



Market Access and Permit Reform

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BNSF Railway – Burlington Northern Santa Fe

32,500 mile rail freight system
in 28 states and three Canadian provinces



- Employees: **42,000**
- Headquarters: **Fort Worth, Texas**
- Ports served: **40+**
- Intermodal facilities: **25**
- Locomotives: **8,000**
- Bridges: **13,000**
- Tunnels: **89**
- Packages shipped in holidays: **50 million**
- Carloads shipped in 2015: **10.2 million**
- Subsidiary of **Berkshire Hathaway**

Value of Freight Rail Transportation

ENVIRONMENTAL FRIENDLINESS

Freight railroads
reduce greenhouse
gas emissions
by

75%



HIGHWAY GRIDLOCK REDUCTION



A doublestack intermodal train removes **+250 long-haul freight trucks from the highway**

WORKHORSE OF THE ECONOMY

In the U.S., railroads account for approximately

40% of all freight

(more than any other transportation)

COST EFFICIENCY

In general, **shippers pay less** for shipping via rail than other forms of surface transportation

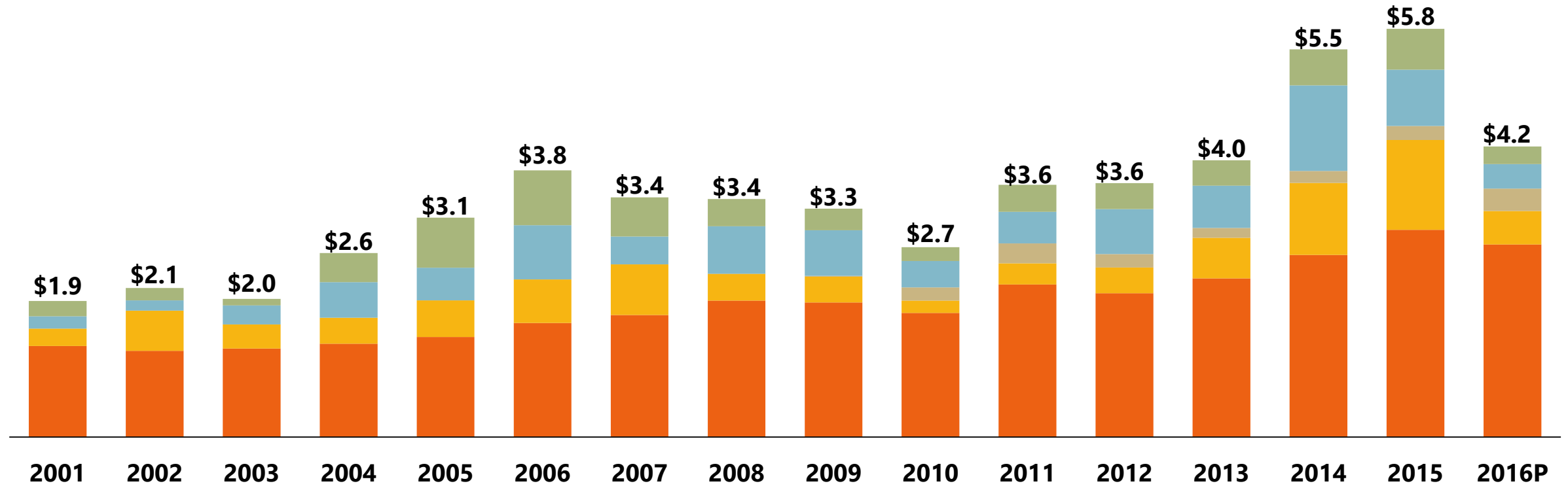


Railroads are Capital Intensive

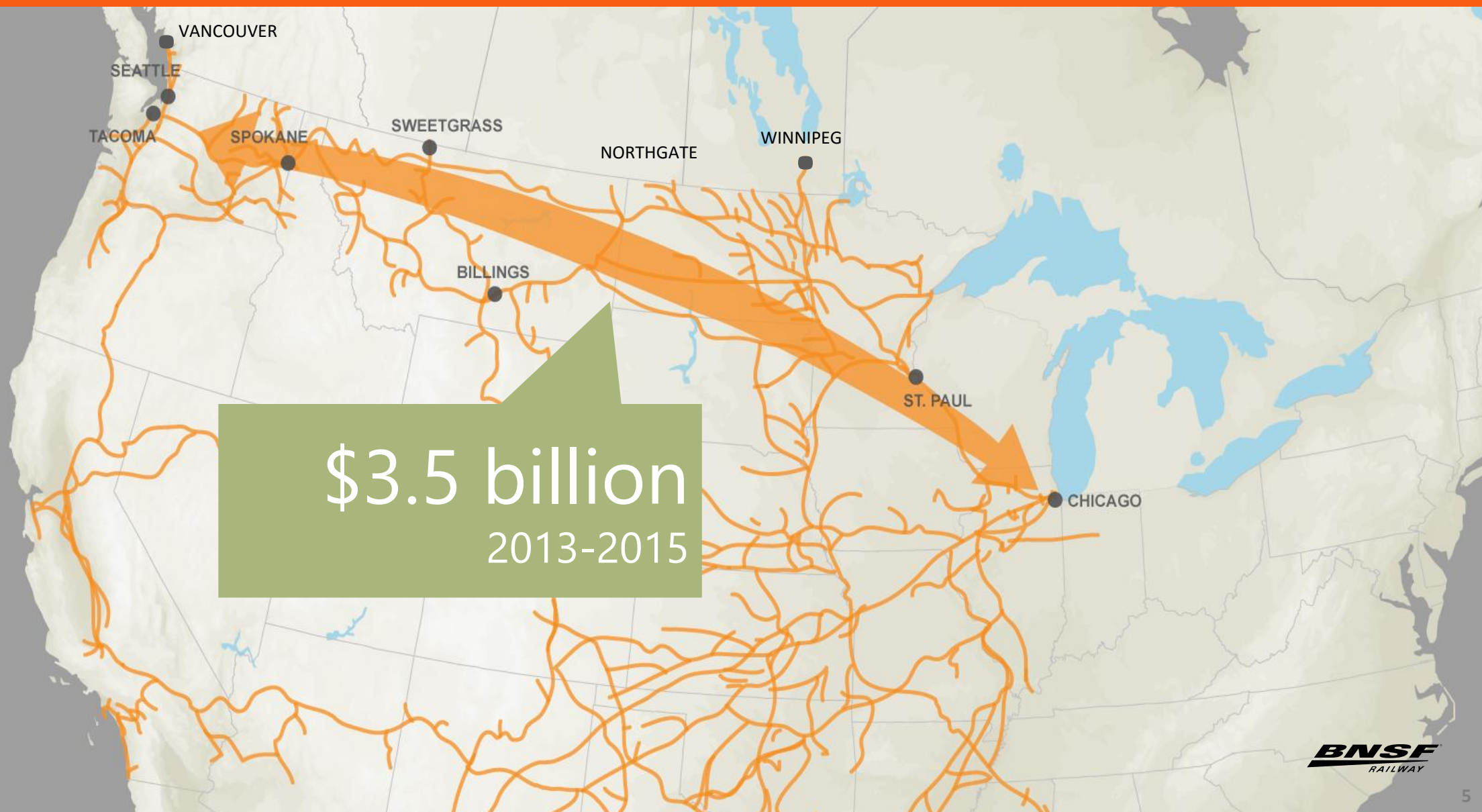
BNSF Capital Expenditures

\$ Billions

■ Replacement Capital ■ Expansion ■ PTC ■ Locomotive ■ Equipment

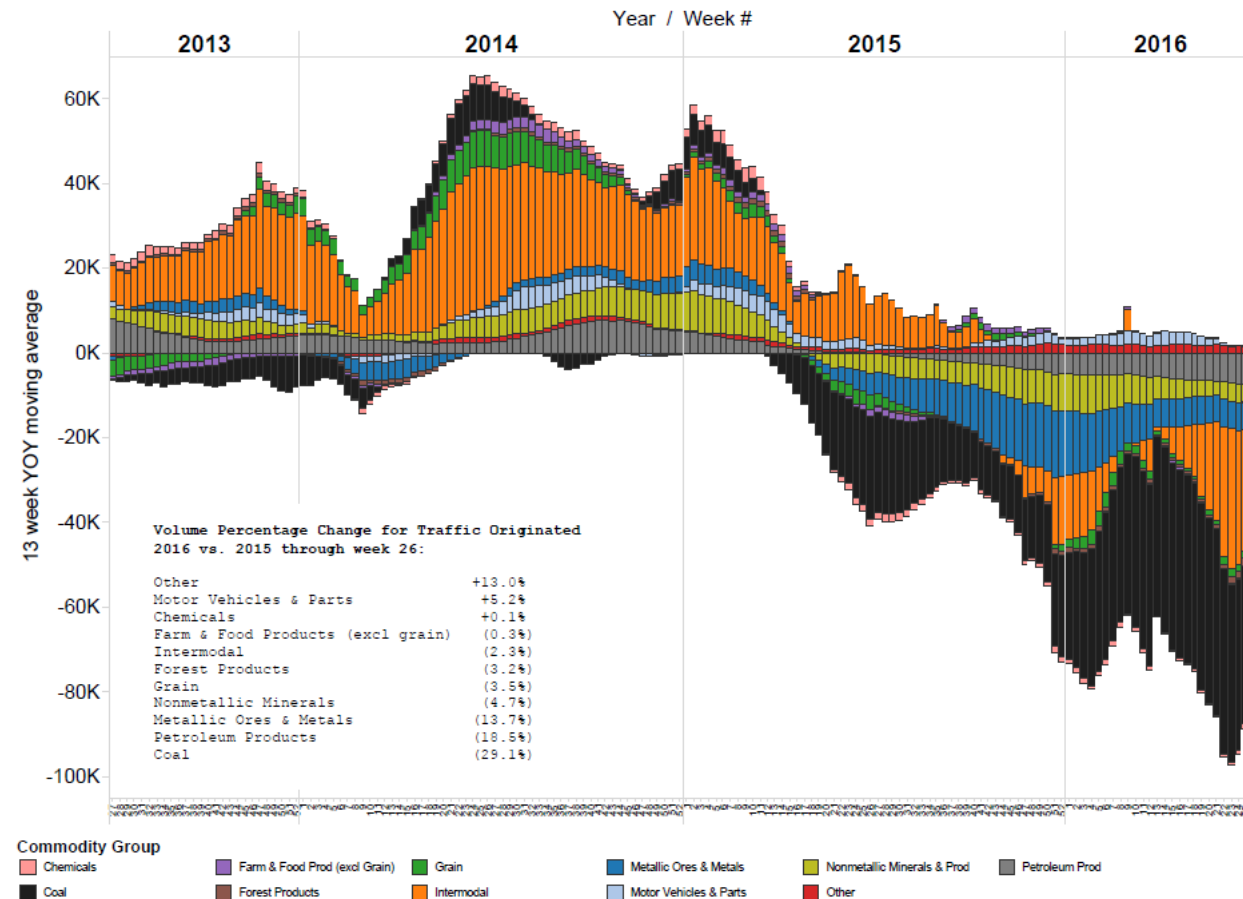


Expanding the Northern Corridor



Rail Freight Volume Trend

All Class Is by Commodity - Trailing 13wk Moving Average Year Over Year Variance
AAR Weekly Railroad Traffic



Traffic Carried*

2016 vs. 2015 through week 26:

	<u>Carloads</u>	<u>Intermodal</u>	<u>Total</u>
U.S.			
BNSF	(15.6%)	+0.8%	(7.8%)
UP	(11.4%)	(7.5%)	(9.7%)
NS	(7.7%)	(2.8%)	(5.2%)
CSX	(10.5%)	(0.8%)	(6.6%)
KCS	(3.5%)	(9.0%)	(5.8%)
Canadian			
CN	(14.1%)	(4.1%)	(10.1%)
CPRS	(8.4%)	(3.8%)	(6.7%)
Mexican			
FXE	+1.7%	+2.3%	+1.9%
KCSM	+1.6%	(0.8%)	(0.4%)

* Traffic carried is the sum of units originated and units received from connecting railroads

Long-Term Expectations for Growth

+40%
more freight
over the next
30 years



Increase in Community Issues



Safety

- Rail operations
- Grade crossing and trespassing incidents
- Hazmat & Crude shipments
- Bridge condition

Quality of life complaints

- Blocked crossings
- Train horn complaints
- Train idling complaints

Anti-Rail/Fossil Fuel Campaigns

Public and Government Focus:

- Operational changes or capacity expansions negatively attributed to increased crude movement
- Training and equipping of emergency and first responders for crude
- Increased community calls for public disclosure of real-time train manifests and movements
- State rail safety legislative actions

Non-Governmental Organization Focus:

- Opposition groups leverage the public's safety concerns attempting to prevent the increased usage of domestic crude by restricting transportation
- Increasing permitting challenges lengthening project timelines and impeding growth



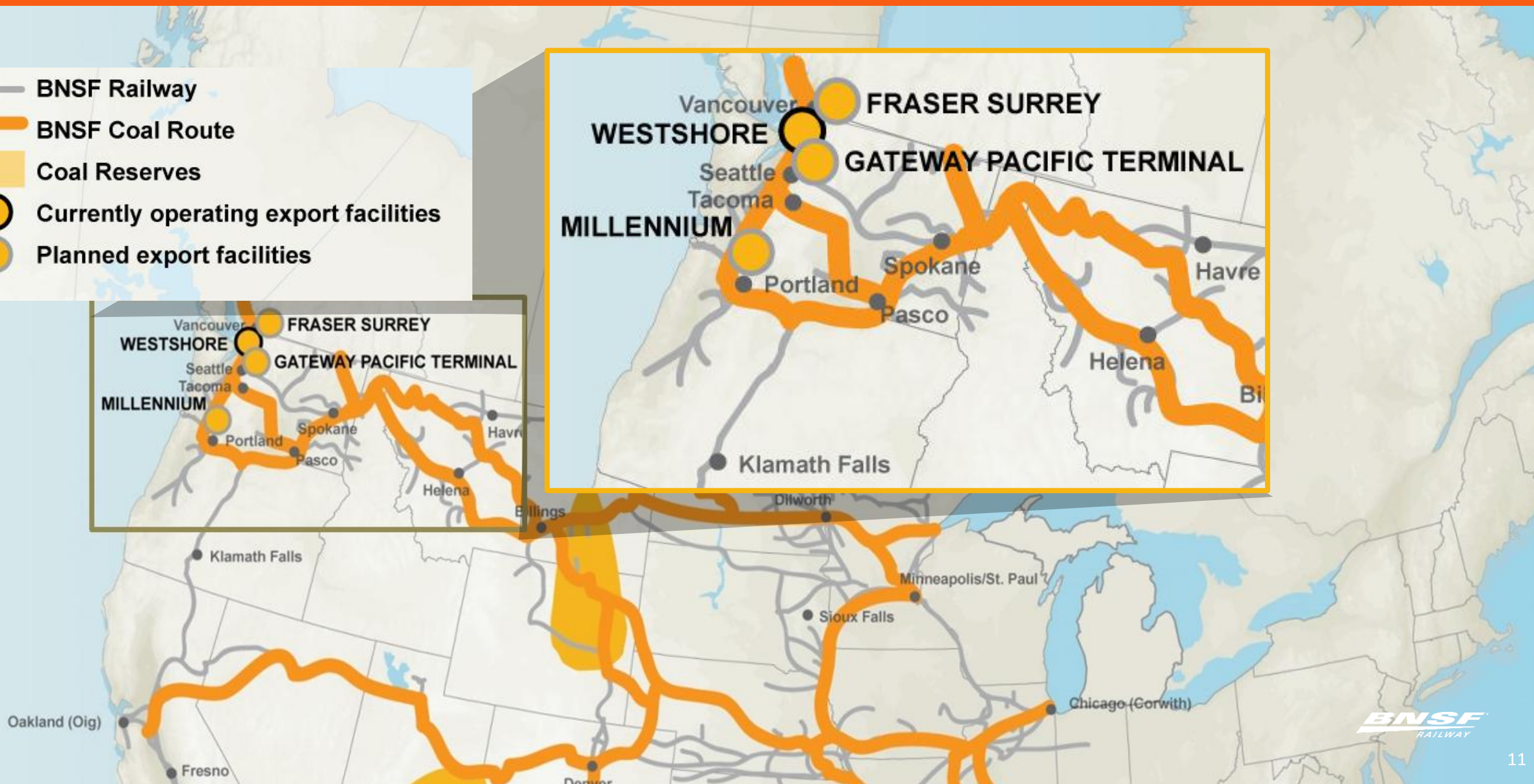
Construction Permitting Challenges

Burgeoning, uncoordinated regulation creates substantial permitting delays

- Delays have many negative consequences:
 - Can *double* the cost of projects
 - Reduces our supply chain competitiveness
 - Unintended consequence: environmental harm
 - Uncertainty limits private investment
 - Many projects *just won't happen*

Coal Export Facilities

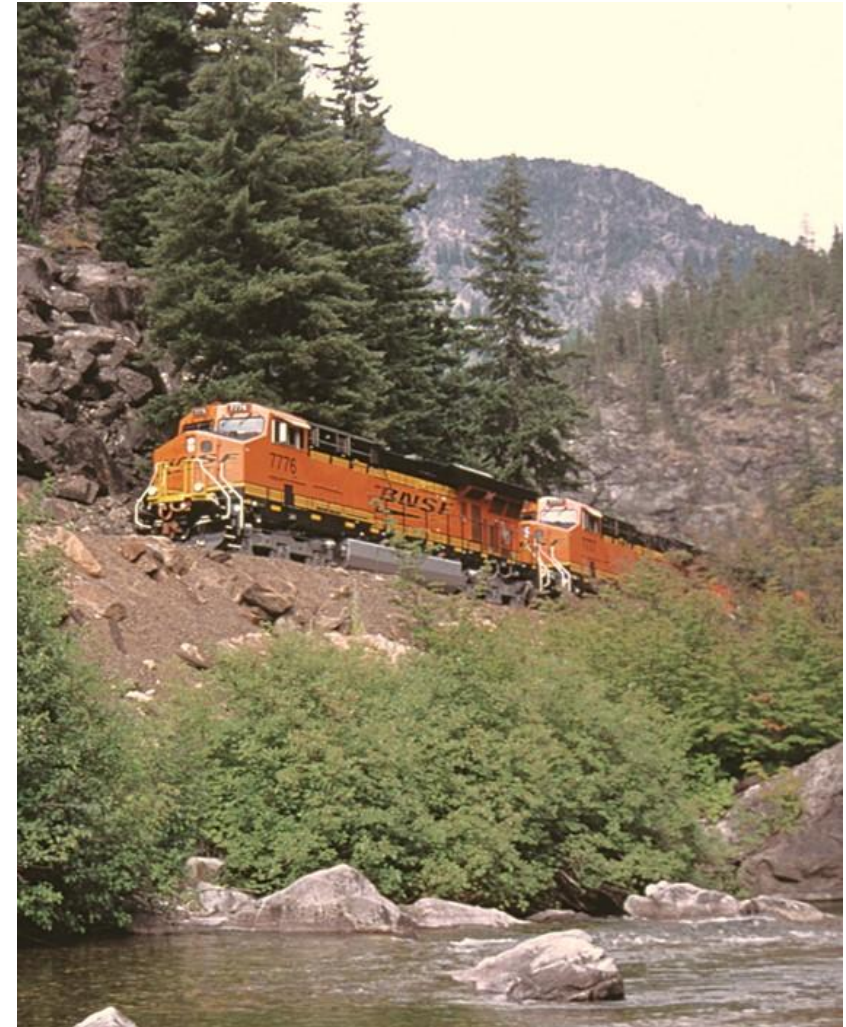
- BNSF Railway
- BNSF Coal Route
- Coal Reserves
- Currently operating export facilities
- Planned export facilities



Expanded Review in Washington State

Washington State Regulators Have Expanded Facility “Scoping” to include:

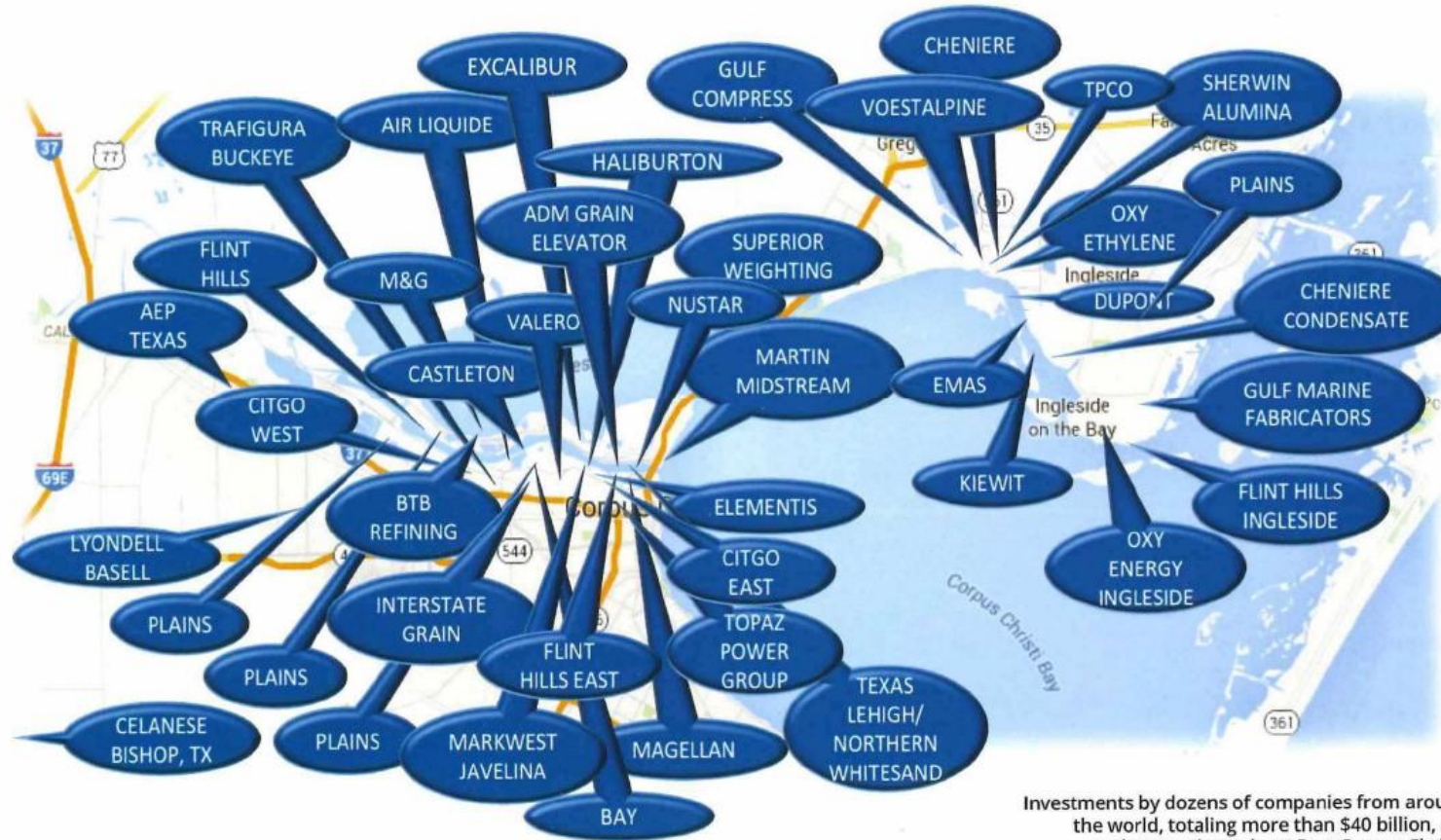
- A detailed assessment of rail transportation on other representative communities in Washington and a general analysis of out-of-state rail impacts
- A general assessment of cargo-ship impacts beyond Washington waters
- An evaluation and disclosure of greenhouse gas emissions of entire life-cycle of coal from production to end-use coal combustion



SCIG – Southern California International Gateway



Gulf Coast Petrochemical Development



Global industries advance \$40 billion in investments at Port Corpus Christi

Permitting Reform Solutions

Solution	Description
Lead Agency	Assign lead agency as "one-stop shop" to coordinate cross-agency permitting
Early Screening	Conduct preliminary assessments - early identification and scoping of issues
Federal-State Coordination	Avoid duplicative federal environmental review following competent state review
Standardization Across Agencies	Harmonize permitting procedures and timelines across agencies, for similar issues
Collaboration Across Agencies	Share information and coordinate reviews among participating agencies
Concurrent Reviews	Conduct simultaneous, rather than sequential, reviews by agencies
Tracking and Transparency	Establish on-line dashboard to monitor permit approval process against goals
Tools & Education	Provide technical assistance and support to state/local agencies
"Shot Clock"	Establish a defined time period for permit milestones and issuance
Finite Challenge Period	Establish reasonable statute of limitations for permit challenges

Market Access – Future Dynamics

Forces changing the cost, speed and availability of global supply chain options

Process/ Operations

- End-to-end visibility
- Collaboration
- Big data
- Optimization
- Border fluidity

Capital Investment

- Panama Canal
- SA agriculture supply chain
- Deep water ports
- Highway bottlenecks
- Intermodal connectors
- Grade separations

Regulation/ Policy

- Permitting reform
- Fossil fuel regs
- Trade policy
- Mexico energy reform

New Technology

- Automation
 - Warehouses
 - Ports/terminals
 - Drones
 - Ground vehicles
- “Fruber”
- Energy storage
- 3D printing
- Hyperloop?

Move too slowly in any of these areas and other regions/countries will fill the void



BNSF[®]
RAILWAY