



Cross Border Rail Studies
Diesel Multiple Unit/Passenger/Freight
Whatcom Council of Governments
Northwest Business Council
August 10, 2011

Bruce Agnew, Cascadia Center for Regional Development

WCOG Rail Contract to Cascadia

- Delays to Amtrak *Cascades* trains
Seattle to Vancouver BC
- Delays to BNSF freight rail - future
economic opportunity
- Comparison of current passenger
trains and Diesel Multiple Units
(DMU's)
- Caveat – “traffic modelling” only
done from Seattle to Bellingham
with current – not projected train
traffic on BNSF line

Geographic Scope



Stakeholder Interviews



Passenger Report

Objectives...

- Examine border-crossing delays for passenger trains (at the US-Canada border)
- Examine Customs and border clearance issues

Amtrak Cascades – An Overview

- Federally-designated High-speed Rail Corridor
- 466-mile rail corridor
- Serves 17 communities totaling 8 million people
- Hosts 11 Amtrak *Cascades* trains
- Hosts 6 Amtrak long-distance trains
- Hosts 24 Sound Transit commuter rail trains between Tacoma and Everett (26 starting June 1)
- Union Pacific Railroad's (UP) tracks between Eugene and Portland
- BNSF Railway between Portland, Seattle and Vancouver, BC
- UP and BNSF policy toward passenger service – “Keep Us Whole”



ARRA HSIPR Program Report

- Washington applied for nearly \$1.3 billion.
- Washington was awarded \$590 (now **\$781 million**) in 3 segments.
- Washington received the fifth highest amount nationwide.
- FRA announcement: funding will
 - Add two additional daily round trips between Seattle and Portland.
 - Reduce travel time by at least 5%.
 - Increase on-time performance from 62 to 88%.
 - **Everett congestion projects**
 - **Blaine/Swift border crossing siding**
 - **Everett to Blaine rail upgrades**
 - **Congressman Larsen urges WSDOT to prioritize rail investments north for jobs**

| STATE | MILLIONS |
|-------------------|----------------|
| CALIFORNIA | \$2,344 |
| FLORIDA | 1,250 |
| ILLINOIS | 1,235 |
| WISCONSIN | 822 |
| WASHINGTON | 590 |
| NORTH CAROLINA | 545 |
| OHIO | 400 |
| N.E. CORRIDOR | 112 |
| VIRGINIA | 75 |
| INDIANA | 71 |
| MASSACHUSETTS | 70 |
| VERMONT | 50 |
| CONNECTICUT | 40 |
| MICHIGAN | 40 |
| MAINE | 35 |
| MISSOURI | 31 |
| PENNSYLVANIA | 27 |
| IOWA | 17 |
| OREGON | 8 |
| TEXAS | 4 |
| MINNESOTA | 1 |
| OTHER (PLANNING) | 6 |
| TOTAL | \$7,924 |



Passenger Report

Amtrak Border Delays

- Irregular delays
 - Slides along corridor (Edmonds, Mukilteo, White Rock)
 - Operational issues between BNSF and Amtrak trains on single-tracked rail line (Everett-Vancouver, BC)
- Regular delays
 - Southbound Amtrak allots 15 min for pre-inspection of passengers at Pacific Central Station in Vancouver, BC
 - Physical inspections conducted at the border in Blaine
 - Northbound Amtrak passengers inspected only upon arrival at Pacific Central Station

Passenger Report

Recommendations

- Align BNSF and corridor stakeholders in Washington and British Columbia to resolve **slide issue** through IMTC process
 - Consider as a recommendation to the Executive Council of Governor Gregoire and Premier Clark
- Continue to advocate for **pre-clearance** at Pacific Central Station to reduce travel time from SEA to Vancouver BC
- (Threat to second train) Need permanent **waiver** of proposed Canadian cost recovery fee
- **Cost recovery is \$1500/train** – decision from Ottawa soon

Leaders from Snohomish to Whatcom launch North Sound coalition for federal high speed rail \$



March 7, 2011

Governor Chris Gregoire
Office of the Governor
PO Box 40002
Olympia, WA 98504-0002

RE: Florida's High-speed rail grant dollars

Dear Governor Gregoire:

We applaud your efforts to secure unused high-speed rail dollars for Washington State. Improving our railway infrastructure is critical to efficiently and effectively moving people and goods throughout the state.

We respectfully request that the resources be dedicated to rail improvements north of Seattle to the U.S./Canada border when Washington State receives additional high-speed rail dollars previously earmarked for Florida. The state has already identified the portion of the North/South corridor south of Seattle for the high-speed rail dollars salvaged from grants previously awarded to Wisconsin and Ohio. Those of us north of Seattle believe it is fitting to use the dollars obtained from Florida for passenger rail improvements to the north as the needs are evident.

Snohomish County is the fastest growing county in the state and is home to the state's largest employer. More than 30,000 people travel to and from Everett each day to work at the nation's largest aerospace manufacturing facility. Investing in passenger rail improvements by way of Amtrak and Sound Transit would help alleviate some of the highway gridlock that cripples the south Snohomish County region during peak commuting hours.

Skagit County is increasingly becoming a bedroom community for workers in Whatcom, Snohomish and even King County. The limited passenger rail service requires people to commute by car on I-5, adding to traffic congestion. This will only get worse, as the county's population is projected to nearly double over the next 50 years, unless rail service improves.

Farther north, the City of Bellingham, Port of Bellingham, Whatcom County, and private industry, including BNSF Railway, are involved in efforts to improve the rail corridor through Bellingham to the Canadian border. These improvements, by way of example, include relocating the rail line to improve train speeds and closing multiple at-grade crossings. This will improve vehicle and pedestrian safety and passenger travel in the north part of the state, and thus would reduce impacts to our quality of life.

Investing the additional funds in rail improvements from Seattle north would pay great dividends for our state, businesses, and local communities along the improved lines. We would be happy to provide additional information if needed.

DMU Report

Objectives

- Analyze and compare the capital and operating cost of differing rail technologies (specifically evaluating DMU technology) that might be used in the Burlington Northern Santa Fe rail corridor from Seattle to Vancouver, B.C.
- Evaluate the operational characteristics of each technology
- Identify a list of capital projects that would allow expanded service to occur.
- Review governance models
- Examine land use and transit connections

Cascadia Contract – Compare Train Technologies

Amtrak - Sounder - DMU





Nippon Sharyo SMART Car



Interior features (see Figures)

- 158 seats per married pair
- 4 wheelchair parking spaces (each with companion seating) per married pair
- 24 primary bicycle spaces per married pair
- 14 secondary bicycle spaces per married pair
- 16 work tables per married pair
- Luggage racks
- ADA restroom on A-car
- Service bar on B-car
- Convenience outlets
- Wi-Fi
- Reclining seats
- Security cameras
- Handholds for standees
- 7 feet, 3 inch ceiling height in center aisle
- ADA access throughout the train (no steps or narrow aisle ways)

Cascadia study examined Capital and operations and maintenance costs of different train technologies

- Capital cost;
 - High Speed train set (existing Talgo) - \$107,394 per seat provided
 - Two car bi-level Sounder/West Coast Express commuter equipment - \$37,857 per seat provided
 - DMU (three car SMART train) - \$37,209 per seat provided
- O&M costs;

Not enough comparable data available from existing US compliant systems to compare long term operating costs

DMU - BNSF Parameters for Adding New Service to Their Lines

- BNSF - No deterioration of freight capacity
 - WSDOT Amtrak Cascades Mid Range Plan has engineered each mile of corridor
 - Track and ROW improvements identified (thru computer simulation/modeling)
 - Those improvements usually become to “price” of allowing service.
 - Our current modelling allows for three more pax roundtrips total of 5 between Everett and Bellingham**
- BNSF will not confirm model until asked by WSDOT for more passenger train service

Report Option – Two Tiered International and Interurban service?

- **Three Amtrak Cascades** round trips daily to Vancouver BC, supplemented by **two “interurban”** rail frequencies between Everett and Bellingham (and possibly Blaine for area residents and Canadians who reside south of Fraser River)
 - AM and PM connections with existing Sounder service at Everett to Seattle
 - Connect with proposed 7 mile new track from Everett to Snohomish to Eastside (old BNSF) line to Bellevue (Light Rail to Seattle) and Renton – co-developed with parallel trail
 - PRIVATE SECTOR PARTNERSHIPS FOR CAPITAL AND OPERATING for Interurban service
 - Permanent funding for inter-county transit connecting Whatcom, Skagit, Island and Snohomish County systems

DMU Report

Public Private Partnerships – Capital

- State rail plan called for partnerships between Amtrak, Sound Transit, state agencies and stakeholders
- Cascadia's proposal
 - A “**Fast North Corridor**” effort in North Puget Sound patterned after the successful Freight Action Strategic (FAST) project in Seattle area
 - The Freight Action Strategy for the Everett-Seattle-Tacoma Corridor (FAST Corridor) is a partnership of 26 local cities, counties, ports, federal, state and regional transportation agencies, railroads and trucking interests
 - Resulted in \$568 million worth of freight investments
 - Our version (Fast North Corridor) would include Snohomish County rail projects (Boeing), Skagit River Bridge replacement, Bellingham Rail Relocation as well as Custer/Swift/Blaine enhancements
 - Recommend federal RRIF loan funds (vs. High Speed Rail)
 - Port of Vancouver, WA (\$73 million of \$150 million Westside Access Project)

What they will cost

(Conceptual cost estimates are in addition to improvements already underway, to be completed by BNSF, Sound Transit, WSDOT and / or ARRA funding)

- \$35M for Stations, Shops and layover facilities & track improvements.
- Vehicles would add another \$28M
- Operational cost estimated at \$3.1M /yr.

Public Private Partnership for Excursion Trains?

Weekend excursion trains using DMU's:

- Winery and Bounty of Washington tasting trains
- Seahawk, Mariner, Sounder charters
- Tulalip Entertainment and Conference Center
- Sea-to – Ski and Tulip Festivals

Freight Report

Objectives...

- Examine border crossing delays for freight trains (at the U.S.-Canada border)
- Examine route restrictions that prevent double stacking of containers
- Offer assessments of how to minimize delays and related cost estimates for that action
- Economic Analysis of cross-border freight

Freight Report

Blaine siding and border crossing issues

- With new federal funds, WSDOT will add second siding at Blaine-Swift to reduce congestion between freight and passenger trains in 45-mile gap between sidings at Swift and Colebrook
- Rail/highway conflicts in Blaine as a result of southbound trains waiting for inspections at Swift remain a concern for the community
 - Department of Homeland Security and BNSF do not have plans at this time to move the inspection equipment (known as a VACIS machine)
 - Query: will new Swift Customs siding project accommodate VACIS machine relocation?

Freight Report – Options for IMTC

- Currently, northbound inspections are conducted on the main BNSF line between White Rock and the Semiahmoo First Nation Reserve
 - Impacts access and operational flexibility
- Extending the current Blaine siding could allow CBSA to conduct the inspection at the border and free up the mainline
 - Required: extensive consultation among inspection agencies, Semiahmoo First Nation, BNSF
 - Required: resources to engineer related costs of construction, environmental impacts, inspection facilities and joint staffing
- Blaine and the Port of Bellingham have developed long term plans to develop a Board Walk and pedestrian overpass
 - Possible future passenger rail stop

Freight – Seattle to Everett - Boeing Fuselage on Tracks HWY 9



Port of Everett / Boeing



Source: Port of Everett TIGER Grant Application, South Terminal Intermodal Freight Shipping Facility Improvements: Project Location Map

BNSF “Mixed Manifest” Train Southbound at Peach Arch



Bellingham Waterfront Development - Rail Relocation is key to economic development



Blaine Boardwalk



**REDEVELOPMENT CONCEPT FOR
BLAINE BOARDWALK
CITY OF BLAINE**

Architecture: David Christensen CHRISTENSEN DESIGN MANAGEMENT
Digital Image: Rick Mullen PRESENTATION ART STUDIO REV. 02/01/07

Roberts Bank BC Rail Corridor

- BNSF – *“delays for our trains to Roberts Bank cause us to hold trains south of Bellingham”*
- Corridor mostly single rail track and currently carries up to 18 trains per day, ranging from 6,000 to 9,500 feet in length.
- Volume of train traffic is expected to increase to 28–38 trains per day by 2021, and some train lengths are expected to increase up to 12,000 feet.
- Corridor has about 66 road-rail crossings.
- About 388,000 vehicles per day cross the tracks, and this number is estimated to increase to 560,000 vehicles per day by 2021.
- **COST of Project - \$360 million CDN**

Overpass in Surrey – Roberts Bank Rail Corridor

Current Status

Conceptual designs have been produced and project completion is required by March 2014. The city is in the process of obtaining the necessary environmental and Agricultural Land Commission approvals. Property acquisition, as well as consultation with the public, is currently under way.

The request for design build proposals is scheduled to be issued in early 2011.



Conceptual rendering of the 192 Street Overpass, looking northeast

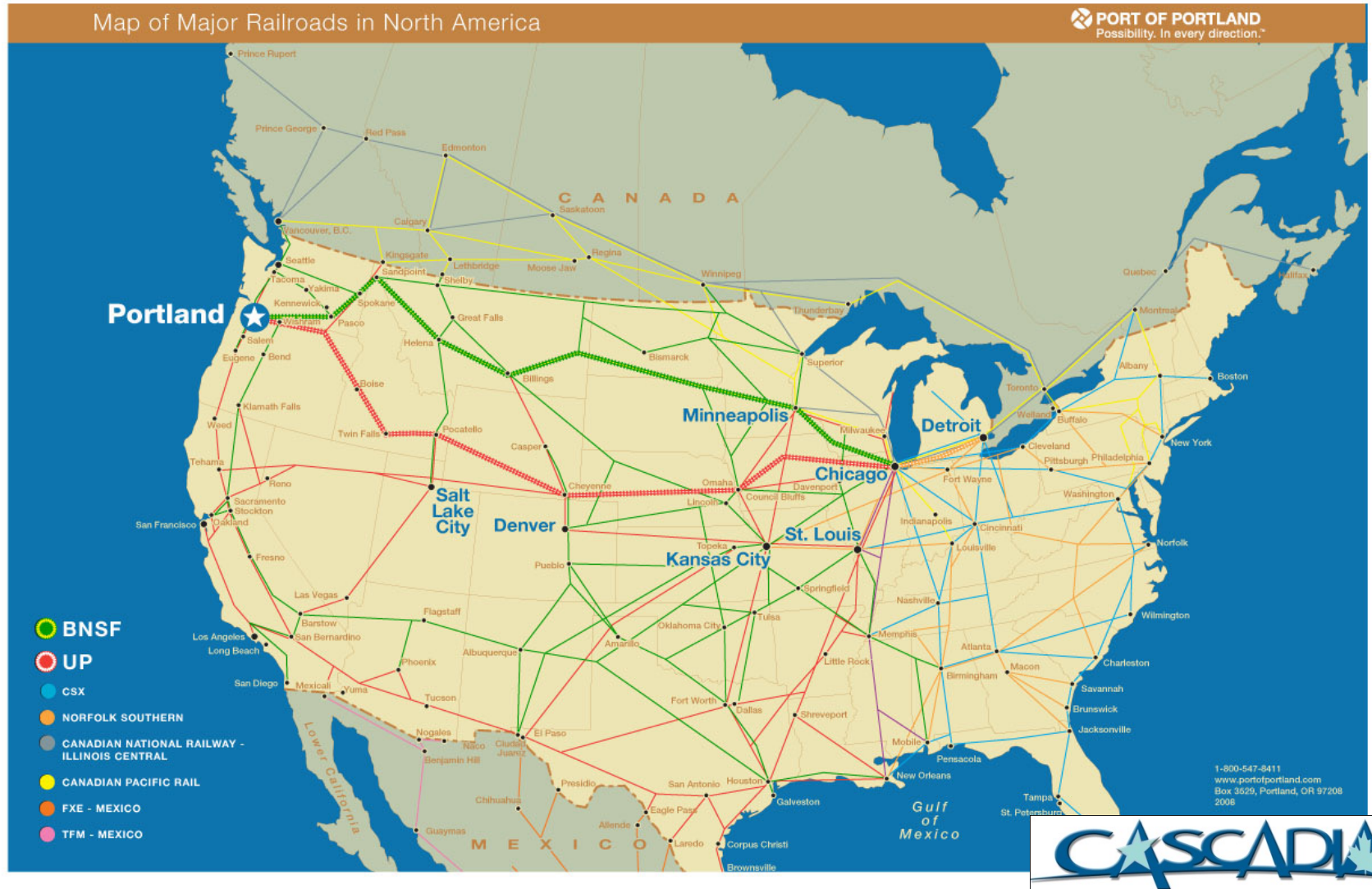
Westshore Terminal - Roberts Bank BC



Proposed Gateway Pacific Terminal – Whatcom jobs and commodity bulk port for West Coast



North American Rail Networks



Rail Corridors in Washington State and Western Canada

Prince Rupert ❶

Edmonton ❷

Calgary ❸

Vancouver ❹

Cherry Point ❺

Seattle ❻

Portland ❼

Longview ❽

Legend

- BNSF
- CPR
- CN
- UP
- OTHER

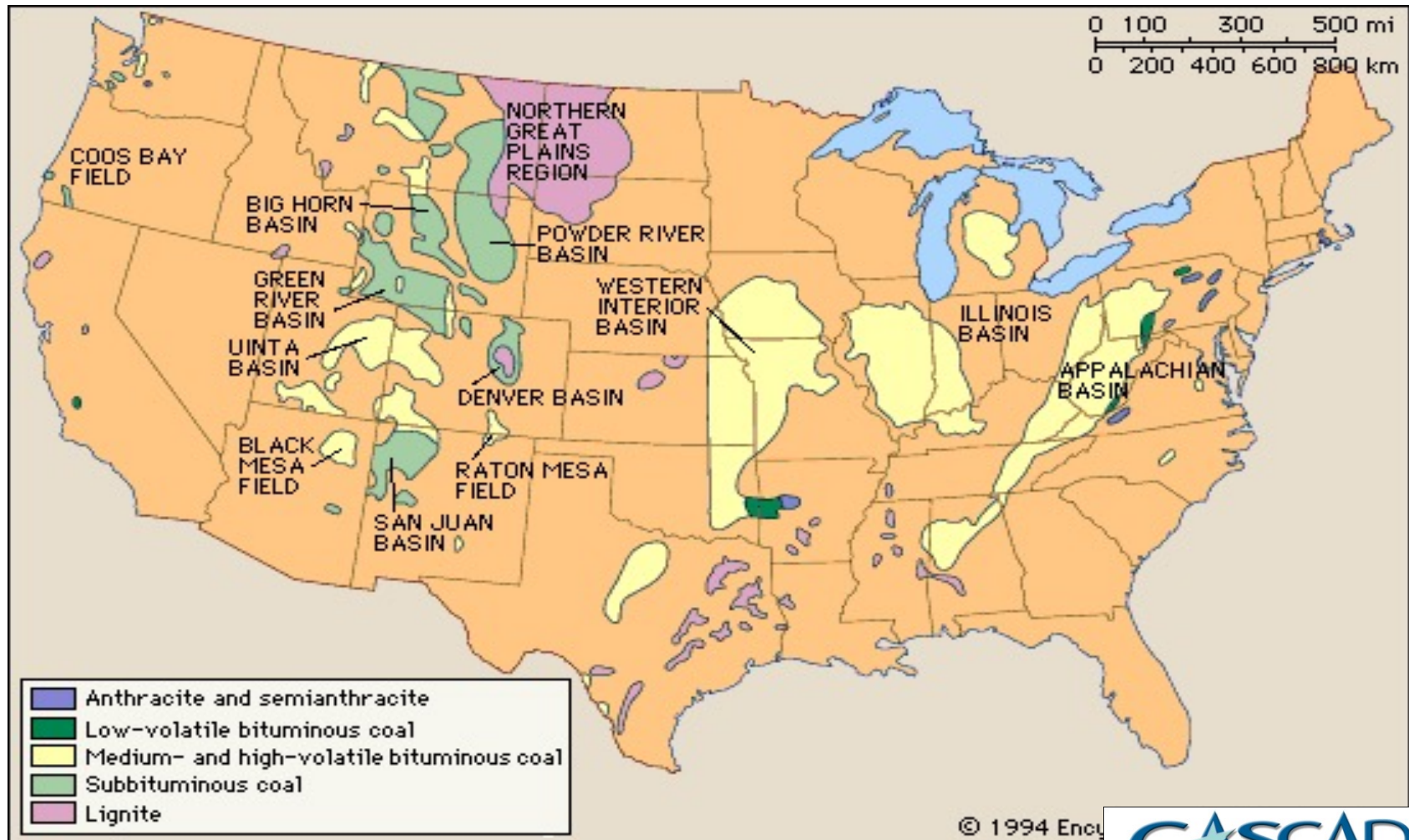


Powder River Basin Coal (PRB)

- Northeast Wyoming is primary source
- PRB represents 40% of all coal production in U.S.
 - 20% of U.S. power generation
- PRB growth:

| <u>1980</u> | <u>2008</u> |
|----------------------|-----------------------|
| 20 million tons (ST) | 450 million tons (ST) |
- PRB coal energy equivalent: 95 nuclear plants or 324 Hoover Dams

U.S. Coal Sources



U.S. Coal Exports – Shipped currently through Canada

- 1st QTR 2011- 20.6 (ST) exported
 - 49% more than prior year quarter
 - Coking coal remains primary export (64% of total)
- Main driver of coal growth is for power generation (steam) which increased 160% in 1st QTR 2011
 - Coking coal increased only 21%
- Supply chain disruptions in Australia: flooding

Coal Activity in the PNW

- **Gateway Pacific Terminal**
 - Proposed commodity site in Cherry Point, WA
 - SSA and Peabody Energy
 - 24 million ton capacity
- **Millennium Bulk Logistics**
 - Longview, WA
 - Ambre Energy and Arch Coal
- **Kinder Morgan Energy Partners**
 - Colorado sourced coal
 - Export via Houston
 - “Large Western Coal producer”

B.C. Coal Exports (million metric tons)

| | Actual Throughput | Current Capacity | Expanded Capacity | Maximum future spare capacity |
|--------------------------------------|------------------------------|-----------------------------|------------------------------|--|
| Prince Rupert (Ridley) | -9 | 12 | 24 | -15 |
| North Vancouver (Neptune) | 8 | 8 | 12.5 | 4.5 |
| Roberts Bank (Westshore) | 21 | 29 | 29 | 8 |
| TOTAL | 38 | 49 | 65.5 | 27.5 |