Freight Railroads: Linking Pennsylvania to the World

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How Freight Moves in the U.S.

- Rail: 39.50%
- Pipeline: 19.60%
- Truck: 28.60%
- Water: 12.00%
- Air: 0.30%
The U.S. Rail Network is made up of hundreds of independent but interconnected companies.

- Unlike other modes of freight transportation, many rail freight shipments are handled by numerous different railroads.
- This is both a strength and challenge for the rail industry.
560 railroads with 140,000 track miles

7 Class I / BNSF, CSX, NS, UP, CN, CP, KCS
  - “Big Four”: CSX and NS in East, BNSF and UP in West
  - 95,300 miles of track in 44 states and DC
  - 163,400 employees
  - Definition threshold: $452.7 million in annual revenues
    (smallest, KCS, had $2.3 billion in 2016 U.S. revenue)

21 Class II / “Regionals”
  - 10,300 miles of track, 5,500 employees
  - Definition range: $32.6 to $452.6 million in annual revenues

546 Class III / “Short Lines”
  - “First mile – Last mile” of many rail freight shipments
  - 32,900 miles of track, 12,300 employees
  - Definition: up to $32.6 million in annual revenue
Freight Railroads Extremely Fuel Efficient

- Move a ton of freight 468 miles per gallon.
- Four times more fuel efficient than trucks, on average.
- Since 1980, roughly double the freight on same amount of fuel.
Pennsylvania Freight Rail Lines

- Three Class I RRs (CN, CSX, NS)
- Two Class II RRs (BPRR, WLE)
- Fifty+ Class III RRs
- 59 total freight RRs in PA, most of any state in the nation

Sources:
AAR 2013 Railroad Facts Booklet
PennDOT Bureau of Rail
Snapshot: Freight Railroads in Pennsylvania

- Number of Freight Railroads: 59
- Freight Railroad Miles: 5,165
- Freight Railroad Employees: 7,056
- Average Wages & Benefits: $99,530
- Railroad Retirees: 38,400
Freight Moving Out of Pennsylvania

- Intermodal: 384,761 carloads (35.3%)
- Coal: 255,372 carloads (23.4%)
- Petroleum: 73,870 carloads (6.8%)
- Metals: 37,837 carloads (3.5%)
- Food Products: 36,291 carloads (3.3%)
- Other: 300,975 carloads (27.6%)
- TOTAL: 1,089,106 carloads
### Freight Moving Into Pennsylvania

<table>
<thead>
<tr>
<th>Category</th>
<th>Carloads</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermodal</td>
<td>552,266</td>
<td>35.8%</td>
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<tr>
<td>Petroleum/Gas</td>
<td>122,526</td>
<td>8.0%</td>
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<tr>
<td>Coal</td>
<td>111,535</td>
<td>7.2%</td>
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<tr>
<td>Food Products</td>
<td>104,294</td>
<td>6.8%</td>
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<tr>
<td>Chemicals</td>
<td>80,269</td>
<td>5.2%</td>
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<tr>
<td>Other</td>
<td>570,240</td>
<td>37.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,541,130</strong></td>
<td></td>
</tr>
</tbody>
</table>
NS Links the Global Supply Chain

NORFOLK SOUTHERN SYSTEM
Norfolk Southern Corporation is one of the nation’s premier transportation companies. NS operates approximately 20,000 route miles in 22 states and the District of Columbia, serves every major container port in the eastern United States, and provides efficient connections to other rail carriers. We operate the most extensive intermodal network in the East and are a major transporter of coal, automotive, and industrial products.
Norfolk Southern Economic Contribution: Pennsylvania

<table>
<thead>
<tr>
<th>2016 Statistics</th>
<th></th>
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<tbody>
<tr>
<td>Employees</td>
<td>4,920</td>
</tr>
<tr>
<td>Payroll</td>
<td>$307.2 million</td>
</tr>
<tr>
<td>State and Local Tax</td>
<td>$22.1 million</td>
</tr>
<tr>
<td>Goods and Services from PA Vendors</td>
<td>$909.3 million</td>
</tr>
<tr>
<td>Miles Operated</td>
<td>2,402</td>
</tr>
</tbody>
</table>
Norfolk Southern’s Pennsylvania Footprint

- Division headquarters in Pittsburgh and Harrisburg
- Main locomotive repair shop in Altoona
- Major classification yards in Allentown, Conway, Harrisburg
- Intermodal terminals in Pittsburgh, Harrisburg, Bethlehem, Scranton and Morrisville
- Over past 10 years more than $500 million invested in PA to construct or expand NS facilities
Norfolk Southern and the Lehigh Valley

- 200 employees
- 25-35 freight trains daily
- 13 locals
Rail Safety at an All-Time High

Grade crossing collisions: ↓ 81%
Employee injuries: ↓ 84%
Train accidents: ↓ 79%

% = change from 1980-2013. Source: FRA
Safety is Our Top Priority

Rail Inspections – Road & Yard Tracks
- Mainlines inspected twice weekly at a minimum.
- All other rail lines are inspected at a minimum.
- During extreme weather – hot, cold and storm–rails inspected daily at a minimum.
- Yard tracks inspected monthly at a minimum

Public Crossing and Signal Inspections
- All crossing warning devices are inspected every 30 days at a minimum.
- All railroad traffic signals are inspected every 90 days at a minimum.
Positive Train Control

- In 2008, following an incident in California between a commuter train and a freight train in which 25 people lost their lives, the U.S. Congress passed the Rail Safety Improvement Act of 2008, which called for the development and implementation of Positive Train Control (PTC).

- The purpose of PTC is to prevent:
  - Train-to-train collisions;
  - Overspeed derailments;
  - Unauthorized incursions by trains into sections of track where maintenance is being performed;
  - The movement of a train through a main line switch left in the wrong position.
Positive Train Control

- PTC is generally required to be installed on main lines that are used to transport passengers or toxic-by-inhalation (TIH) materials by December 31, 2018, and to be fully implemented by December 31, 2020.
- As required by law, NS has submitted to the Federal Railroad Administration a sequence and schedule for the installation of its PTC system.
- When the Rail Safety Improvement Act of 2008 was passed, PTC technology did not exist.
- Since 2008 NS has spent $1.4 billion to develop, construct and implement PTC on 40 percent of its 20,000 mile network.
NS and Passenger Trains

- Safety is paramount
- An operational feasibility study to fully understand all potential impacts will be performed by NS at the project sponsor’s cost
- Service must be designed and engineered to keep interference between freight and passenger trains to an absolute minimum
- Funding sources must be identified early in the process
- NS will receive fair compensation for the use of its assets
- Service must have adequate liability protection
NS and Trails

- Safety is paramount
- Active railroad rights-of-way and access roads are not allowed to be used for recreational purposes
- Abandoned and inactive corridors can be considered
- New at-grade crossings are not permitted
- NS will be paid a negotiated value for the use of its property
- Fencing, signage and other safety-related measures may be required
Thank You