

POSITIVE TRAIN CONTROL

BENEFITS AND COSTS FOR
LETTER REPORT TO
CONGRESS



Study Required by Congress

- Letter report due October 1, 2003, analyzing the benefits and costs of PTC, including benefits to shippers
- RSAC Implementation report was apparently not adequate
- FRA attempted to meet Congressional intent



FRA Intent

- Letter report will go to Congress by itself
- Additional Documents, including comments, may be sent to Committee staff
- Letter report will go into clearance at OST by May 15, 2004



Study methodology

- Zeta-Tech Associates studied business benefits with emphasis on shipper benefits.
- Volpe Center used existing databases to estimate accident cost reduction
- FRA Office of Policy estimated diversion from highway mode.
- FRA Office of Safety coordinated the studies and is compiling the report.



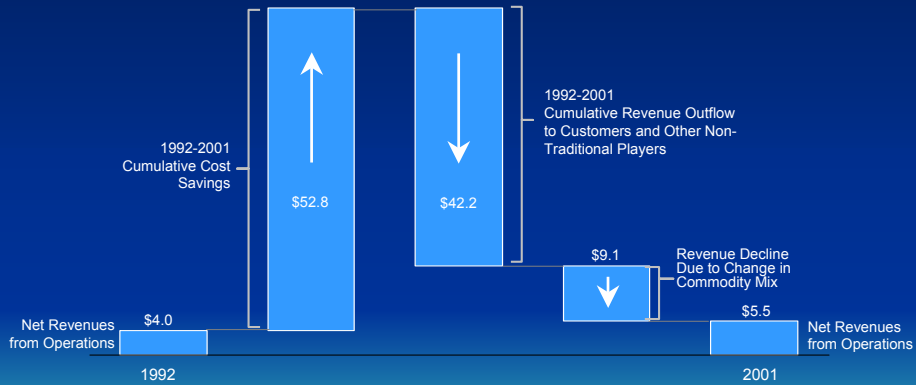
Key assumptions

- Railroad rates stay constant.
 - In the past railroads have only been able to capture about 20% of productivity improvements because of lower rates
 - Lower rates would mean more diversion from highways, more shipper and highway user benefits, and lower returns to railroads
- PTC is implemented on all Class I railroads + busy lines (100,000 miles)



Railroads have had to “give away” most productivity benefits just
to remain competitive.

**Outflow of U.S. Class I Railroads
Productivity Gains/Cost Savings**
(billions of nominal 2001 dollars)



Source: Association of American Railroads; Mercer analysis.

Mercer Management Consulting © 2003

What Are We Attempting to Measure?

- Total societal benefit
 - Includes benefits to railroads, shippers, highway users, and the general public
 - Is not affected by who pays or who benefits
- We are also attempting to measure and discuss distributional effects
 - Who pays, and who benefits



Peer Review Workshop 4/13/04

- Review the study and its components for obvious errors
- Discuss alternative assumptions
- Clarify the study where needed
- Provide the basis for comments which do not concur with the study results



FRA's Commitment

- FRA will reevaluate its assumptions as they are challenged
- FRA will make a final determination as to the agency's position
- FRA will summarize dissenting opinions and prepare a summary for Congress
- FRA will also prepare any dissenting written opinions for presentation in full to Congress
- FRA will not submit without approval from DOT, OMB and other executive agencies



Preliminary Results

- If PTC can support improved transit times and service reliability, benefits to railroads, shippers and the public could be substantial
- Diversion of intermodal traffic to rail would drive a large portion of the benefits
- Direct Safety benefits would be a very small proportion of total benefits
- Highway safety benefits would be much greater



Not measured

- Benefit to highway users
 - Reduced congestion
- Labor Savings



Can business benefits be achieved other ways?

- A key assumption of the 1998 study was that the business benefits of PTC could be achieved more economically through other technologies.
- Some of those other technologies have not been adopted, and the location system and data channels needed for PTC may be prerequisites for achieving those benefits.



Why Railroads have not adopted PTC-per Zeta-Tech

- Restrained competition
- Technological Risk
- Financial Risk
- Railroad Organization



Principal Comments

- Called attention to system capacity constraints as a limit on velocity/reliability improvements (yards, terminals)
- Questioned ability of PTC to assist in easing *over-the-road* capacity constraints (inherent conservatism of braking algorithms; incompatibility of dynamic block with freight operations)
- Questioned asset utilization estimates
- Need to finish NAJPTC project to build confidence in the technology



Where we go from here

- FRA has received comments
 - Update as of 4/27 morning
- Written comments
 - Tight deadline of 14 days necessary because of FRA's deadline of May 15
- FRA will summarize comments, revise the report as needed, and submit the report for clearance by 5/15/04

