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
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
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 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

<table>
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<tr>
<th>CRUDE OIL PRODUCTION: JAN. - SEPT. 2014*</th>
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<td>1. Russia</td>
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<td>2. Saudi Arabia</td>
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<td>8. UAE</td>
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<td>10. Mexico</td>
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- ■ = 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: 35%
- Tesoro Refinery: 5%
- Truck to Canadian Pipelines: 1%
- Estimated Rail: 59%

November 2014

Source: North Dakota Pipeline Authority
North Dakota Pipeline Miles

Oil & Natural Gas Pipeline Miles

- YE 2009: 11,707
- YE 2010: 12,717
- YE 2011: 15,070
- YE 2012: 17,356
- YE 2013: 19,934

2,578 miles of new pipe in 2013
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.

U.S. Energy Information Administration
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)
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
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
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
BNSF Volume – 2014

TOTAL UNITS AND % CHANGE FROM FULL YEAR 2013

- **Consumer Products**: 5,114 (+0.2%)
- **Industrial Products**: 2,049 (+6.5%)
- **Ag**: 817 (+1.9%)
- **Coal**: 2,267 (+1.7%)

Total BNSF Volume: 10,247 (+1.9%)
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

Source: BNSF Internal Data, represents monthly average for Jan.
2014 BNSF Investments for Growth

CAPACITY

$3,643M

Maintenance Capital: $2,615M

Expansion

RAILCARS 7,500*

RECORD $5.5B INVESTED

LOCOMOTIVES 612

*includes long-term leases and acquisitions

PEOPLE +7,000

DOUBLE TRACK 82 MILES

$2,615M

$1,028M

$3,643M

* 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

As of Oct. 31, 2014
As of Oct. 31, 2014

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 duties, shuttle and coal unit plan v. performance
    - BNSF’s Coal Contingency Plan: summary of BNSF’s internal processes to elevate most urgent customer stockpile shortages and array of responsive measures; submitted to STB following denial of WCTL petition
APPENDIX
BNSF COAL UNITS (IN THOUSANDS)

Source: BNSF internal data through Nov. 30, 2014, future periods based on December Forecast
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

2010 2011 2012 2013 2014 2015P

$2.7 $3.6 $3.6 $4.0 $5.5 $6.0

Equipment

Locomotive

PTC
See you in New York!