

# Rail Problems in the Midwest

Moderator: Hon. Libby Jacobs, Iowa

Panelists:

John Carr, Dairyland Power

Kari Cutting, ND Petroleum Council

Deb Miller, US Surface Transportation Board

Amy Hawkins, BNSF



# NARUC Winter Conference

## Midwest Coal Delivery Issues

John P. Carr

Vice President-Strategic Planning



A Touchstone Energy® Cooperative 

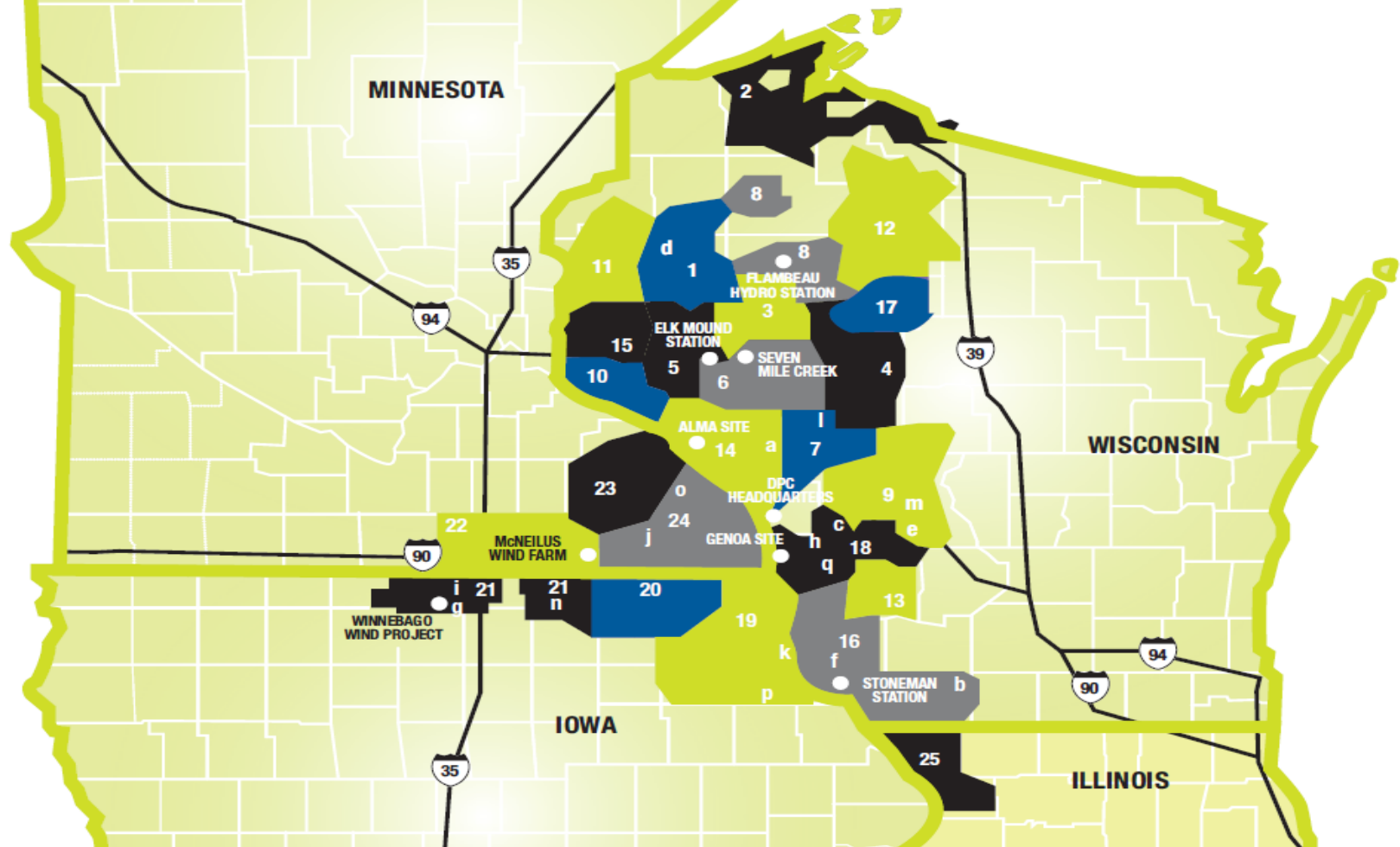
# Dairyland Power Cooperative



- HQ - La Crosse, Wisconsin
- Generation and Transmission
- Serving
  - 25 Class A Member Cooperatives
  - 17 Municipal Customers
  - WI, MN, IA, IL
  - Approx. 600,000 people
- 1,371 MW Generation
  - Coal
  - Natural Gas
  - Renewables
- 3,191 Miles Transmission Lines

Dairyland Power Cooperative

# Members & System Map



# Generation Resources

- Alma #4 & #5
  - Retired in 2014
  - 136 MW
  - Bituminous Coal
  - Barge Delivery



- John P. Madgett
  - 387 MW
  - PRB Coal
  - Rail Delivery





# Generation Resources

- Genoa #3
  - 340 MW
  - PRB or Bituminous Coal
  - Barge Delivery
- Weston #4
  - 162 MW (DPC Share)
  - Operated by WPS
  - PRB Coal
  - Rail Delivery



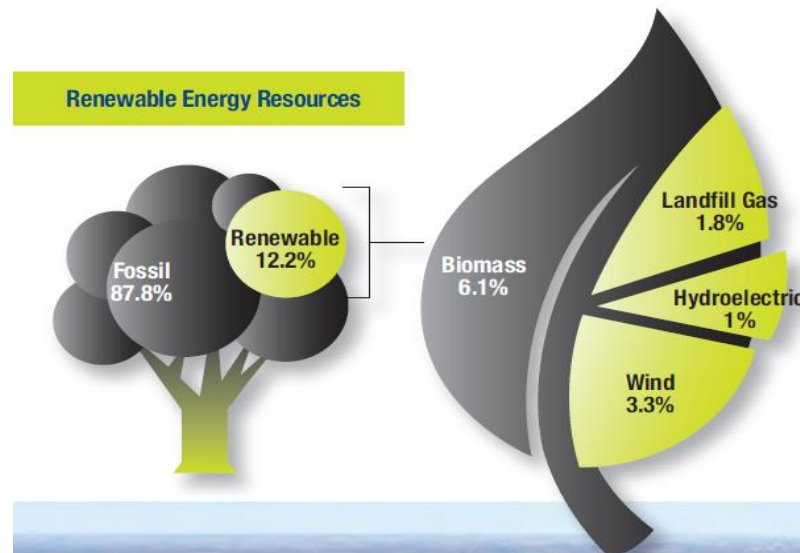
# Generation Resources

- Elk Mound
  - 71 MW
  - Natural gas/fuel oil



- Renewables

- Hydro
- Biomass
- Wind
- Solar



# Fuel Delivery Issues

- Signs of trouble surfaced in fall 2013.
  - Began an extended period of:
    - Deliveries well below our plan
    - Generation higher than expected (winter 2014)
      - Polar vortex !
      - Rising natural gas prices
  - Very low inventories (mid-winter 2014)
  - How to re-build inventory in this environment ?
    - Reduced generation
      - Increase MISO Offer prices (within IMM limits)
      - Added planned outages
    - Increased reliance on purchased power (MISO spot market) to meet load obligations

**Major impacts in 2014 but showing signs of improving**



# Fuel Deliveries and Inventory

- Delivery Plans

- Built on a forecast of expected generation
  - “Normal” weather/electric demand
  - Market prices:
    - Coal, natural gas, marginal wholesale power (LMP)
  - Planned outages

- Fuel Inventory

- Hedges risk of variance between generation and fuel deliveries
- How to optimize (size/cost/benefit) ?
- Significant swings up and down during past 5-6 years

- Generation Capability

- Short term defined by inventory availability
- Long term defined by fuel delivery

# Concluding Remarks

- Railroads are critical partners in our mission:
  - Rail performance is critical to ensure electric customers have reliable and reasonably priced electric service
- Focus areas:
  - Working together
  - Improve flexibility and transparency
  - Mutually develop contingency plans to manage unexpected variation from the forecast/plan
  - “Preventing fires” vs. “Fighting fires”



*Questions?*



NORTH DAKOTA  
PETROLEUM  
COUNCIL

*We keep North Dakota going strong*



# North Dakota Bakken Production and Transportation

Kari Cutting, Vice President  
North Dakota Petroleum Council

# Strong Production Despite Prices

In November 2014:



188 average drilling rigs



11,942 producing wells

(72% were Bakken-Three Forks)



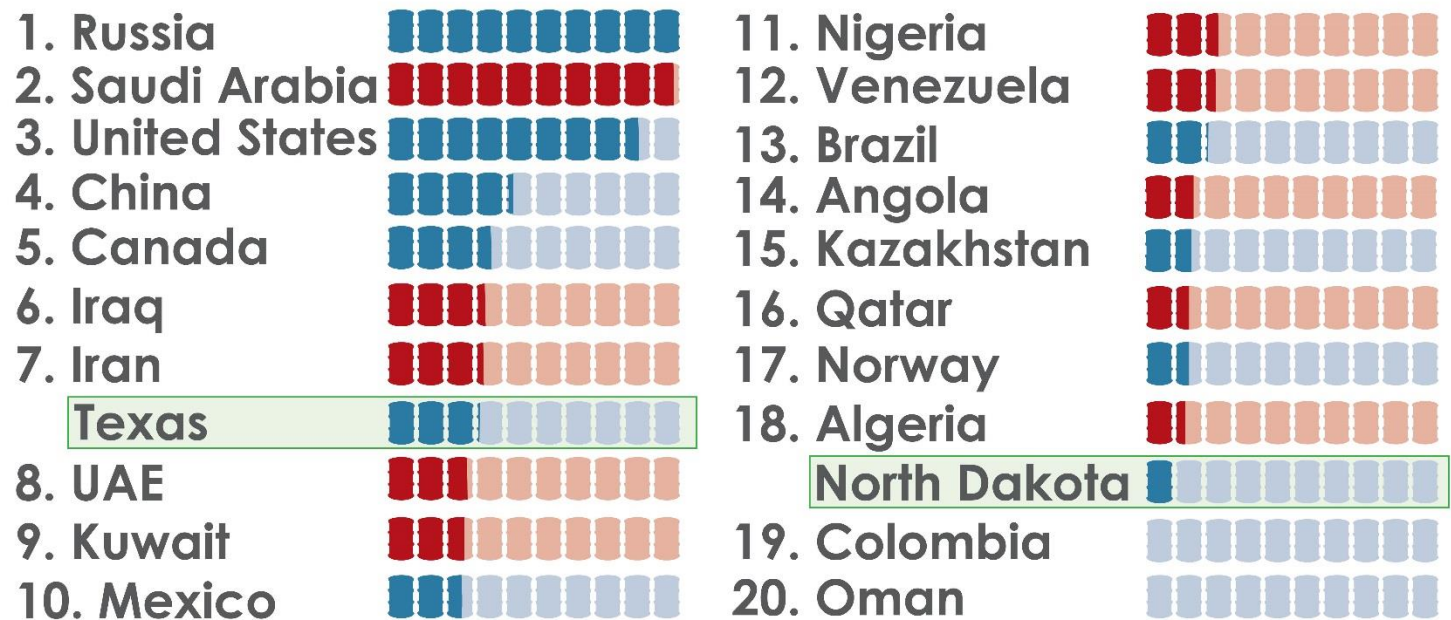
1.19 million bopd oil production



1.4 MMCF/day gas production

# ND a Top World Producer

## CRUDE OIL PRODUCTION: JAN. - SEPT. 2014\*



= 1 million barrels per day



OPEC Country



Non-OPEC Country

\*Most up-to-date information available from EIA



# ND Providing Energy Security



- U.S. produced average of 7.5 million bopd in 2013
  - 15% increase from 2012
  - ND accounts for 10-11% of all production

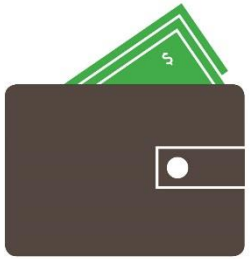


- Since 2006 (Bakken begins), imports have fallen 18.6%;
- Imports fell 28% from last year alone.

# Supporting Jobs & Economic Growth



15.3%, or 1 in 7, jobs in ND attributable to oil and gas related employment\*;



O&G jobs represented 28,5% of total wages in ND

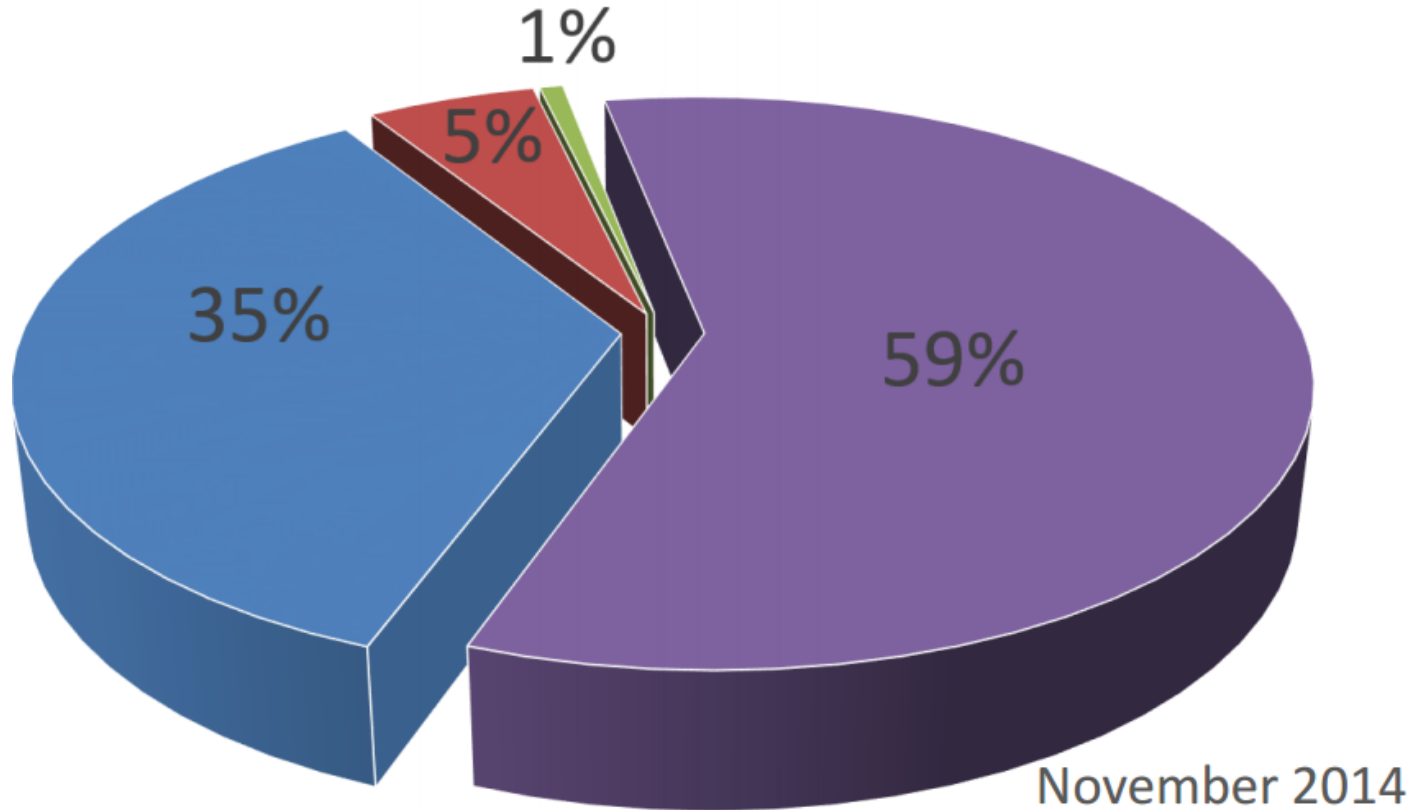


In 2011, contributed \$30.4 billion to ND economy

- Personal income, government revenues, retail biggest beneficiaries

\*According to 2013 Job Service ND report

# Moving Product

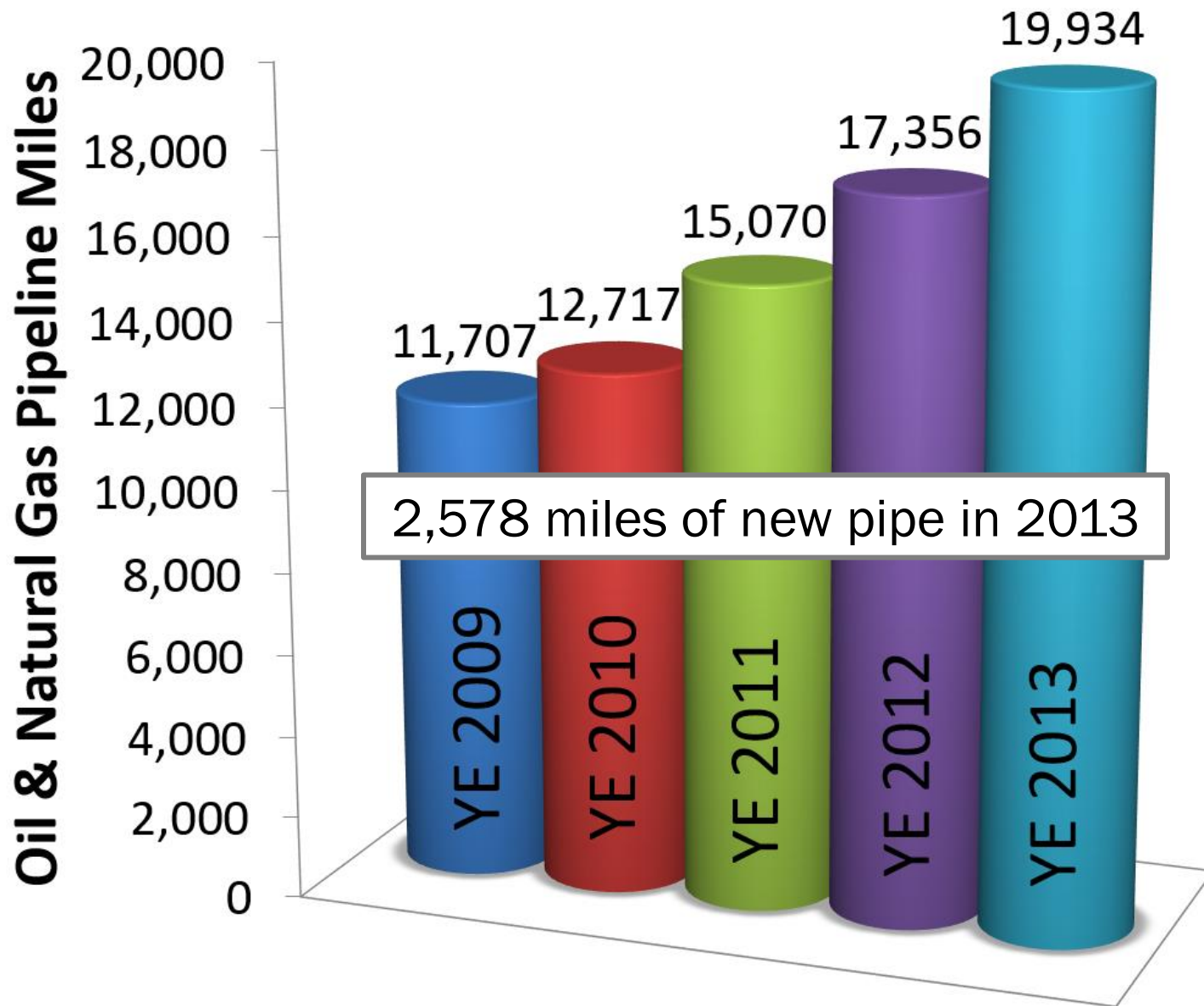


■ Estimated Pipeline Export  
■ Truck to Canadian Pipelines

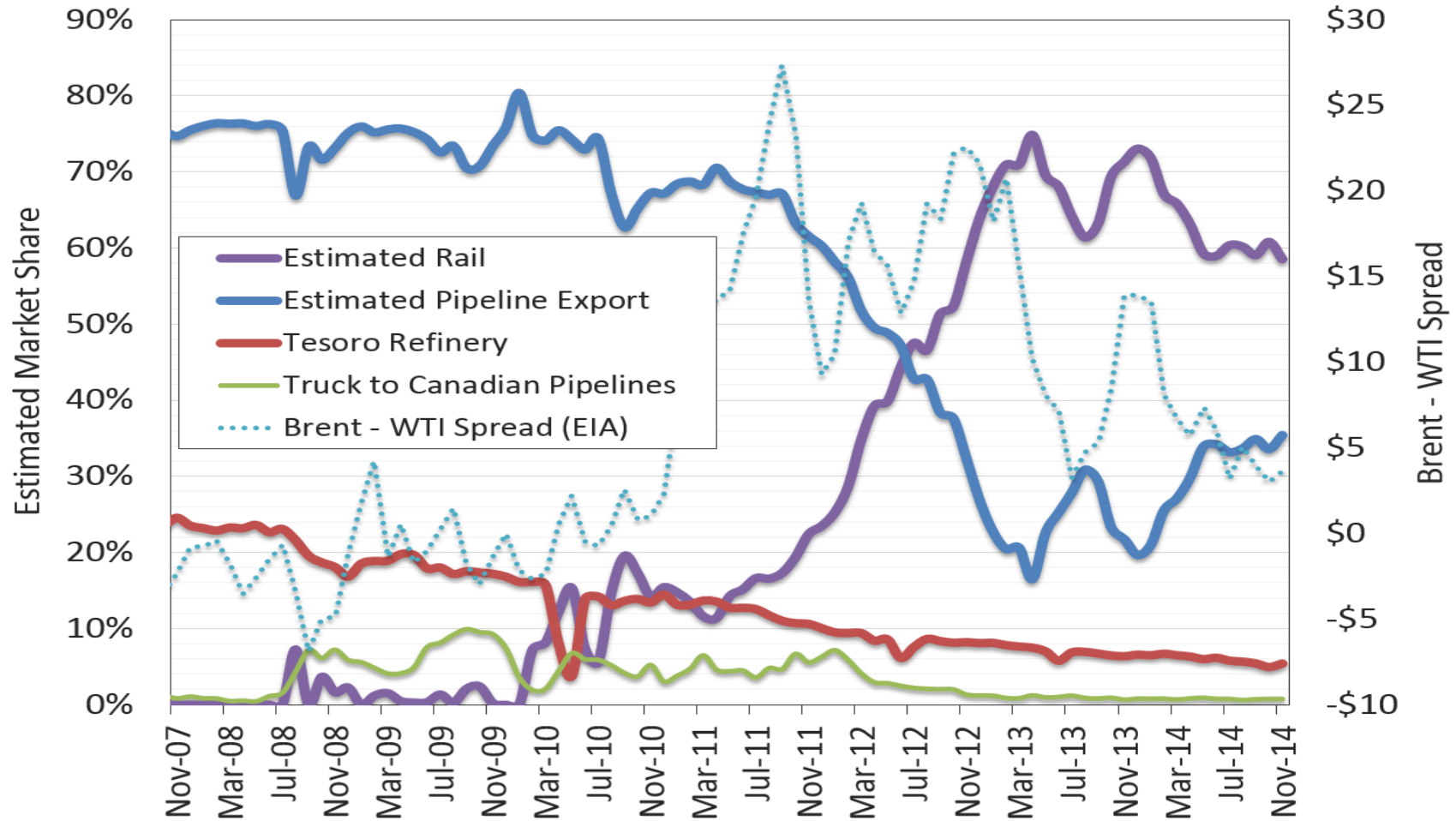
■ Tesoro Refinery  
■ Estimated Rail

Source: North Dakota Pipeline Authority

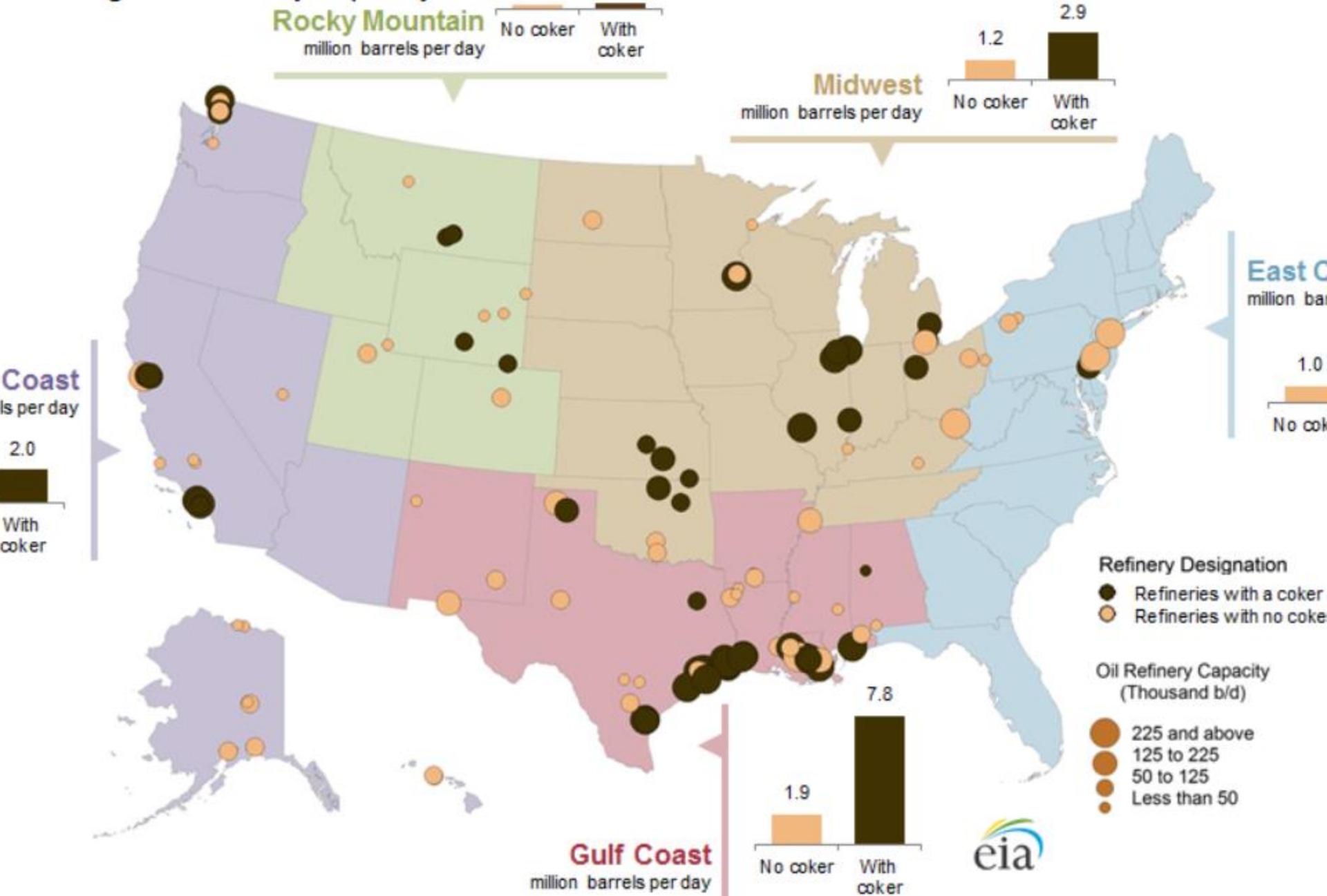
# North Dakota Pipeline Miles



# Williston Basin Oil Transportation

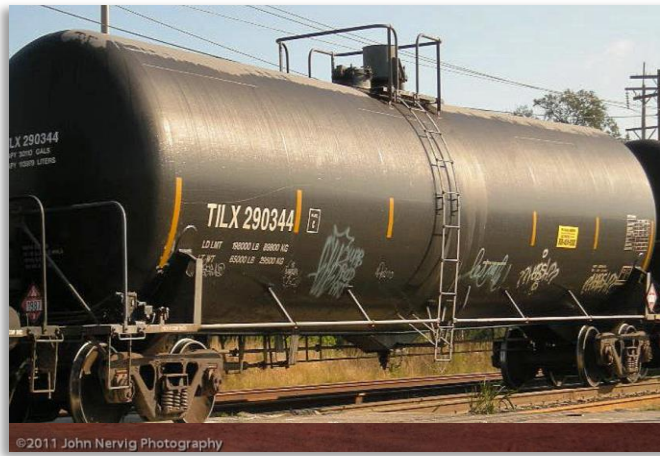


# U.S. regional refinery capacity



As of January 1, 2014, there were 133 operating refineries with atmospheric crude oil distillation units (ACDU) totaling capacity of 18.9 million barrels per day. Heavy capacity denotes refineries with coking capacity; light capacity denotes refineries without coking capacity.





# CRUDE BY RAIL



# **“Rail Transportation Problems in the Midwest”**

NARUC Winter Committee Meetings

February 17, 2015

Deb Miller  
Acting Chairman  
Surface Transportation Board

# What is the STB?



- ▶ Established Jan. 1, 1996
- ▶ Assumed some (not all) functions of the abolished Interstate Commerce Commission
- ▶ Organizationally housed in U.S. DOT
  - Decisionally independent
- ▶ Led by 3 Board Members
  - Appointed by president; confirmed by Senate
  - Serve 5-year terms
  - No more than 2 from same political party
- ▶ Staff of 140 (economists, attorneys, analysts)

# What Does STB Regulate?

- ▶ Freight Rail: *Economics only*
  - Rail carriers are considered “common carriers” and, in some instances, have monopoly power
    - Entry and Exit Licensing
    - Rate and service disputes
    - Restructuring (M&A)
- ▶ Amtrak (limited jurisdiction)
- ▶ Other modes (limited jurisdiction):
  - Non-energy pipelines
  - Intercity bus carriers
  - Household goods movers
  - Trucking companies (collective activities)
  - Water carriers (U.S. mainland to AK/HI/territories)



# STB Functions

- ▶ Rate regulation: Railroads can engage in “demand-based differential pricing”
  - Higher rates for captive shippers
  - Tariffs vs. Contracts
  - Certain rates subject to challenge





# STB Functions

- ▶ Collect and produce economic data
- ▶ Service issues
  - Unreasonable practice complaints
  - Rail Customer & Public Assistance program
- ▶ Resolve conflicts between Federal and state/local laws (i.e., preemption)





# Service Issues

- ▶ Began winter of 2013/2014
  - Record grain harvest
  - Severe weather (polar vortex)
  - Unexpected increase in traffic volumes
    - Oil shipments
- ▶ Mostly on BNSF and CP systems
- ▶ Significant number of backlogged grain shipments
  - Mostly in ND, SD, Minnesota
- ▶ Problems began affecting shipment of other commodities, notably coal



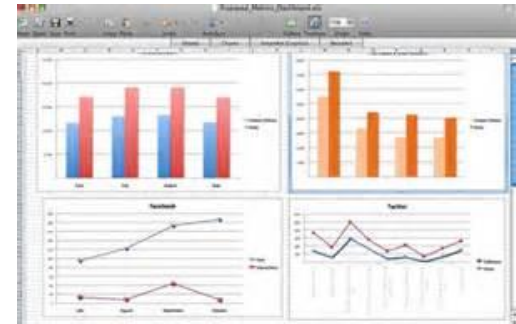
# How the STB Responded

- ▶ April 10, 2014: Hearing (Washington, D.C.)
- ▶ April 23, 2014: “Fertilizer” order
- ▶ June 20, 2014: “Grain” order
- ▶ Aug. 19, 2014: Fall Peak Season letters
- ▶ Sept. 4, 2014: Hearing (Fargo, ND)
- ▶ Oct. 8, 2014: Data collection order *(more on next slide)*
- ▶ Oct. 14, 2014: Questions for CP

# Data Collection Order (Part 1)

## ► 10 sets of metrics:

- Train speed by commodity
- Terminal dwell
- Cars online by commodity
- Dwell at origin for unit trains by commodity
- Trains held greater than 6 hours
- Cars not moved in greater than 120 hours and 48 hours
- Grain cars loaded and billed
- Grain cars: past due, average days late, new orders, orders filled, orders canceled
- Grain trains: plan vs. performance (i.e. cycle times)
- Coal trains: plan vs. performance (i.e. cycle times)

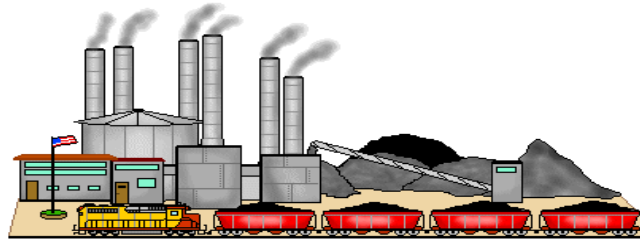


# Data Collection Order (Part 2)

- ▶ Chicago:
  - Average daily car counts in Chicago yards
  - Average daily number of trains held short of Chicago
  - Generally summary of CTCO protocols and alert levels
    - Provide STB notice when alert level is changed



# Coal



- ▶ *Summer 2014:* Concern about low coal stockpiles for utilities on BNSF system escalate
- ▶ *Oct. 22, 2014:* Western Coal Traffic League (WCTL) files petition requesting that STB:
  - require BNSF to file a coal service recovery plan with milestones for each aspect of the plan and specific dates those milestones will be reached
  - approve BNSF's coal recovery plan
  - require BNSF to file weekly compliance updates
  - enforce compliance by issuing fines
- ▶ *Oct. 28 and Nov. 3, 2014:* BNSF replies, opposing WCTL petition; describes “escalation” process when utility drops below 10-day supply

# STB Dec. 31, 2014 Order

- ▶ WCTL petition denied, but STB still concerned about BNSF's capabilities to meet utilities' needs
- ▶ As alternative, BNSF ordered to provide:

***“contingency plans for addressing any such [coal] shortfalls, including a detailed description of the steps it takes to identify coal-fired plants at critical levels and to remedy acute shortages in a timely fashion”***

- ▶ Utilities also invited to provide status reports
- ▶ STB noted continued coordination with FERC and DOE





# BNSF Jan. 29, 2015 Response

- ▶ Provides more detail about how it identifies utilities below the 10-day threshold
- ▶ Outlines various measures that can be taken when customer drops below threshold
  - Increase/decrease number of trainsets
  - Locomotive allocation
  - Route Adjustments
  - Alternate Gateways
  - Contract modification

# Looking Ahead



- ▶ Status of rail service today
  - Improvements since last winter, but still concern about capacity
    - Growth in traffic will continue; can RRs expand capacity fast enough?
- ▶ What's on the STB's plate?
  - Revenue Adequacy
    - Could be new avenue for shippers to challenge coal rates
    - Board needs to balance:
      - Ability for RRs to earn sufficient revenues to invest in capacity expansion
      - Need to protect shippers from rates that are so high that it causes them to lose business
  - Service metrics
    - Will hopefully allow STB to better monitor service issues before they arise and give shippers more transparency into the shared rail network

# Questions





## ***NARUC PANEL***



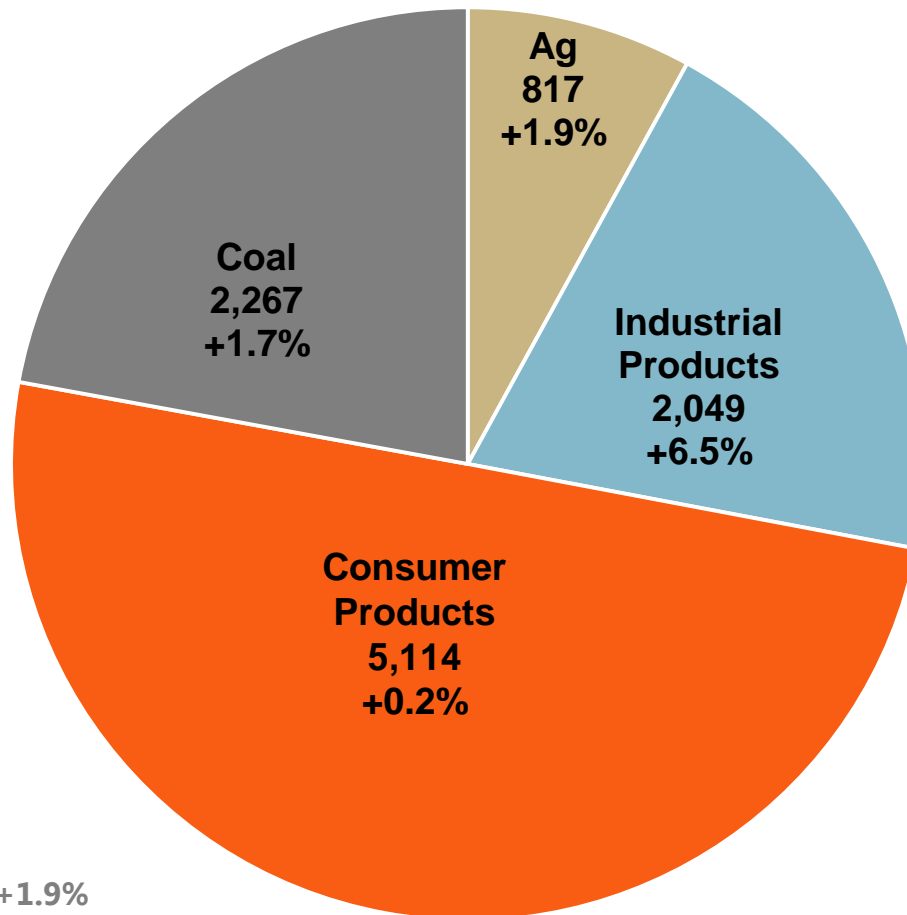
*February 17, 2015*



# BNSF Volume – 2014

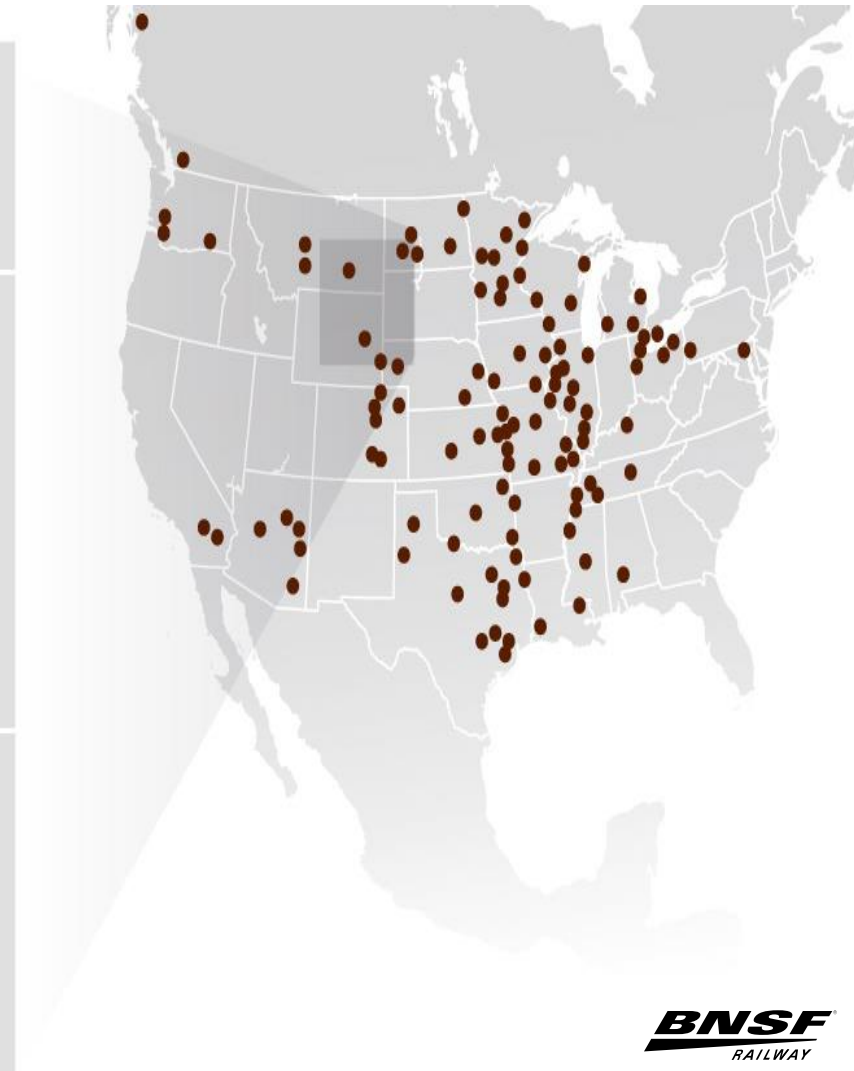
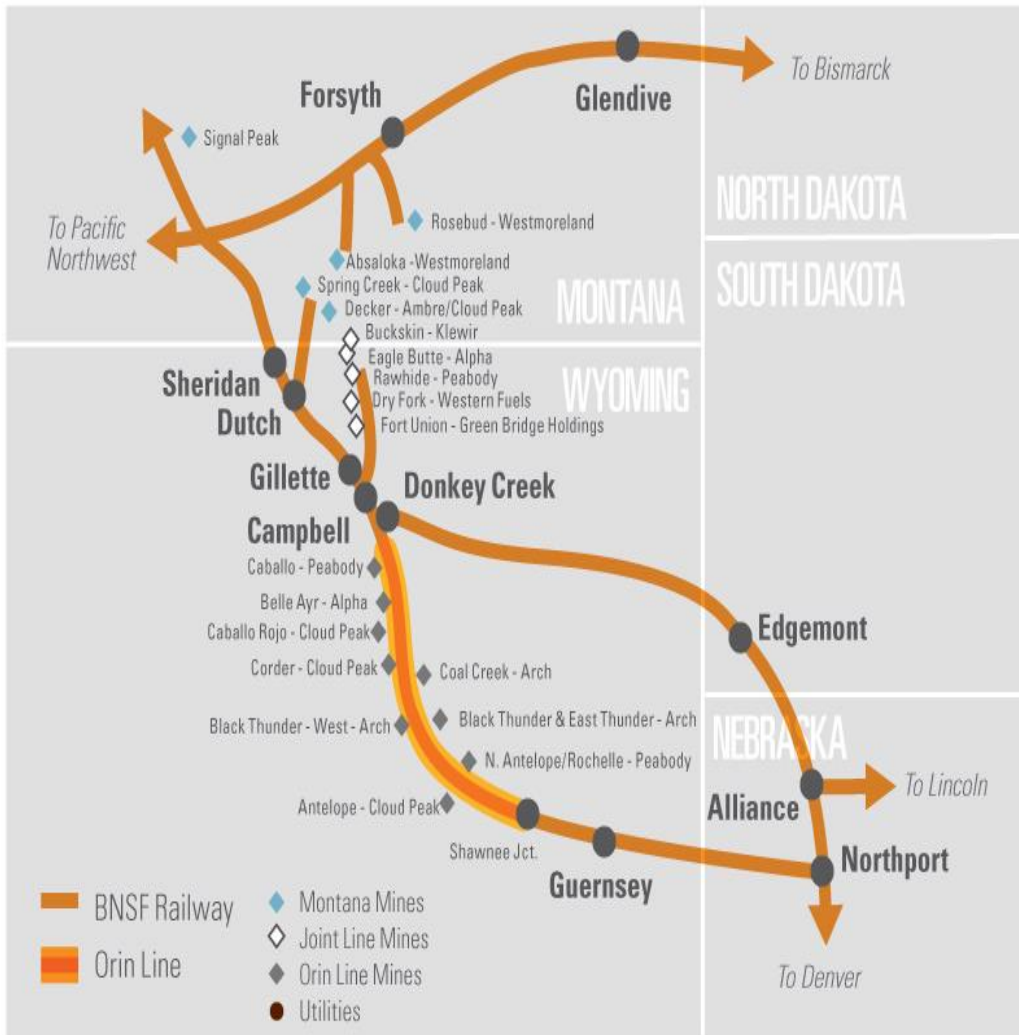
*In Thousands*

TOTAL UNITS AND % CHANGE FROM FULL YEAR 2013



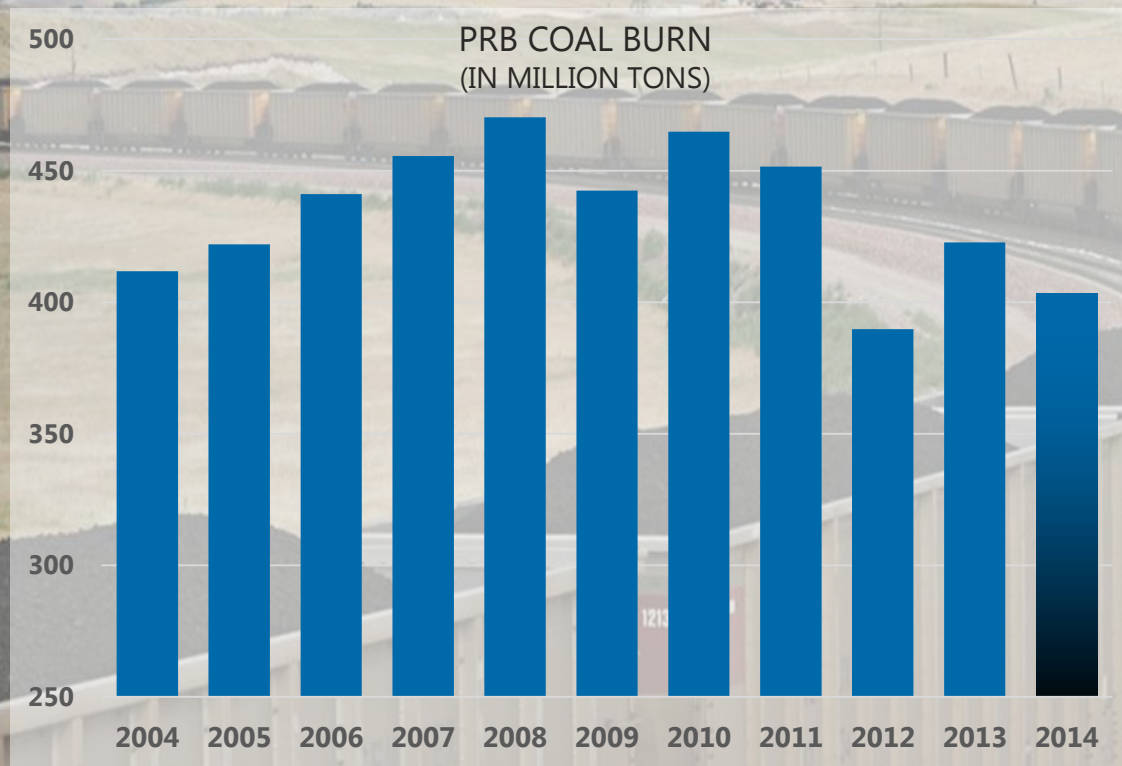
Total BNSF Volume 10,247 +1.9%

# BNSF Coal Network





# Powder River Basin Coal Burn



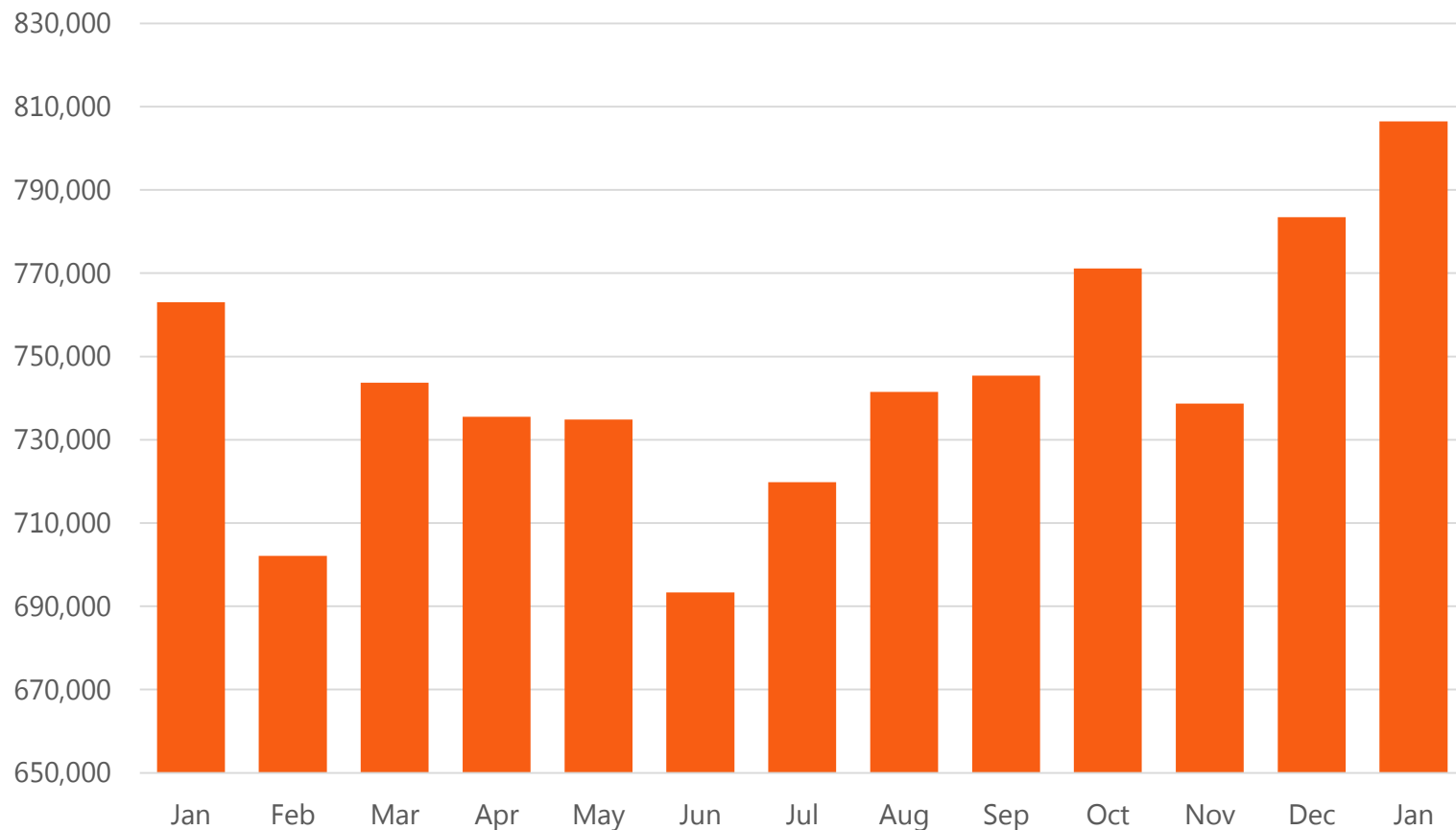
# Coal Performance

## Average Daily Coal Train Loadings\*

System Plan = 52.0

System Actual = 54.1

AVERAGE DAILY LOADED TONS 2014 AND 2015



# 2014 BNSF Investments for Growth

## CAPACITY

**\$3,643M**

Maintenance  
Capital: **\$2,615M**

Capital:  
**\$1,028M**

Expansion



RAILCARS

**7,500\***

## RECORD \$5.5B INVESTED

LOCOMOTIVES



**612**

\*includes long-term  
leases and acquisitions

PEOPLE



**+7,000**

DOUBLE  
TRACK

**82**

MILES



\* Includes acquired and renewed

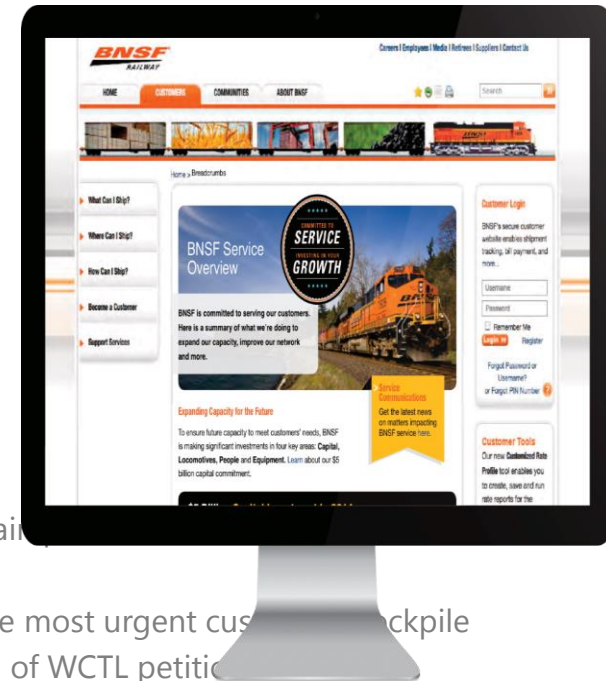
# 2015 \$6 billion Capital Investment Across the Network

- 2015 North Region Growth and Maintenance: \$1.5 billion
- 2015 Central Region Growth and Maintenance: \$650 million
- 2015 South Region Growth and Maintenance: \$800 million
- **2014 and 2015:**
  - 211 miles of double track
  - 878 miles of CTC
  - 22 new sidings
  - 28 extended sidings
  - Planned purchase of 330 new locomotives to add to existing 8,000 locomotive fleet



# Ongoing BNSF Communications Around Service

- As a supplement to the daily communications we have with our individual customers, additional resources include:
- **www.BNSF.com:**
  - Service Overview Page: gateway to current service advisories, capital plans and project progress, maintenance schedules and general service overviews
  - Commodity-specific communications: market and service reports and advisories about service across our network (e.g., Ag Podcast)
  - Customer eTools: access to expansive, tailored network and shipment data and custom reports, including car-specific service info like ETAs, ETDs and ETIs
- **Other Recent BNSF Service Reporting:**
  - Weekly Metrics Filed with STB: includes train speeds, dwell, holding reports, grain dues, shuttle and coal unit plan v. performance
  - BNSF's Coal Contingency Plan: summary of BNSF's internal processes to elevate most urgent customer backpile shortages and array of responsive measures; submitted to STB following denial of WCTL petition



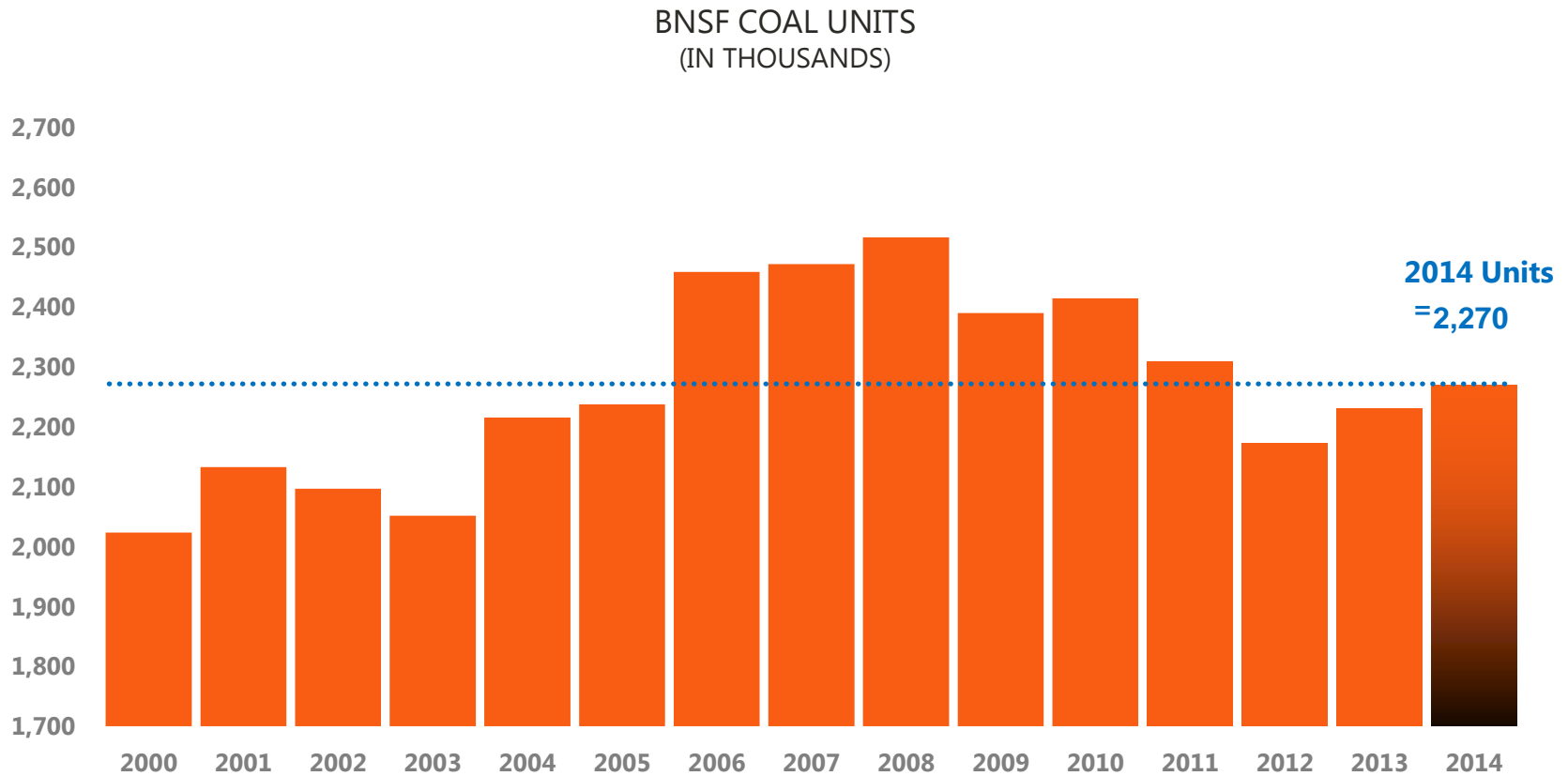
The image features the BNSF Railway logo centered over a background of a BNSF locomotive and freight cars. The locomotive is in the upper half, and the freight cars are in the lower half. The entire image has a monochromatic orange tint. The logo consists of the word "BNSF" in a bold, italicized, sans-serif font, followed by a registered trademark symbol (®). Below "BNSF" is a thick, white, diagonal swoosh that starts under the 'B' and ends under the 'F'. Below the swoosh, the word "RAILWAY" is written in a smaller, italicized, sans-serif font.

***BNSF***®  
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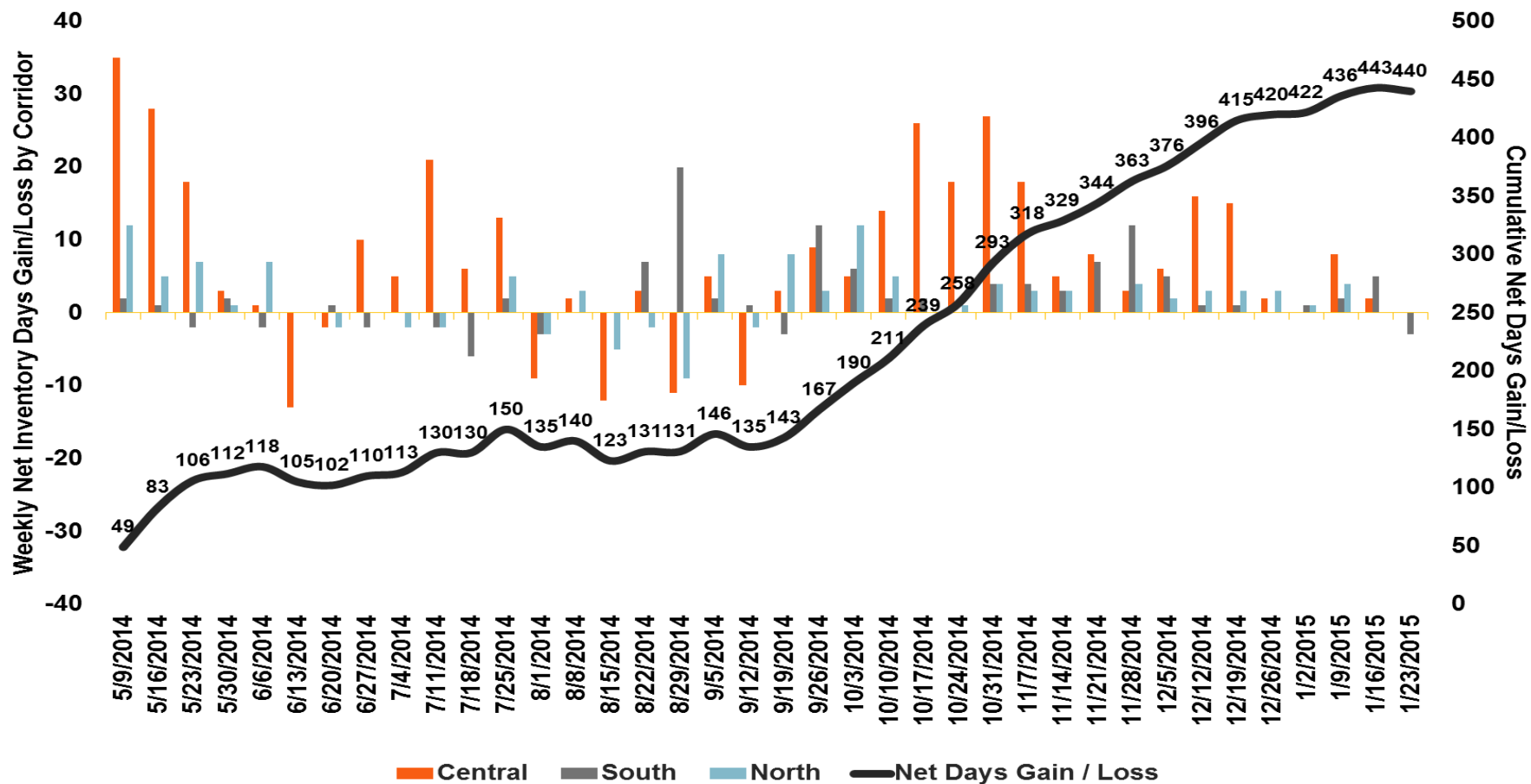
# APPENDIX

# 2000-2014F Volumes - Coal



# Coal Stockpiles

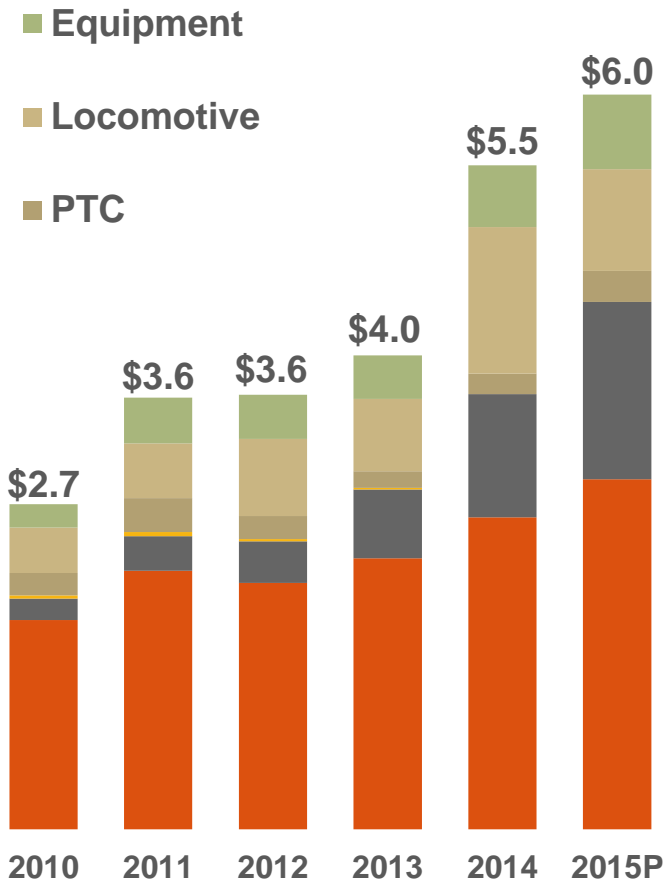
## Critical Coal Stockpile Customers Net Inventory Days Gain / Loss



Source: BNSF Internal Data, through Jan. 25, 2015. "Watch List" customers are defined as under 20 days of stockpile as self-reported.

# BNSF's Capital Investments 2000 – 2015

\$ Billions



2015 \$6B Capital Commitment



\$2.9 billion  
Core Network &  
Related Assets

\$1.4 billion  
Loco, Freight Car,  
& Other Equip

\$1.5 billion  
Expansion &  
Efficiency

\$200 million  
PTC

See you in New York!

