the Midwest. We have only a relatively small regional market here – our metro area accounts for about 4-5% of the nation.
- The Green Gateway and our innovative sustainability programs are sharpening our competitive edge and moving us towards our goal as one of the cleanest and most energy efficient ports in North America.



Port
of Seattle

THANK YOU!