

RAIL (FREIGHT)



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2006 Report Card for Pennsylvania's Infrastructure

In 1998, 919 million tons of freight passed through the Commonwealth. In 2020, that value is expected to be 1,397 million tons. Railroad freight demand is growing at a much faster rate than the general population, and railroad traffic is steadily approaching World War II levels. Projects that could be undertaken to address the Commonwealth's infrastructure needs total some \$280 million. Annual state of good repair track and bridge expenditures for all railroad classes within the state are projected to be approximately \$560 million. Class I and larger railroads are more poised to cover their own financial needs. Smaller railroads are not as fortunate and need the most assistance to remain competitive.

BACKGROUND

A number of benefits result from supporting rail freight: congestion mitigation, air quality improvement, improving transportation safety, curtailing truck traffic growth on highways, job growth and economic development. Railroads also remain the safest and most viable mode for transporting hazardous materials, coal, industrial raw materials and large quantities of goods.

Since the mid-1800's, rail transportation has been the centerpiece of industrial production and energy generation. Specifically, in light of September 11th and from a national security point of view, railroads are one of most secure options for transporting dangerous or hazardous products. In fact, the majority of spent nuclear fuel rods will likely be sent via rail to the newly established federal depository. Surely, many of these shipments will pass through the Keystone State. By further improving the rail infrastructure, railroad operation can become even safer and more difficult to disrupt by any terrorist group.

CONDITIONS

Pennsylvania is one of the nation's leaders in freight assessment, planning and investment. This level of support stems from the state's rich historical and industrial heritage. Most railroads are privately owned. Class I and mid-sized railroads operating within the Commonwealth's borders are generally able to finance capital improvements on their own. Problems arise with short line railroads, which have difficulty in making infrastructure investments to remain viable and competitive. The regional and short line railroads are the feeders and supporting players in Pennsylvania's overall transportation network, and the network is only as strong as its weakest link.

Pennsylvania has 5,145 route-miles of freight railroad operating and 69 freight railroads, more than any other state. Commodities, which originate and terminate in Pennsylvania and are carried by rail, are dominated by coal (62 percent of originating tons, and 39 percent of terminating tons) and also include primary metal products, petroleum, chemicals and food

products. Railroads are a vital component of the Commonwealth's transportation system and are very important to the state's economy.

Pennsylvania's core, or strategic, rail lines connect Philadelphia, Harrisburg, Pittsburgh and Chicago, and include some of the highest volume in the nation, such as the former Pennsylvania Railroad main line – now Norfolk Southern. This line carries more than 120 million gross tons (MGT) annually. Other very highly-trafficked rail lines in the Keystone State include CSX's east-west line through Erie, at 113 MGT; CSX's line through Connellsville, Pittsburgh and New Castle, at 100 MGT; and Norfolk Southern's Reading-Bethlehem-Easton-New Jersey line, at 100 MGT. Another important trunk line is Amtrak's Northeast Corridor, a portion of which passes through southeast Pennsylvania, including Philadelphia. Some freight is moved on this predominantly passenger rail corridor.

At the other end of the spectrum, there are a number of rail lines in Pennsylvania considered "at risk" because of low traffic density (1). The term "at risk" means that these lines may be abandoned because traffic revenue may not be sufficient to maintain the line. These low density lines are normally the object of publicly-funded rail preservation efforts when it is deemed that the rail line is capable of growth and development, and where continuation of rail service provides public benefits. With annual traffic less than five MGT, 124 Pennsylvania rail lines are considered somewhat at risk of abandonment. Of these, 96 rail lines are considered especially at risk, because they carry annual traffic of less than one MGT.

To get a sense of how freight traffic is increasing in Pennsylvania, the following statistics can be supported:

- One modest forecast for the movement of freight by the Federal Highway Administration indicates that increases of up to 70% can be expected in the Northeast from 2003-2013.
- Another forecast by the United States Department of Transportation predicts an approximate doubling of surface transportation over the next two decades, 2000-2020.
- Extrapolation of trends which characterize highway traffic over the past twenty-five years indicates an alarming increase of vehicle miles traveled – at a rate of four times population growth.
- In 1998, 919 million tons of freight passed through the Commonwealth. In 2020, that number is expected to be 1,397 million tons (2nd and 3rd respectively nationwide).

Pennsylvania has funded rail freight infrastructure by means of the Rail Freight Assistance Program (RFAP), Capital Budget Grants and double-stack clearance projects. The double-stack

The B reflects:

- Low-density railroads at risk of abandonment
- Short line, "feeder" rail in need of investment
- Needed capacity enhancements
- Positive impact of larger rail funding its own improvements
- Success of public-private and innovative financing for new investment

projects were completed and funded between 1991 and 1996. RFAP was created by the Commonwealth's Rail Freight Preservation and Improvement Act of 1984, No. 119, which provides funds to preserve essential rail freight service and stimulate employment through generation of new or expanded rail freight service. Capital Budget Grants have also been funded annually to help pay for freight infrastructure improvements. RFAP grant authorization increased from \$4.25 million to \$8.5 million in 2004. The Capital Budget grant allocation for rail also increased in 2004 from \$10 million to \$20 million.

PennDOT also established the Pennsylvania Infrastructure Bank (PIB) for rail freight and provided \$500,000 in initial seed capital to kick-start a program that provides low-interest loans to railroads and shippers for their use on railroad infrastructure projects. The Agency periodically adds funds to this. As payments are made they are recycled and re-loaned.

Additionally, Pennsylvania's Department of Community and Economic Development administers several economic development loan and grant programs that assist rail infrastructure expansions, including the Infrastructure and Facilities Improvement Program, the Tax Increment Financing Guarantee Program, the Business in Our Site Program and the Infrastructure Development Program.

PennDOT is also beginning to utilize other funding programs to complement their RFAP and Capital Budget Programs. These include: Congestion Mitigation Air Quality (CMAQ), Local Tax Increment Financing (TIF) and federal Railroad Rehabilitation and Improvement Financing (RRIF) program.

In the most recent Capital Budget Act (Act 40), which was passed by the Pennsylvania Legislature, \$560,932,000 in State Capital Budget dollars were requested for statewide rail freight industry infrastructure needs.

In another study, annual track and bridge expenditures for all railroad classes within the state are projected to be approximately \$136 million. As stated earlier, the larger railroads are more able to cover their financial needs. Smaller railroads are not as fortunate and need the most assistance. Clearly, increased state funding would be most helpful and a sound investment.

Indicators of the health of the Commonwealth's existing rail freight infrastructure are as follows:

- **Physical plant needs.** 60% of the short line and regional railroad physical plant is in need of extensive rehabilitation, including 170 bridges. Bridge repairs are anticipated to be > \$ 1 million a piece.
- **Ability to handle heavy loads.** Excluding the Bessemer & Lake Erie (CN) and Delaware & Hudson Railroads (CP Rail) – both of which have heavy load infrastructures, short line and regional railroads are capable of handling the heavier, 286,000-pound loads on only 70% of their infrastructure. In contrast, almost all new freight rail cars being manufactured today are 286K capable — the exception being cars that are manufactured for use in the transport of Powder River Basin coal, many of which are the latest generation 315,000-pound capacity rail cars.
- **Derailments.** Over the period from 2001 to 2005, there was an annual average of 80.4 derailments in Pennsylvania. In 2005, total derailments in the state were down 30.3% over the previous year (2004). It is estimated that more than 540,000 carloads of hazardous materials cross Pennsylvania's rail system each year.

- **Choke points.** There are some forty-five rail traffic choke points throughout the state. Most notable of locations needing capacity improvements include Philadelphia's "Phil" and "Zoo" Interlockings, Norfolk Southern's Port Perry Branch and its Lemoyne Connector, which links NS's Lurgan Branch with its Port Road / Enola Branch at Lemoyne on the west bank of the Susquehanna River near Harrisburg.

Regarding new investment, much success has and can be accomplished with public/private innovative financing. Numerous public-private and/or innovative funding plans have assisted maintenance and improvement of rail infrastructure. Following are some examples.

Use of public funds to leverage private funding, a public-private participation project, is one method of funding where there are both public and private benefits. Pennsylvania's Conrail double-stack project of the 1990's is a prime example, wherein the state participated in the \$100 million project to the extent of \$35.8 million. As of 2002, other Pennsylvania projects that are now under consideration or which have been recently completed include:

1. **Advanced Warning Timing Devices with Norfolk Southern, Bessemer & Lake Erie and Union railroads.** This project is a \$10 million State Capital Budget item to improve safety at 97 crossings between 2003 and 2006. The total project cost of \$8.67 million is to be shared, with 80 percent state funds and 20 percent railroad funds.
2. **Norfolk Southern's** new construction of the Shelocta line to the Keystone Power Plant in Indiana County. Project funding included \$10 million in Congestion Mitigation Air Quality (CMAQ) funds through the Southwest Pennsylvania Commission (SPC). Currently there are no state funds committed, however, an additional \$3.2 million in a SAFETEA-LU earmark and \$2 million in an ISTEA earmark remain available to this project.
3. **Restoration of Buffalo and Pittsburgh Railroad's Homer City Branch in Indiana County.** The project restored rail service for coal delivery to EME Homer City Generation L.P.'s Homer City Electric Generating Station. Total investment in the project was \$8.62 million, including \$4 million in state grant funds, \$2.3 million in federal grants and \$2.32 million in private matching funds. The project involved the installation of 16 miles of continuous welded rail, 41,000 ties and 10 new switches. In addition, 34 public and private road crossings were rehabilitated, five new bridge decks were installed and 30,000 tons of ballast was distributed over the line. The plant burns approximately 6 million tons of coal annually, which is largely delivered by truck over local roads. The line will have the capacity to deliver up to 2 million tons of coal annually, which would remove up to 80,000 loaded trucks from local highways each year.

Rail Freight Assistance Benefits 2002-2005

Fiscal Year	Grant Type	State Investment	Total Project Cost	Number of Projects Funded	<i>Jobs Created</i>	<i>Jobs Maintained</i>	Trucks Off Highway
2002	RFAP	\$4,250,000	\$6,300,000	31	675	31,897	202,923
2002	Capital Budget	\$10,000,000	\$13,300,000	14	498	34,250	216,490
Total 2002		\$14,250,000	\$19,600,000	45	1,173	66,147	419,413
2003	RFAP	\$4,250,000	\$6,500,000	30	1,002	18,348	216,070
2003	Capital Budget	\$18,000,000	\$24,000,000	20	185	30,980	367,011
Total 2003		\$22,250,000	\$30,500,000	50	1,187	49,328	583,081
<u>2004</u>	RFAP	\$8,500,000	\$11,800,000	<u>43</u>	<u>1,709</u>	<u>10,211</u>	<u>166,799</u>
2004	Capital Budget	\$20,000,000	\$26,700,000	25	1,217	12,768	873,909
Total 2004		\$28,500,000	\$38,500,000	68	2,926	22,979	1,040,708
<u>2005</u>	RFAP	\$8,500,000	\$11,700,000	<u>52</u>	<u>2,375</u>	<u>29,065</u>	<u>836,306</u>
2005	Capital Budget	\$20,000,000	\$28,500,000	20	2,033	60,880	2,949,768
Total 2005		\$28,500,000	\$40,200,000	72	4,408	89,945	3,786,074
<u>Grand Total:</u>		\$93,500,000	\$128,800,000	235	9,694	228,399	5,829,276

Please Note: The total project cost is estimated for the 2002 and 2003 Fiscal Years.

A widely-held and strongly-felt opinion, recorded in a recent survey of Pennsylvania's Metropolitan Planning Organizations (MPOs) and public rail authorities, indicated that there is widespread appreciation of Pennsylvania's funding of rail freight programs and that more RFAP and Capital Budget funding is required.

POLICY OPTIONS

Solutions that would ease the increasing demands on Pennsylvania's heavy rail transportation system and improve freight conditions, capacity and safety are multi-faceted.

ASCE urges the legislature to:

- **Continue its model of excellence.** The Commonwealth must continue to build on its excellent model, increase transportation investment at all levels of government and make use of the latest technology.
- **Support multi-modal transportation.** Cities and communities should not be shortsighted concerning freight planning and should also look at statewide planning and connectivity to maximize their own inter-modal options. Freight planning in the Commonwealth should include consideration of all transportation modes and should be developed as an outgrowth of the new Mobility Plan.
- **Link planning efforts.** The Commonwealth's freight planning effort should dove-tail with both the new National Freight Plan and the freight plans of Pennsylvania's neighbor states, including New Jersey, New York, Ohio, Maryland, Delaware, Virginia and West Virginia.
- **Recognize the connection between railroads and highways.** There needs to be awareness at the national and state levels that diverting freight movements from our highways can best be accomplished by expanding the rail infrastructure and by mitigating or eliminating existing choke points. Government entities must be able to accept the rationale that allocating more public funds for rail will help reduce pressure on highways.

RECOMMENDATIONS

- Provide additional state and national rail funding, above current levels. This includes being able to fund larger projects that can be supported over multiple contract years.
- Upgrade small railroads to 286,000-pound railcar capability where merited.
- Promote more double-stack, inter-modal clearance projects, where required.
- Support other projects facilitating inter-modal growth, including transfer facilities.
- Eliminate choke points.
- Support innovative, public-private financing agreements for freight projects.
- Continue to advance the efforts to promote freight planning at the local/MPO level. Continue to improve coordination between local levels and the state planning agency, and add to the noteworthy inroads that have already been made in freight planning at many of Pennsylvania's MPOs/RPOs.
- Seek new, innovative sources of federal and state funding for rail freight investment to specifically reduce highway congestion and improve the overall level of transportation safety in the Commonwealth.

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