

Nos. 10-1198 & 10-1308

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

ASSOCIATION OF AMERICAN RAILROADS,

Petitioner,

v.

DEPARTMENT OF TRANSPORTATION;
RAY LAHOOD, SECRETARY OF TRANSPORTATION;
FEDERAL RAILROAD ADMINISTRATION;
JOSEPH C. SZABO, ADMINISTRATOR, FEDERAL
RAILROAD ADMINISTRATION; UNITED STATES OF AMERICA,

Respondents.

On Petition For Review Of A Final Rule
Of The Federal Railroad Administration

BRIEF OF PETITIONER ASSOCIATION OF AMERICAN RAILROADS

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

(A) Parties and Amici:

The parties in this case are the Association of American Railroads (AAR or petitioner) and the Department of Transportation; Ray LaHood, Secretary of Transportation; the Federal Railroad Administration; and Joseph C. Szabo, Administrator of the Federal Railroad Administration; and the United States of America (respondents). There currently are no intervenors or amici.

AAR is a nonprofit trade association representing railroads operating in North America. AAR's membership includes freight railroads that operate 72 percent of the line-haul mileage, employ 92 percent of the workers, and account for 95 percent of the freight revenue of all railroads in the United States; and passenger railroads that operate intercity passenger trains and provide commuter rail service. AAR represents its member railroads in proceedings before Congress, the courts and administrative agencies in matters of common interest, such as the issues that are the subject matter of this petition for review.

On the rulemaking docket and in the final rule (75 Fed. Reg. at 2604), respondent Federal Railroad Administration lists the following parties to the rulemaking proceeding: American Association of State Highway and Transportation Officials (AASHTO), American Chemistry Council, American Public Transportation Association, American Shortline and Regional Railroad

Association (ASLRRA), American Train Dispatchers Association, AAR, BNSF Railway Company (BNSF), Brotherhood of Locomotive Engineers and Trainmen Division, Brotherhood of Maintenance of Way Employees Division, Brotherhood of Railroad Signalmen, Caltrain, Canadian Pacific (CP), CSX Transportation, Inc. (CSXT), Friends of the Earth, GE Transportation (GE), HCRQ, Inc. and Cattron Group International (collectively, “HCRQ/ CGI”), International Brotherhood of Electrical Workers, Invensys Rail Group—Safetran Systems (“Safetran”), National Railroad Passenger Corporation (Amtrak), National Transportation Safety Board (NTSB), New York State Metropolitan Transportation Authority (NYSMTA), NJ Transit, Northern Indiana Commuter Transportation District (NICTD), Pacific Southwest Railway Museum, Rail Interoperability Group, Railroad Passenger Car Alliance, Railway Supply Institute, San Bernardino Railway Historical Society, Siemens, Inc., Southern California Regional Rail Authority (SCRRA or Metrolink), The Chlorine Institute (CI), The Fertilizer Institute (TFI), Tourist Railway Association, Trinity Railway Express (TRE or Trinity), United Transportation Union, and Utah Transit Authority (UTA). A number of individuals also submitted comments: Rod Fishburn; Robert Kittel; Jonathan J. Morris; Georgia G. Peters; and Roy J. Wullich.

(B) Rulings Under Review:

The Association of American Railroads seeks review of the Federal Railroad Administration's final rule (as amended) implementing a requirement that passenger and freight railroads install positive train control systems on certain routes, as well as the agency's related order denying reconsideration. The final rule at issue here was published in the Federal Register on January 15, 2010, *Positive Train Control Systems; Final Rule*, 75 Fed. Reg. 2598 (Jan. 15, 2010), and the order denying reconsideration was issued on July 8, 2010. The FRA issued amendments to the final rule on September 27, 2010, *Final rule amendments*, 75 Fed. Reg. 59108 (Sept. 27, 2010).

(C) Related Cases:

Petitioner is aware of no cases related to this Petition.

/s/ Thomas H. Dupree, Jr.

CORPORATE DISCLOSURE STATEMENT

Petitioner states as follows:

1. The Association of American Railroads is a trade association. Its members are railroads that will be affected by the final rule.
2. The Association of American Railroads has no parent company and is a nonstock corporation.

/s/ Thomas H. Dupree, Jr.

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*Authorities upon which we chiefly rely are marked with an asterisk.

GLOSSARY

AAR	Association of American Railroads
ETMS	Electronic Train Management System
FRA	Federal Railroad Administration
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIH	Poisonous-If-Inhaled
PTC	Positive Train Control
RSIA08	Rail Safety Improvement Act of 2008

JURISDICTIONAL STATEMENT

The Federal Railroad Administration (FRA) issued its final rule on January 15, 2010, JA548-673, 75 Fed. Reg. 2598, and denied reconsideration on July 8, 2010. JA706-07. The Association of American Railroads timely petitioned for review on July 28, 2010. JA732-34 (No. 10-1198). The FRA issued amendments to the final rule on September 27, 2010. JA737-747, 75 Fed. Reg. 59108. AAR timely petitioned for review of the amendments on October 5, 2010, JA748-750 (No. 10-1308), and this Court consolidated the two petitions on October 22, 2010.

This Court has jurisdiction under 28 U.S.C. § 2342(7) and 49 U.S.C. § 20114(c). Those sections provide this Court with jurisdiction over final actions of the Secretary of Transportation under Part A of Subtitle V of Title 49 (49 U.S.C. §§ 20101–21311). This qualifies as such a final action, as this rule implements 49 U.S.C. § 20157, and the FRA has invoked that section as providing statutory authorization for this rulemaking. JA549, 649, 650.

STATEMENT OF THE ISSUES

This is a challenge to a rule issued by the Federal Railroad Administration requiring railroads to install Positive Train Control (PTC) systems on certain locomotives and tracks by the end of 2015. The FRA projects that its rule will impose more than \$13 *billion* in costs on the industry while securing a mere \$674 million in safety benefits. JA635. The FRA blames Congress for the stunning

irrationality of a regulation that will result in what the agency acknowledges is a net loss of more than twelve billion dollars, claiming that Congress prohibited it from considering costs and benefits during the rulemaking, and warning that in order to comply with this new regulatory mandate, “railroads must immediately engage in a massive reprogramming of capital funds.” JA6; *see also* JA568.

The questions presented are:

1. Congress mandated a *limited* rollout of PTC by directing that it be installed on certain tracks used to carry passengers or specified hazardous materials as of the end of 2015. The FRA’s rule, however, goes well beyond the statutory mandate by requiring that PTC be installed on tracks that were transporting passengers or hazardous materials in 2008 — even if those tracks are *no longer* transporting passengers or hazardous materials as of the end of 2015 — thereby forcing railroads to spend hundreds of millions of dollars to install PTC on tracks that Congress did not require be equipped with PTC. The agency acknowledged that the costs of its rule dramatically exceed the benefits, but concluded that “Congress . . . directed implementation of PTC without regard to the rules by which costs and benefits are normally evaluated in rulemaking.” JA568. Did the FRA commit legal error in construing the authorizing statute as prohibiting it from even *considering* costs and benefits during the rulemaking, and did the agency otherwise act in an arbitrary and capricious manner in expanding the scope of PTC

to encompass tracks that are not transporting passengers or hazardous materials as of the 2015 implementation date?

2. The final rule further expands the congressional mandate by requiring that PTC information be displayed to the train's conductor as well as the engineer. This provision will require freight railroads to install a *second* PTC display screen in locomotive cabs, imposing an additional \$220 million in cost on the railroads. Although single-screen systems with a display for only the engineer have been used for many years and have a flawless track record, and despite the absence of studies supporting the FRA's approach, the agency concluded that adding a second screen was necessary to enable the conductor to monitor the PTC display. Did the FRA act in an arbitrary and capricious manner, or otherwise contrary to law, in adopting the display requirement?

STATUTES AND REGULATIONS

The Rail Safety Improvement Act of 2008 ("RSIA08"), 49 U.S.C. § 20157, provides in relevant part:

§ 20157. Implementation of positive train control systems

(a) In general.--

(1) Plan required.--Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, each Class I railroad carrier and each entity providing regularly scheduled intercity or commuter rail passenger transportation shall develop and submit to the Secretary of Transportation a plan

for implementing a positive train control system by December 31, 2015, governing operations on--

(A) its main line over which intercity rail passenger transportation or commuter rail passenger transportation, as defined in section 24102, is regularly provided;

(B) Its main line over which poison- or toxic-by-inhalation hazardous materials, as defined in parts 171.8, 173.115, and 173.132 of title 49, Code of Federal Regulations, are transported; and

(C) such other tracks as the Secretary may prescribe by regulation or order.

(2) Implementation.—

.....

The railroad carrier shall implement a positive train control system in accordance with the plan.

* * *

The Federal Railroad Administration's final rule concerning positive train control systems, 49 C.F.R. § 236.1005, provides:

(b) *PTC system installation*

.....

(2) *Initial baseline identification of lines.* For the purposes of paragraph (b)(1)(i) of this section, the baseline information necessary to determine whether a Class I railroad's track segment shall be equipped with a PTC system shall be determined and reported as follows:

(i) The traffic density threshold of 5 million gross tons shall be based upon calendar year 2008 gross tonnage, except to the extent that traffic may fall below 5 million gross tons for two consecutive calendar years and a PTCIP or an RFA

reflecting this change is filed and approved under paragraph (b)(4) of this section and, if applicable, § 236.1021.

(ii) The presence or absence of any quantity of PIH hazardous materials shall be determined by whether one or more cars containing such product(s) was transported over the track segment in calendar year 2008 or prior to the filing of the PTCIP, except to the extent that the PTCIP or RFA justifies, under paragraph (b)(4) of this section, removal of the subject track segment from the PTCIP listing of lines to be equipped.

* * *

The final rule further provides, at 49 C.F.R. § 236.1029(f):

(f) The PTC system's onboard apparatus shall be so arranged that each member of the crew assigned to perform duties in the locomotive can receive the same PTC information displayed in the same manner and execute any functions necessary to that crew member's duties. The locomotive engineer shall not be required to perform functions related to the PTC system while the train is moving that have the potential to distract the locomotive engineer from performance of other safety-critical duties.

STATEMENT OF FACTS

1. Positive Train Control

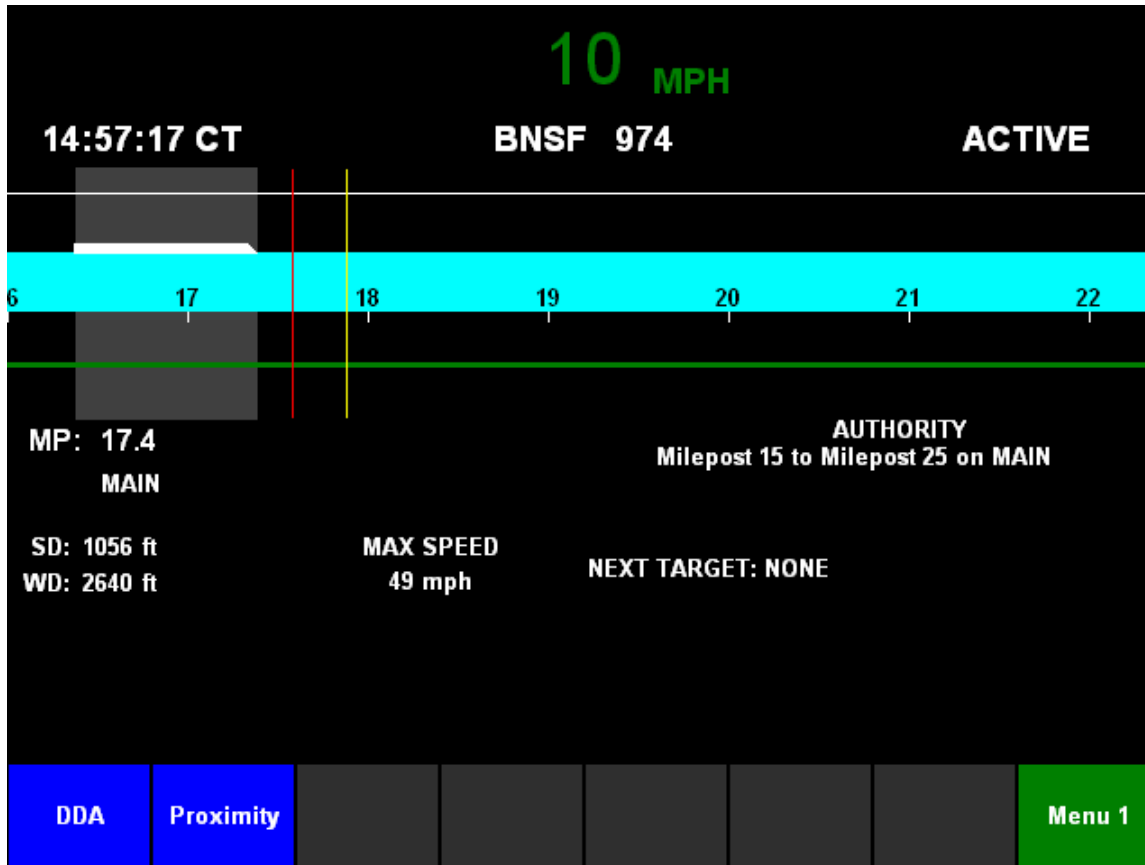
Positive Train Control, or PTC, refers to “a system designed to prevent train-to-train collisions, over-speed derailments, incursions into established work zone limits, and the movement of a train through a switch left in the wrong position.” 49 U.S.C. § 20157(i)(3). Although the specifics of particular PTC systems vary, generally speaking PTC is a wireless technology that links the locomotive to the

dispatcher in the central office. A PTC system automatically monitors and controls the movement of trains to reduce the risk of human error that could lead to derailments or collisions.

PTC is a still-developing technology that in key respects remains in its experimental stages. No freight railroad has ever implemented PTC on a broad basis, and the few that have deployed it in any context have limited it to short segments of track where the system's design and performance can be closely monitored and refined. JA552-53. There is no "standard" PTC system in existence; rather, PTC continues to be studied, developed, and customized to the needs and performance goals of individual railroads. *Id.*

PTC uses Global Positioning System technology to ascertain the location and speed of trains, and the location of work zones or other areas where movement is prohibited or restricted. This information is provided to the engineer through a PTC display in the locomotive cab. The system alerts engineers when it is necessary to slow or stop the train. For example, as the train approaches a work zone, the PTC system might flash a warning on the display screen, accompanied by audio cues. If for whatever reason the engineer fails to heed the warning and slow the train, the PTC system will take over and automatically bring the train to a full stop in advance of the work zone. The goal of PTC is to "provid[e] a safety net for occasional human errors." JA606.

A PTC display unit is a monitor much like a standard computer screen. An engineer looking at a PTC display sees a simple graphic depiction of the train's location relative to the track ahead, as well as information concerning speed, grade, track curvature and the like. JA701. If a speed restriction is in effect, that restriction will be displayed graphically (*e.g.*, the track will be surrounded by a box with red lines). The picture below is a screenshot from a PTC display used on one of the few existing systems:



Id.

PTC is an extremely expensive technology. As discussed in more detail below, the FRA has described the costs of installing PTC as “tremendous” and

“prohibitive,” and has conceded that the costs of PTC “far exceed the benefits.” JA552, 553. Railroads must develop, test and install a wide array of technology and hardware in order to implement PTC. JA635. Equipping a particular segment of track with PTC requires the installation of numerous wayside components designed to monitor a train’s location and progress. Implementing PTC also requires establishing a centralized, networked dispatching system that can communicate with computers on locomotives and with the wayside equipment. It requires installing equipment, including display screens, in the locomotives themselves. It requires extensive training of engineers and dispatchers, as well as those responsible for programming and overseeing the network. And it requires ongoing maintenance, repairs and upkeep to keep all parts of the system in working order. *See* JA635 (identifying categories of costs). Moreover, all of the technology must be interoperable among the different railroads. *See* 49 U.S.C. § 20157(a)(2). Locomotives and crews of one railroad routinely operate on tracks owned by a different railroad, and crews from one railroad may operate locomotives from other railroads, thus requiring cross-training in the different systems.

While the costs of PTC are “tremendous,” JA553, the benefits are relatively few. The FRA has acknowledged that “PTC is currently an imperfect technology fed by databases that can be corrupted.” JA621. Moreover, in the FRA’s

estimation, even when PTC is working perfectly, it would prevent only two percent of all train accidents. *See* JA1049 (“[I]n part because rail collisions and other events preventable by [PTC] technology constitute only about two percent (2%) of reportable train accidents in any given year, the direct safety benefits that would accrue to railroads are small relative to the costs.”) (transmittal letter for 2004 FRA report, FRA-2008-0132-0054, available at www.fra.dot.gov/downloads/safety/ptc_ben_cost_report.pdf).

It is undisputed that railroads are very safe and getting safer even in the absence of PTC. In 1980, train accidents occurred at the rate of 11.43 per million train miles. JA248 (citing FRA, Office of Safety Analysis report). As of 2007, the frequency of accidents had been sharply reduced, to approximately 3.39 per million train miles. *Id.* The FRA has recognized that “[e]ngineers and conductors have an excellent record of avoiding accidents,” JA621, and that railroads as a whole have an “enviable safety record.” JA729.

Likewise, although it is possible that PTC might someday produce business benefits by improving the efficiency of trains, the FRA has acknowledged that such benefits are too speculative and uncertain to predict with a meaningful degree of accuracy. *See* JA635 (FRA Regulatory Impact Analysis concluding that potential business benefits of PTC “are not included because of significant uncertainties regarding whether and when individual elements will be achieved and

given the complicating factor that some benefits might, absent deployment of PTC, be captured using alternative technologies at lower cost”).

2. The FRA Has Repeatedly Determined That PTC Is Not Worth Its Exorbitant Cost.

The concept of Positive Train Control has existed since the 1970s. In the wake of a 1969 collision, federal authorities began investigating the possibility of developing a system of “positive train separation” that would minimize the risk of human error by automatically maintaining distance between trains. JA550.

As technology advanced throughout the 1970s and 1980s, Congress became interested in Positive Train Control and asked the FRA to study the issue and submit a report. In 1994, the FRA submitted its first report on PTC, *Railroad Communication and Train Control*. The agency concluded that while PTC systems may deliver some safety benefits, the benefits were simply not worth the cost. The FRA explained that “an immediate regulatory mandate for PTC could not be justified based upon normal cost-benefit principles relying on direct safety benefits.” JA550-51, 926.

Five years later, the FRA again studied the feasibility of PTC, this time by convening a working group that included government representatives as well as engineers from the private sector. The working group submitted its findings in 1999, echoing the conclusion of the prior FRA report that a regulatory mandate

requiring the installation of PTC could not be justified under a traditional cost/benefit analysis. *See Implementation of Positive Train Control Systems*, JA911-1049.

In 2003, Congress requested “that FRA update the costs and benefits for the deployment of PTC and related systems.” JA551. The FRA “carried out a detailed analysis” of PTC that it submitted to Congress in 2004. JA551. The report, entitled *Benefits and Costs of Positive Train Control*, noted that the amount of benefits resulting from PTC “was subject to considerable controversy,” and reiterated the conclusion of the 1994 and 1999 reports that PTC was simply not worth the cost. The report

reaffirmed earlier conclusions that the safety benefits of PTC systems were relatively small in comparison to the large capital and maintenance costs. Accordingly, FRA continued to believe that an immediate regulatory mandate for widespread PTC implementation could not be justified based upon traditional cost-benefit principles relying on direct railroad safety benefits.

Id.

Between 2004 and 2008, the railroads continued to work on developing PTC prototypes. For example, the BNSF Railway Company developed a PTC system known as ETMS — Electronic Train Management System — that the FRA approved for installation on certain routes. Notwithstanding the successful limited

deployment of ETMS and similar systems, however, “the widespread deployment of these various train control systems, particularly on the general freight system, remained very much constrained by prohibitive capital costs.” JA552.

3. Congress Enacts The Rail Safety Improvement Act.

On September 12, 2008, two trains collided in the Chatsworth district of Los Angeles, California, resulting in 25 fatalities. JA553. Several Senators made floor statements expressing their view that “PTC systems are designed to prevent train derailments and collisions, like the one in Chatsworth,” *id.*, and on October 1, 2008, Congress passed the Rail Safety Improvement Act of 2008. The Act was signed into law on October 16, 2008.

The Act requires a *limited* deployment of PTC. Congress was well aware of the FRA’s repeated determinations — in reports submitted at Congress’ request — that PTC “could not be justified” in light of its exorbitant costs and relatively few safety benefits. Accordingly, Congress eschewed a broad deployment and instead carefully limited its PTC mandate.

Specifically, Congress directed that PTC be installed on only two types of tracks: those used to carry passengers, and those used to transport poison- or toxic-by-inhalation (“PIH”) hazardous materials. *See* 49 U.S.C. § 20157(a)(1)(A)-(B). Congress further narrowed the PTC mandate by limiting the installation to “main line” tracks, *i.e.*, tracks that carry at least 5 million gross tons of freight annually,

id. § 20157(i)(2), and to tracks owned by Class I railroads (the largest railroads) and by entities that provide regular passenger service, *id.* § 20157(a)(1). In addition to the mandatory installation on the specified passenger and PIH tracks, Congress also provided that the Secretary of Transportation may require PTC on “such other tracks as the Secretary may prescribe by regulation or order.” *See* 49 U.S.C. § 20157(a)(1)(C).

Congress did not require that the railroads install PTC immediately. Rather, Congress directed that the railroads submit, by April 2010, “a plan for implementing a positive train control system by December 31, 2015” that would govern operations on main line track over which passengers or hazardous materials are transported. 49 U.S.C. § 20157(a)(1). Once the Secretary of Transportation approves the plan, “[t]he railroad carrier shall implement a positive train control system in accordance with the plan.” *Id.* § 20157(a)(2).

In sum, Congress ***required*** railroads to install PTC only on those main line tracks that, as of December 31, 2015, are being used to transport passengers or PIH materials. At the same time, Congress ***permitted*** the agency to require PTC on such additional tracks as prescribed by the Secretary’s regulation or order.

4. The Rule Under Review.

The FRA issued its final rule on January 15, 2010. It expanded the scope of PTC beyond the congressional mandate in two key respects. First, the agency

directed that PTC be installed on certain tracks that will *no longer* be carrying passengers or PIH traffic by the end of 2015. Second, the agency ordered that a PTC display be visible to *all* crew members in the locomotive, not just the engineer, thereby effectively requiring the installation of a costly second PTC display screen in locomotive cabs.

In conjunction with its rulemaking, the FRA conducted the required Regulatory Impact Analysis. It calculated the costs and benefits of its final rule, and determined that nothing has changed: the costs of PTC continue to be immense, and vastly exceed the projected benefits. JA635-36. The FRA determined that the costs of complying with its rule — approximately \$13.21 billion using a 3 percent discount rate — are nearly 20 times higher than the mere \$674 million in benefits. JA635.

a. The FRA Expands The Scope Of PTC Installation By Adopting A “Year 2008 Baseline.”

The final rule requires railroads to use a “Year 2008 baseline” to determine their PTC obligations for purposes of the 2015 year-end deployment. This means that railroads must take a snapshot of traffic patterns as they existed in 2008 and install PTC on tracks that transported PIH materials as of 2008 — *regardless* of whether those tracks are still carrying PIH materials in 2015. *See* 49 C.F.R. § 236.1005(b)(2)(ii) (“The presence or absence of any quantity of PIH hazardous

materials shall be determined by whether one or more cars containing such product(s) was transported over the track segment in calendar year 2008”).

The same holds true for the “main line” requirement: if the tracks satisfied the density threshold in 2008, PTC must be installed even if the tracks are all but abandoned in 2015. *See* 49 C.F.R. § 236.1005(b)(2)(i) (“The traffic density threshold of 5 million gross tons shall be based upon calendar year 2008 gross tonnage”).

The final rule further provides that in cases where a segment of track did *not* meet the statutory criteria as of the 2008 snapshot, but *would* as of 2015, PTC must be installed. *See* 49 C.F.R. § 236.1005(b)(3). However, in the reverse situation — where a segment of track *did* meet the statutory criteria as of 2008 but would *not* as of 2015 — the FRA did not excuse railroads from having to install PTC.

Rather, the final rule provides that railroads must petition the agency for relief and make detailed traffic- and risk-based showings. *See* 49 C.F.R. § 236.1005(b)(4); JA737-47 (amended final rule modifying procedure for de-designating routes).

During the notice-and-comment period, commentators argued that the statute did not establish a 2008 baseline, and in fact designated December 31, 2015 as the relevant date for determining the scope of PTC installation. *See* JA211-16, 251-58. Commentators explained that a 2008 baseline would force railroads to install PTC on thousands of miles of track where Congress had not required it, at a cost of

hundreds of millions of dollars. *Id.* They noted that traffic patterns had already changed significantly since 2008 and will continue to change, and thus a 2008 snapshot would bear limited resemblance to the traffic patterns that are likely to exist in 2015 and beyond. *Id.* In particular, commentators emphasized that recently-enacted federal mandates had compelled the re-routing of PIH shipments, and as a result there were thousands of miles of track that carried PIH materials in 2008, but would no longer do so by the end of 2015. *Id.* CSX Transportation, Inc., for example, projected at the time of the rulemaking that it had 844 miles of track that would no longer satisfy the statutory criteria by the end of 2015, and that the 2008 baseline approach would therefore force it to bear an additional \$38 million in cost. JA648.

Commentators implored the FRA to consider the costs and benefits before adopting a 2008 baseline, which would result in a far broader deployment of PTC than Congress had required. JA209-10, 245-49. They pointed out the agency's repeated determinations (including in this very rulemaking) that the costs of PTC exceeded the benefits by more than twelve billion dollars — money that could be spent on far more effective safety programs, such as improving safety at grade crossings, or on capacity-expansion programs that would benefit the environment by moving freight traffic off the highways. *Id.* Commentators argued that given the relative costs and benefits of PTC, it simply made no sense for the agency to

direct a more *expansive* rollout than Congress had mandated, thereby worsening the disparity between costs and benefits and forcing railroads to bear a heavier, and even less justifiable, regulatory burden. *Id.*

Commentators proposed reasonable and lower-cost alternatives to a 2008 baseline. For example, one commentator suggested that railroads begin installing PTC on those routes that they project will satisfy the statutory criteria in 2015. *See* JA262-64. With regard to those routes that are *not* projected to satisfy the criteria, the railroads would provide the FRA with traffic updates at frequent intervals — and if based on the updated data, it appears that PTC would be required on a particular track, the railroad would then begin installation. *Id.* Another commentator proposed that the agency should use 2008 or 2009 traffic patterns as a starting point, but then provide that PTC need not be installed on any lines where there is no longer any passenger or PIH traffic as of the end of 2015. JA215-16. These commentators pointed out that any of these approaches would be vastly preferable from a cost/benefit perspective, because they would ensure that the scope of PTC would not be broadened beyond what Congress had required. JA215-16, 262-64. They also noted that these approaches, unlike a 2008 baseline, would be consistent with the intent of Congress that PTC installation be based upon traffic patterns as they will exist in 2015, rather than the historic patterns that existed back in 2008. *Id.*

The FRA rejected these arguments. It acknowledged that it had “filed three congressionally-required reports since 1994” setting forth the agency’s position that PTC could not be justified from a cost/benefit perspective, but stated that “the issue is now presented in a different light than before.” JA568. The FRA explained: “With the passage of RSIA08, Congress has in effect set its own value on PTC *and directed implementation of PTC without regard to the rules by which costs and benefits are normally evaluated in rulemaking.*” JA568 (emphasis added). Accordingly, the agency deemed itself powerless to take costs and benefits into account in deciding to adopt a 2008 baseline. *Id.*

The FRA recognized that the statute did not require a 2008 baseline. *See* JA34 (admitting that “the literal language of the legislation would be satisfied” without a 2008 baseline). But the agency explained that it would exercise its discretion to fulfill what it perceived as the unspoken “intent” of Congress. JA568. In short, the FRA concluded that because Congress had already “set the value” of PTC, the agency was prohibited from taking costs and benefits into account even when making discretionary determinations to expand the scope of PTC coverage beyond the coverage mandated by Congress.

Notwithstanding the FRA’s claim that Congress “directed implementation of PTC without regard to the rules by which costs and benefits are normally evaluated in rulemaking,” JA568, the agency *did* weigh costs and benefits in deciding that it

would not require the smaller Class II and III railroads to equip their locomotives with PTC when traveling on Class I PTC-equipped track. The FRA explained that “the cost of equipping those trains would be high when viewed in the context of the financial strength of the Class II or III railroad and the marginal safety benefits would be relatively low in those cases where a small volume of traffic is moved over the PTC-equipped line.” JA585.

Finally, the FRA recognized the immense regulatory burden it was imposing on the railroads, emphasizing that to comply with the agency’s broad vision, “railroads must immediately engage in a massive reprogramming of capital funds.” JA6.

b. The FRA Requires A PTC Display To Be Visible To All Crew Members.

The final rule also requires that a PTC display unit be visible to *all* crew members in the locomotive, not just the engineer. *See* 49 C.F.R. § 236.1029(f).

Freight trains typically operate with a two-person crew: an engineer and a conductor. JA220, 235-37. The engineer is responsible for operating the locomotive. The conductor, however, has no duties with regard to train handling (other than intervening to apply the emergency brake in extreme situations), and in fact is legally barred from operating the train because he lacks an engineer’s certificate. JA691. When the train is not in motion, the conductor is responsible

for monitoring the cars that make up the train and determining their placement.

JA619. When the train is in motion, the conductor will typically sit in the locomotive cab and serve as a redundant pair of eyes to confirm information external to the cab, such as switch alignments, signals, or obstructions on the track ahead. JA691. The conductor also assists in relaying mandatory directives from the dispatcher to the engineer, as discussed below. *Id.*

As a practical matter, the display requirement will force railroads to install a second PTC display screen for the conductor. JA220. That is because installing a single large display screen that would be visible to both the engineer and the conductor is not possible without obscuring the windshield. Although the FRA noted that it may be possible for some railroads to comply with the display requirement through other configurations, it acknowledged that Class I freight railroads have no choice but to install a second screen. *See* JA622-23 (“FRA does not question” that Class I railroads will need to install two screens); *id.* at 623 (“FRA believes [two screens] may be the norm for freight locomotives” required to comply with the display requirement).

The display provision will impose significant costs on the railroads. Installation of a second screen costs approximately \$8,000 per screen — a figure that does not include the substantial cost of future maintenance. JA624. The FRA

has acknowledged that the additional cost of installing a second display in the freight locomotives covered by the rule exceeds \$220 million. *Id.*

Requiring that the conductor be given access to a PTC display is a departure from the way PTC systems have historically been configured. Because the engineer is the crew member responsible for operating the train, the vast majority of existing PTC systems use a single-screen model in which the display is not visible to anyone but the engineer. JA221, 264. The FRA does not view single-screen systems as inherently unsafe. In fact, passenger trains — in which the engineer is the only crew member in the locomotive cab — typically operate with a single-screen system (and may continue to do so under the final rule). JA623. Single-screen configurations have worked flawlessly over the years: there has never been a reported accident, or any sort of safety-related incident, resulting from the use of a single screen by an engineer. JA222, 264-65.

PTC technologies perform functions that have historically been performed by crew members. The display requirement, however, was viewed by some as a way to enshrine a role for the conductor in the new PTC era. During the notice-and-comment period, the display requirement was strongly supported by the American Train Dispatchers Association, the Brotherhood of Locomotive Engineers and Trainmen, the Brotherhood of Maintenance of Way Employees Division, the Brotherhood of Railroad Signalmen, the International Brotherhood of

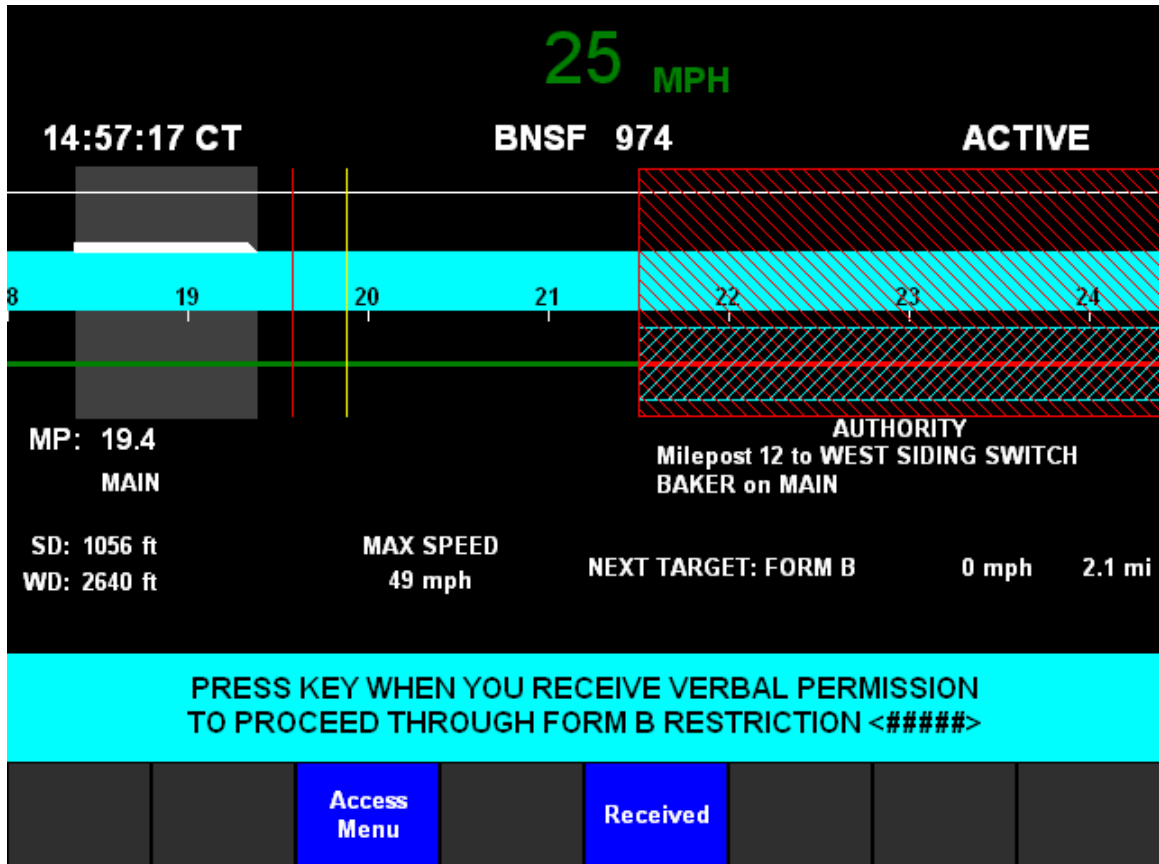
Electrical Workers and the United Transportation Union. *See* Docket ID FRA-2008-0132-0030 (Aug. 24, 2009), at 5-6.

The FRA's justification for the display requirement shifted throughout the rulemaking process. But the agency ultimately settled on the theory that a second display for the conductor would reduce the danger that the engineer might become "distracted" by his own PTC display, lose situational awareness, and cause an accident. JA621-22; JA727-29. The FRA admits that there is no danger of engineer distraction resulting from ordinary monitoring and use of the PTC system. *See* JA622 ("simply referencing the default PTC display screen will be consistent with good situational awareness and should not present a problem"). The FRA contends, however, that a risk of engineer distraction "arises in the context of exclusive electronic delivery of mandatory directives to the locomotive engineer" while the train is en route. JA729.

A mandatory directive is an order transmitted from the dispatcher, directing the engineer to take, or refrain from taking, certain action. For example, if a work crew is occupying the tracks ahead, the dispatcher may issue a mandatory directive that the engineer is not to enter the work zone until cleared to do so. Mandatory directives are usually issued before a train begins its journey, but in some cases they are issued while the train is en route. Under historic practice, when a mandatory directive is issued while a train is en route, the dispatcher radios the

conductor in the locomotive cab and communicates the mandatory directive. The conductor verbally communicates the mandatory directive to the engineer, and also writes it down on a slip of paper, which the engineer must then read.

The final rule does not require that mandatory directives be transmitted electronically or that engineers must acknowledge mandatory directives through the PTC display. JA620. The final rule permits the railroads to continue their historic practice of transmitting mandatory directives via radio to the conductor, who then communicates the directive to the engineer. *Id.* Nonetheless, the FRA anticipates that, in the future, mandatory directives will be transmitted directly to the engineer through the PTC system. Under this approach, a message will appear at the bottom of the PTC display alerting the engineer and requiring him to press a key to acknowledge receipt of the message and/or receipt of permission to proceed. The following screenshot illustrates this type of message:



JA702. According to the FRA, if a mandatory directive appears on the PTC display while the train is moving, the engineer may become distracted by having to read the message or by having to press a button acknowledging receipt of the message. JA621. Thus, according to the FRA, the conductor must be given access to his own display. *Id.*

Commentators had urged the FRA to abandon the display requirement, contending that the agency lacked substantial evidence supporting its “engineer distraction” rationale. JA220-25; 264-69. They pointed out that the FRA had failed to cite any studies indicating that engineer distraction was a legitimate concern and that it made little sense in any event: if an engineer *did* get distracted

and failed to heed a mandatory directive, the PTC system itself would kick in and automatically stop the train. *Id.*

The agency rejected these arguments. It reasoned that because an unnamed FRA employee had “observed engineers exceeding authorities while attempting to respond to PTC system requirements” during certain unidentified “tests,” it did not need to rely on a study, explaining that “FRA does not need a study to verify the possibility of that which it has observed directly.” JA621.

It also relied heavily on a 2009 FRA report — the only study or report it cited to support its “engineer distraction” rationale — that the agency said confirmed its conclusion that “interaction with PTC can distract the engineer from looking outside the cab.” JA622 (citing *Technology Implications of a Cognitive Task Analysis for Locomotive Engineers* (FRA 2009)); JA282-91 (Human Factors Research Support). But the report actually says that while there is “*some* evidence that PTC technology may require locomotive engineers to focus more of their attention on in-cab displays reducing their ability to monitor activity outside the cab,” “[*m]ore research is needed to determine whether this is the case.*” JA1142 (available at www.fra.dot.gov/downloads/Research/ord0903.pdf) (emphases added).

Petitioner moved for reconsideration. It submitted an expert report prepared by a former National Transportation Safety Board official, Dr. John Lauber,

explaining that there was simply no legitimate safety-related justification for the \$220 million display requirement. JA691. Dr. Lauber relied on his considerable experience as a human factors scientist and an NTSB board member who investigated more than 40 passenger and freight rail accidents during his tenure. JA690, 698. In conducting his report, Dr. Lauber not only drew on relevant human factors studies and literature, but also traveled to Texas to observe operations on a locomotive cab equipped with the ETMS system and studied the extensive human factors research used in designing it. JA690, 695. Dr. Lauber concluded that the FRA's approach "is based on a fundamental misapplication of human factors considerations for PTC design and operations," and that "[n]o human factors data or principles suggest that system safety would be enhanced by the so-called dual display mandate." JA696.

The FRA denied reconsideration. Despite its statement that "FRA does not need a study to verify the possibility" of engineer distraction, JA621, the agency explained that "[i]n the absence of thorough studies supporting [his conclusion that there is no risk of engineer distraction], FRA believes that Dr. Lauber's assertion lacks credibility" JA722.

SUMMARY OF ARGUMENT

1. The FRA committed a clear legal error in concluding that Congress "directed implementation of PTC without regard to the rules by which costs and

benefits are normally evaluated in rulemaking.” JA568. This Court has held that absent a clear statement from Congress, an agency is free to weigh costs and benefits in exercising its rulemaking discretion — and no such clear statement exists here. Had the FRA correctly interpreted its statutory authority, there is no way it would have invoked its discretion to *expand* the scope of PTC installation through the adoption of a 2008 baseline given its repeated determinations that PTC is not worth the cost and its acknowledgment that the rule’s costs exceed its benefits by more than twelve billion dollars.

Even if this clear legal error could somehow be overlooked, the FRA’s adoption of a 2008 baseline is contrary to the statutory text, inconsistent with congressional intent, and amounts to arbitrary and capricious agency action. The statutory text expressly designates 2015 as the relevant date for determining the scope of PTC obligations, and the FRA erred in concluding that the statute’s legislative history manifests an unspoken congressional intent for a broader deployment. Although the FRA offered several policy-based justifications for a 2008 baseline, none is supported by substantial evidence. Finally, the agency erred by declining to address the reasonable alternative the railroads proposed during the notice-and-comment period.

2. The FRA’s imposition of the \$220 million display requirement cannot be justified. The agency claimed the requirement is necessary to avoid engineer

“distraction.” But when commentators challenged this premise on the basis that no study supports the FRA’s view, the agency asserted that it “does not need a study” to know that engineer distraction is a legitimate risk, basing its conclusion entirely on the undocumented “observation” by an unidentified FRA employee at an unidentified time and place — an obviously impermissible basis for an agency rulemaking. Then, the FRA offered its own 2009 report (the *only* study the agency cited to support its “distraction” theory), and proceeded to misstate the study’s conclusion: that “more research is needed” before the FRA can say that engineer distraction is a meaningful risk — a conclusion that is directly at odds with the final rule. Finally, having declared that the FRA “does not need a study,” and having mischaracterized the contrary conclusion of the only study it did cite, the FRA rejected the analysis of petitioner’s expert Dr. Lauber on the basis that his opinion “lacks credibility” because it was not supported by “thorough studies.” This is the epitome of arbitrary and capricious agency reasoning.

In promulgating the display requirement, the FRA dismissed the extensive real-world performance record of single-screen configurations, which have worked flawlessly and have never caused an accident. In fact, under the final rule, passenger trains may continue to operate with a single screen, as the engineer is the only crew member in the locomotive cab. Nor, in light of the many gaps and logical disconnects in the FRA’s analysis, can the display requirement be sustained

by the agency's reference to generalized principles of "crew resource management" that have little applicability in this context. Finally, the FRA erred in rejecting cost/benefit objections to the display requirement by relying on the purported "business benefits" of a second display. In its Regulatory Impact Analysis, the FRA specifically declared that the alleged business benefits were too uncertain and speculative to be taken into account in this rulemaking.

STANDING

Petitioner is a trade association with standing to bring suit on behalf of its members under *Hunt v. Washington State Apple Advertising Commission*, 432 U.S. 333 (1977). Petitioner's members include Class I freight railroads that will be required to install PTC pursuant to the challenged rule; petitioner filed a comment during the notice-and-comment process; and the FRA has acknowledged that its rule will impose costs on petitioner's members. JA635. In such circumstances, where the petitioner is the "object of the action" under review, there is "little question" about standing. *Sierra Club v. EPA*, 292 F.3d 895, 900 (D.C. Cir. 2002) (quotation marks omitted).

STANDARD OF REVIEW

The FRA's interpretation of the Rail Safety Improvement Act is reviewed under the two-step *Chevron* test. See *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-45 (1984). Even where the agency has correctly

interpreted the statute, its rule may nonetheless be set aside if the agency's action was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); see *Motor Vehicles Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 41 (1983).

ARGUMENT

The FRA has gone well beyond the statutory mandate and issued a regulation that imposes a staggering and unjustified burden on railroads that carry freight that is vital to businesses and consumers throughout the country. Although the FRA attempts to justify its rule as a safety measure, limiting the rule to what Congress actually required will *enhance* safety by freeing railroads to invest their capital in ways that result in safety benefits commensurate with, or even exceeding, their cost.

I. THE FRA'S ADOPTION OF A 2008 BASELINE RESTS ON A FUNDAMENTAL LEGAL ERROR AND IS ARBITRARY AND CAPRICIOUS.

The FRA's adoption of a 2008 baseline will force the railroads to spend hundreds of millions of dollars to install PTC on thousands of miles of track that Congress did not require be equipped with PTC. The FRA's approach is flawed in two key respects. First, the agency committed legal error and misread the statute in concluding that Congress barred it from taking costs and benefits into account during the rulemaking. Second, even putting aside this clear legal error, the FRA's

decision to use historic 2008 traffic patterns as a baseline for the December 31, 2015 installation contradicts the text of the statute and is arbitrary and capricious.

A. The FRA Erred In Concluding That Congress Barred The Agency From Considering Costs And Benefits.

The FRA acknowledged that its rule could not be justified under a traditional cost/benefit analysis. JA635-36 (stating that the “costs associated with implementation of the final rule are significant and such costs would far exceed the benefits”). But it concluded that Congress “directed implementation of PTC without regard to the rules by which costs and benefits are normally evaluated in rulemaking.” JA568.

“[A]n order may not stand if the agency has misconceived the law.” *Teva Pharmaceuticals v. FDA*, 441 F.3d 1, 5 (D.C. Cir. 2006) (quoting *SEC v. Chenery Corp.*, 318 U.S. 80, 94 (1943)). The FRA’s conclusion that Congress barred it from considering costs and benefits in making the discretionary determination to adopt a 2008 baseline amounts to a clear error of law requiring vacatur and remand. It is “the settled law of this circuit” that “*only* where there is clear congressional intent to preclude consideration of cost that we find agencies barred from considering costs.” *Michigan v. EPA*, 213 F.3d 663, 678 (D.C. Cir. 2000) (emphasis added and quotation marks omitted). Accordingly, “preclusion of cost consideration requires a rather express congressional direction.” *Id.*; *see also NRDC v. EPA*, 824 F.2d 1146, 1155, 1163 (D.C. Cir. 1987) (en banc) (although the

statute “evinces an intent to make health the primary consideration” in setting emission standards, “we cannot discern clear congressional intent to preclude consideration of cost and technological feasibility” and thus “we necessarily find that [the agency] may consider these factors”).¹

Likewise, in *Entergy Corp. v. Riverkeeper, Inc.*, 129 S. Ct. 1498, 1508 (2009), the Court held that the agency was free to consider costs and benefits in rulemaking where the authorizing statute was “silent” as to whether doing so was permissible. The Court explained that “[i]t is eminently reasonable to conclude that [the statute’s] silence is meant to convey nothing more than a refusal to tie the agency’s hands as to whether cost-benefit analysis should be used, and if so to what degree.” *Id.*

Here too, the statute is silent and there is no “express congressional direction,” *Michigan v. EPA*, 213 F.3d at 678, that the FRA was barred from considering costs and benefits in adopting a 2008 baseline. Indeed, federal agencies are **required** by Executive Order to weigh costs and benefits when promulgating rules unless Congress has specifically prohibited it. *See* Exec. Order

¹ Viewed through the *Chevron* framework, when Congress does not expressly **prohibit** cost/benefit analysis, that amounts to an unambiguous manifestation of intent to **permit** cost/benefit analysis. Thus, the question presented here is resolved at *Chevron* step one.

No. 12,866, 3 C.F.R. § 638, 639 (providing that to “the extent permitted by law,” federal agencies may “propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs”). The FRA nowhere identified the specific statutory language barring it from considering costs and benefits when promulgating its regulation. Under a straightforward application of this Court’s and the Supreme Court’s precedent, there is no basis for the agency’s conclusion that Congress “directed implementation of PTC without regard to the rules by which costs and benefits are normally evaluated in rulemaking.” JA568.

The FRA reasoned that cost/benefit analysis was impermissible because Congress “set the value” of PTC simply by enacting the Rail Safety Improvement Act. JA568. But the same could be said about any congressional mandate. The fact that Congress enacted a statute that speaks in general terms does not mean that the agency is barred from weighing costs and benefits when deciding how to *implement* the statute through regulations. An agency has some degree of discretion in deciding whether to promulgate regulations that implement the statutory mandate broadly or narrowly, and in making those determinations the agency is free to take costs and benefits into account unless Congress has explicitly barred it from doing so. Here, Congress set a basic standard — PTC must be

installed by the end of 2015 on main line passenger and PIH tracks — and gave the agency discretion in how to implement that general mandate.

Nothing in the statute **required** the FRA to adopt a 2008 baseline; rather, it made a discretionary determination to adopt the 2008 baseline as one of a range of options. The agency conceded the discretionary nature of its determination throughout the rulemaking process, explaining that in adopting the 2008 baseline, “FRA will **exercise its discretion** to ensure that the network design reflects safety needs and places a value on PTC that reflects an understanding of the value applied by the Congress.” JA568 (emphasis added); *see also id.* (“FRA also explicitly stated in the preamble to the NPRM its intention **to use its statutory discretion** to preserve congressional intent and tied that intention to the use of 2008 traffic levels”) (emphasis added). In exercising that discretion, the FRA was free to consider all relevant factors, including the relative costs and benefits of basing implementation on 2008 traffic patterns.

The FRA’s claim that Congress barred it from weighing costs and benefits when implementing PTC is further contradicted by the fact that the agency **did** weigh costs and benefits in deciding to limit the scope of PTC installation for smaller (*i.e.*, non-Class I) railroads. *See* JA585-86 (explaining that “the cost of equipping those trains would be high” while “the marginal safety benefits would be relatively low”). This **exact** reasoning applies to the Class I railroads, and there

is absolutely no basis in the text of the statute for the FRA's belief that cost/benefit analysis is prohibited for the larger railroads but permissible for the smaller ones. If it was permissible for the FRA to weigh costs and benefits in deciding to limit the smaller railroads' PTC obligations, it was permissible for the FRA to do so for the larger railroads as well.

Had the FRA properly understood that it could consider costs and benefits, it is overwhelmingly likely that it would not have adopted a 2008 baseline — an approach that expands the scope of PTC installation beyond that mandated by Congress. Indeed, given the agency's numerous prior conclusions that PTC could not be justified even with regard to tracks carrying passenger or PIH traffic, it follows *a fortiori* that PTC could not be justified with regard to tracks that do *not* carry such traffic. In any event, “[i]f a reviewing court agrees that the agency misinterpreted the law, it will set aside the agency's action and remand the case — even though the agency (like a new jury after a mistrial) might later, in the exercise of its lawful discretion, reach the same result for a different reason.” *Albany Eng'g Corp. v. FERC*, 548 F.3d 1071, 1080 (D.C. Cir. 2008). Because the FRA misinterpreted the law as prohibiting it from taking costs and benefits into account when establishing a 2008 baseline, remand is warranted.

B. The FRA's Adoption Of A 2008 Baseline Is Arbitrary And Capricious.

The FRA erroneously construed the statute as barring it from so much as *considering* “the rules by which costs and benefits are normally evaluated in a rulemaking” when exercising its discretionary rulemaking authority. JA568. As shown above, where an agency has misapprehended its legal authority, that is the beginning and the end of the analysis, and remand is required under *Chenery*. But even were one to overlook the FRA's clear legal error, its decision to rely on historic 2008 traffic patterns to determine the scope of 2015 installation is contrary to the text of the statute, inconsistent with the intent of Congress, and constitutes arbitrary and capricious agency action.

1. The 2008 Baseline Defies The Plain Language Of The Statute And The Intent Of Congress.

Congress required that PTC be installed on main lines that are transporting passengers or PIH materials as of December 31, 2015. But rather than adopt a forward-looking rule consistent with the statutory text — *i.e.*, a rule that requires installation based on traffic patterns in 2015 and beyond — the FRA adopted a backward-looking rule that requires installation based on historic 2008 traffic patterns. The 2008 baseline must be set aside under *Chevron* step one, as Congress clearly provided that 2015 traffic patterns, not 2008 traffic patterns, govern the scope of PTC implementation. *See Chevron*, 467 U.S. at 842-43 (if Congress has

spoken unambiguously, “that is the end of the matter, for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress”). Even if this Court concludes that the statute is ambiguous on this question, the FRA’s interpretation is impermissible under *Chevron* step two. *See Int’l Alliance v. NLRB*, 334 F.3d 27, 34 n.3 (D.C. Cir. 2003) (looking to “the language, structure, and purpose of statutes in evaluating the reasonableness of agency interpretations of ambiguous congressional language”).

The FRA acknowledged that its approach lacked support in the text of the statute and instead based its rule on its own misguided understanding of congressional intent. The agency reasoned that if it did not adopt a 2008 baseline, “the intent of Congress with respect to deployment of PTC might be defeated, even though the literal language of the legislation would be satisfied.” JA34. As the agency explained:

The lesson FRA perceives [from the statutory mandate] is that the core of the national rail system, which carries passenger and PIH traffic, needs to be equipped with PTC and that Congress used 5 million gross tons of freight traffic, the presence of PIH traffic, and the presence of passenger service as readily perceptible markers identifying the core lines on which Congress wants PTC to be installed. In making its judgments, Congress was necessarily looking at the national rail system as it existed in 2008 when the statute was passed. A corollary of

that lesson is that the later disappearance or diminution of one of those markers from a line does not necessarily mean that Congress would no longer see that line as part of the core national rail system meriting PTC.

JA568-69.

There are numerous flaws in this reasoning. For one thing, if Congress defined the “core” of the national rail system as tracks carrying passenger and PIH traffic, then it follows that tracks that are *not* carrying passenger and PIH traffic are *not* part of the “core” system. The FRA’s claim that Congress was “necessarily looking” at 2008 traffic patterns when it passed RSIA08 is both wrong and completely irrelevant given that the statute itself directs implementation based on 2015 traffic patterns.

If Congress had intended that PTC be deployed based on 2008 traffic patterns, it would have said so in the statute. But it did not. “The most reliable guide to congressional intent is the legislation the Congress enacted,” *Sierra Club v. EPA*, 294 F.3d 155, 161 (D.C. Cir. 2002), and in this case Congress mandated PTC installation based on 2015 traffic patterns. The *text* of the statute makes crystal clear that the proper baseline is 2015, not 2008, and “neither courts nor federal agencies can rewrite a statute’s plain text to correspond to its supposed purposes.” *Landstar Express America v. Federal Maritime Comm’n*, 569 F.3d 493, 498 (D.C. Cir. 2009). In fact, a recent Senate Report criticized the FRA for

fundamentally *misreading* congressional intent by adopting a 2008 baseline. As the report explained, “FRA argued in its final rule that using 2008 as a base year was the only way to ensure the full deployment of positive train control as Congress intended, but the Committee notes that the legislative language of RSIA ties the mandate only to the year 2015 and not to any other year.” S. Rep. No. 111-230, at 85 (2010).

The FRA noted that it “was provided latitude to require PTC system installation and operation on lines beyond those specifically prescribed by Congress.” JA568. But the agency’s decision to do so rests on its fundamental misapprehension that Congress secretly wanted a broader deployment of PTC than it actually provided for in the statute. To support its theory, the FRA pointed to versions of RSIA08 that Congress rejected. *See* JA16 (discussing how earlier versions of the bill would have required PTC on routes that did not carry passengers or PIH materials). But the fact that Congress considered extending PTC requirements to these routes, and then decided *not* to do so, is powerful evidence that Congress did not want the broad deployment the FRA has now mandated. *See INS v. Cardoza-Fonseca*, 480 U.S. 421, 442-43 (1987) (“Few principles of statutory construction are more compelling than the proposition that Congress does not intend *sub silentio* to enact statutory language that it has earlier discarded in favor of other language.” (quotation marks omitted)).

2. The FRA's Various Rationales Are Not Supported By Substantial Evidence.

The FRA offered several justifications for its adoption of a 2008 baseline. None is persuasive.

First, the FRA stated that “in order to reach completion by December 31, 2015, . . . the railroads and FRA need to identify the relevant route structure very early in the short implementation period and the railroads need to stage the financing and logistics to reach completion.” JA567. But this rationale does not justify the use of a 2008 baseline over other, more reasonable approaches that would also provide for an immediate identification of routes, such as the ones discussed below. The interest in prompt identification of routes that will need to be equipped with PTC requires *some* sort of starting point, but a 2008 baseline is obviously not the *only* way to implement the statute.

The FRA also stated that it “was concerned about responsive and anticipatory actions being taken by some railroads in the face of emerging regulatory influences.” JA568. What the FRA apparently meant by this statement is that if it did not lock them in with a 2008 baseline, the railroads might act strategically by moving PIH traffic off certain routes in order to avoid having to equip those tracks with PTC — and the re-routing might create a greater risk of accidents. *See* JA16. But the routing of PIH shipments is already closely regulated by the federal government. In November 2008, the Pipeline and

Hazardous Materials Safety Administration (PHMSA) published a final rule requiring that rail carriers annually assess and make changes to their routes based on the safety and security risks for transportation of PIH shipments. *See* Hazardous Materials: Enhancing Rail Transportation Safety and Security for Hazardous Materials Shipments, 73 Fed. Reg. 72,182 (Nov. 26, 2008). In light of this extensive regulatory scheme, it is simply implausible to suggest that the railroads could manipulate routing in the way the FRA suggests.

Nor does RSIA08 authorize the FRA to regulate for the purpose of controlling the routing of hazardous materials. “[A]n agency rule [is] arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider,” *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 43, and Congress plainly did not intend that the FRA wield the PTC mandate as a way of controlling routing decisions involving hazardous materials. Under the congressional scheme, the railroads are to make their routing decisions in accordance with the regulations promulgated by PHMSA — and *those* routes will ultimately determine the scope of PTC installation. In short, Congress was clear in RSIA08 and in its regulation of hazardous materials generally that the routing determines the PTC installation, not the other way around. Congress most assuredly did *not* intend or authorize the FRA to use its authority to implement PTC by locking in traffic patterns in an unrealistic manner, so as to achieve the collateral, unauthorized objective of

controlling the routing of rail traffic. There is simply no basis for the FRA to transform a descriptive provision of the statute — the PIH and gross tonnage threshold statutory criteria — to achieve a regulatory objective — directing routing determinations — that the statute itself does not authorize, and that Congress has empowered a different agency to pursue.

Finally, the FRA's request for amendment process does not cure the many flaws in the agency's approach. The final rule, as amended, provides that track that is initially designated for PTC installation may be de-designated if the railroad can make certain traffic- and/or risk-based showings. *See* 49 C.F.R.

§ 236.1005(b)(4). But even if the railroads submitted the requisite paperwork and analysis, the rule still permits the FRA to require PTC on track that does not carry passengers or PIH materials. Rather than follow an approach that is based on inaccurate predictions of 2015 traffic and require railroads to correct those inaccuracies by petitioning for amendments, the FRA should have simply adopted a more accurate approach to begin with.

In sum, none of the agency's proffered explanations can justify the use of a 2008 baseline — an approach that is contrary to the text of the statute and the intent of Congress.

3. The FRA Did Not Provide A Reasonable Explanation For Rejecting The Railroads' Proposed Alternative.

During the notice-and-comment period, as well as during the industry-government meetings that preceded the rulemaking, the railroads proposed a reasonable alternative to a 2008 baseline.

The railroads suggested that they begin installing PTC on those routes that currently meet the statutory criteria for PTC implementation — and that they believe will continue to meet those criteria in 2015. *See* JA262; 216. The railroads would then begin work to install PTC on those routes, focusing first on those that present the highest risk — an approach faithful to the statutory directive to “implement the [PTC] system in a manner that addresses areas of greater risk before areas of lesser risk.” JA262 (citing 49 U.S.C. § 20157(a)(2)). The railroads would next identify those routes that currently meet the statutory criteria for PTC implementation, but that they believe may *not* meet those criteria in 2015. JA263. As to those routes, the railroads would not be required to begin immediate implementation of PTC. Rather, they would supplement their implementation plans at reasonable intervals to update their traffic projections and make revised and more accurate predictions as to whether the routes will satisfy the statutory criteria in 2015. *Id.* If based on the updated data, it appears that PTC will be required on a particular route, the railroad would then begin implementation. JA264.

This was a very reasonable and responsible alternative to the 2008 baseline approach and was set forth in extensive detail. JA262-64. Nor was the FRA overwhelmed with proposed alternatives: the AAR and CSXT comments were the only ones submitted on behalf of the Class I freight railroads, the entities most affected by the proposed rule. The FRA, however, failed to address the railroads' proposal — an error that requires vacatur. *See American Radio Relay League v. FCC*, 524 F.3d 227, 242 (D.C. Cir. 2008) (“An agency is required to consider responsible alternatives to its chosen policy and to give a reasoned explanation for its rejection of such alternatives.”) (citation omitted).

II. THE DISPLAY REQUIREMENT IS NOT THE PRODUCT OF REASONED DECISIONMAKING AND MUST BE VACATED.

This Court should vacate 49 C.F.R. § 236.1029(f) in its entirety because it is not supported by substantial evidence and because the FRA acted in an arbitrary and capricious manner in adopting it. It is undisputed that the display provision will impose more than \$220 million in installation costs on the railroads — an amount that does not include the very significant maintenance and upkeep costs. JA624. Although the FRA attempted to justify this immense regulatory burden on its “engineer distraction” theory, it acted impermissibly in adopting that rationale by rejecting the need for studies, by relying on information known only to the

agency, and — amazingly — by citing as its best evidence a 2009 FRA report that concludes that the risk of engineer distraction *has not been proven*.

The FRA describes an engineer's consulting a PTC display as analogous to his text-messaging on a cell phone. JA621. Because an engineer has no business looking at a cell phone while operating a train, it is fair to describe a cell phone as a "distraction." But taking note of a screen conveying safety-critical information does not amount to being "distracted": it is where the engineer's attention *should* be focused. Suggesting that an engineer may get distracted by the PTC screen is like saying that an airplane pilot would get "distracted" by a display in the cockpit warning him that he was flying too low. See JA693. And if the FRA's concern is that engineers would become mesmerized by the PTC display and lose situational awareness, then it makes no sense to provide conductors with the same mesmerizing device, thus causing *them* to lose situational awareness as well.

A. The FRA Acted Impermissibly By Relying On Anecdotal Information Known Only To The Agency.

The question whether engineers are likely to be distracted by the PTC display is one that is answerable by empirical analysis. There exists an extensive human factors literature that analyzes a person's ability to perform multiple tasks simultaneously in a variety of contexts. Human factors studies are neither difficult nor expensive to conduct, and are commonly used throughout the government and corporate America for a variety of purposes, including product design.

During the notice-and-comment period, commentators pointed out the gaping hole in the FRA's "distraction" rationale: the agency failed to cite a *single* study or empirical analysis supporting its theory that a PTC display might distract engineers, and cause them to lose situational awareness. *See FCC v. Fox Television Stations, Inc.*, 129 S. Ct. 1800, 1813 (2009) (noting that courts can "set aside agency action under the Administrative Procedure Act because of failure to adduce empirical data that can readily be obtained"). Commentators further pointed out that the empirical data that *does* exist — namely, the real-world evidence that single-screen configurations have been working flawlessly for years without a single reported problem — strongly undercut the FRA's claim that engineer distraction was a legitimate danger, as did the available human factors literature.

In the preamble to the final rule, the FRA answered this criticism with the extraordinary claim that it did not *need* any studies because an unidentified FRA employee had supposedly "observed" an unidentified engineer on an unidentified train become "distracted," and that "observation" was a sufficient basis for the display requirement:

The [Association of American Railroads] claims that FRA does not offer any study showing that safety is jeopardized by assigning the engineer PTC-related duties. FRA has directly observed engineers exceeding authorities while attempting to

respond to PTC system requirements on tests of existing PTC systems. In those cases, the engineer was attempting to respond to digitally transmitted authority while the train was in motion and was plainly distracted from safety-critical duties. ***FRA does not need a study to verify the possibility of that which it has observed directly.***

JA621 (emphasis added). The agency offered no further explanation of this mysterious assertion, and nothing in the administrative record cast any light on who purportedly made this “observation” or when or where these “tests” occurred. Petitioner even filed a request under the Freedom of Information Act seeking any documents supporting this claim. JA703-05. The FRA responded by saying that no such documents exist. JA735-36.

This sort of undisclosed, anecdotal “evidence” is not a permissible basis for rulemaking. This Court has repeatedly held that “[i]t is not consonant with the purpose of a rulemaking proceeding to promulgate rules on the basis of inadequate data, or on data that, to a critical degree, is known only to the agency.” *American Radio*, 524 F.3d at 237 (quotation marks and brackets omitted). This rule applies even when the information in question is based on internal agency memoranda, as “disclosure of staff reports allows the parties to focus on the information relied on by the agency and to point out where that information is erroneous or where the agency may be drawing improper conclusions from it.” *Id.* at 236 (emphasis,

brackets and quotation marks omitted). In *American Radio*, the Court vacated an agency order where the agency failed to disclose “a central source of data for its critical determination.” *Id.* at 238; *see also Owner-Operator Indep. Drivers Ass’n v. Federal Motor Carrier Safety Admin.*, 494 F.3d 188, 202 (D.C. Cir. 2007) (vacating rule where “[i]n light of these undisclosed [facts], we cannot say that the agency’s [basis for the rulemaking] was made public in the proceeding and exposed to refutation as required by the APA”) (citation omitted); *Chamber of Commerce v. SEC*, 443 F.3d 890, 899 (D.C. Cir. 2006) (vacating agency rule where the agency failed to “reveal[] for public evaluation . . . the technical studies and data upon which the agency relie[d]” in its rulemaking) (quotation marks omitted).

Here, the FRA claimed that it “does not need a study” to establish the risk of engineer distraction because an unidentified individual made undocumented “observations” in connection with unidentified “tests” that engineers were becoming distracted. JA621. This is a classic example of “promulgat[ing] rules on the basis of . . . data that, to a critical degree, is known only to the agency.” *American Radio*, 524 F.3d at 237. The agency’s refusal to offer any more information — even when faced with a formal request under the Freedom of Information Act — precluded petitioner and the public from meaningfully evaluating or challenging the asserted basis for the rule.

The agency's failure to disclose also frustrates this Court's ability to perform judicial review. Because "review is to be based on the full administrative record that was before the Secretary at the time he made his decision," *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 420 (1971), for a court "to review an agency's action fairly, it should have before it neither more nor less information than did the agency when it made its decision." *Walter O. Boswell Mem'l Hosp. v. Heckler*, 749 F.2d 788, 792 (D.C. Cir. 1984). Here, both the public and this Court have far less information as to the who, where, what and when of these "observations" than does the FRA.

The FRA's reliance on these "observations" was not peripheral to the rulemaking. The primary ground on which commentators criticized the display requirement was that the FRA had not supported its "engineer distraction" rationale with any studies or empirical evidence. *See* JA220-25, 264-69. The FRA relied on these "observations" as its sole response to the criticism, then used the "observations" to establish the key fact in dispute: whether a PTC display poses a meaningful risk of engineer distraction. *See* JA621 ("AAR claims that FRA does not offer any study showing that safety is jeopardized by assigning the engineer PTC-related duties," but "FRA does not need a study to verify the possibility of that which it has observed directly.").

Had the FRA disclosed the facts surrounding these “observations,” it is very likely that petitioner could have rebutted the FRA’s conclusion. As the real-world evidence discussed below demonstrates, single-screen configurations have worked flawlessly in the real world, with no reports of accidents or engineer distraction arising from the engineer’s use of the PTC display. At a minimum, petitioner could have assessed the conditions under which the mysterious “tests” were allegedly conducted, what evidence led the observer to conclude that engineers were distracted, whether the PTC system would have safely stopped the train, and so forth.

The remarkable dénouement of this exchange occurred when petitioner sought reconsideration, submitting an expert report by Dr. John K. Lauber, a distinguished former member of the National Transportation Safety Board. JA690-98. Drawing heavily from his own experience in accident investigation, as well as the relevant human factors literature, Dr. Lauber opined that “[n]o human factors data or principles suggest that system safety would be enhanced by the so-called dual display mandate.” JA696. The FRA, however, rejected his analysis, explaining that “*[i]n the absence of thorough studies* supporting such [a conclusion], FRA believes that Dr. Lauber’s assertion lacks credibility” JA722. Thus, the agency insisted that “FRA does not need a study” to assess the safety risks of a single-screen configuration, JA621, while at the same time

rejecting Dr. Lauber's assessment because he allegedly *lacked* "thorough studies" supporting his conclusion. JA722. It is arbitrary and capricious for an agency to employ such a manifestly unfair double standard.²

B. The FRA's "Distraction" Rationale Is Contradicted By The Agency's Own Report And By The Real-World Evidence.

Notwithstanding its claim that "FRA does not need a study," the agency did rely on one study to support its "distraction" theory: a 2009 FRA report entitled *Technology Implications of a Cognitive Task Analysis for Locomotive Engineers*. JA622. Even though Dr. Lauber cited numerous relevant studies, the 2009 FRA report is the *only* study the FRA cited in its discussion adopting the display requirement in the final rule. *See* JA619-26. According to the FRA, the report

² The FRA also purported to deny reconsideration on the basis that the petition for reconsideration did not contain a "brief statement of the complaint and an explanation of why compliance with the rule is not possible, is not practicable, is unreasonable, or is not in the public interest." JA718. This was a clearly erroneous determination. The second sentence of the petition provided a brief statement of the complaint and the relief requested, JA675, and the remainder of the petition explained in detail why compliance was not practicable, unreasonable and not in the public interest. The agency went on to consider the merits of Dr. Lauber's views in any event. The FRA also noted that Dr. Lauber's report was not submitted until the reconsideration phase, JA718, but he was responding to points raised by the agency *after* the comment period closed — both the "Human Factors Research Support" document that FRA placed in the record after the comment period closed, as well as new justifications the agency raised for the first time in the final rule.

supports the agency's determination that "interaction with PTC can distract the engineer from looking outside the cab." JA622.

This is not an accurate characterization. While the report notes that there is "*some* evidence that PTC technology may require locomotive engineers to focus more of their attention on in-cab displays reducing their ability to monitor activity outside the cab," it concludes that "*[m]ore research is needed to determine whether this is the case.*" JA1142 (emphases added). Thus, the *only* study the FRA cites to support its claim that engineers will be distracted by the PTC display actually concludes *that the FRA cannot say* whether engineers may be distracted by the display.

Weeks after the comment period closed, the FRA entered into the administrative record an unusual document entitled "NPRM Human Factors Research Support." JA282-91. The document consists of quotations from the NPRM preamble, followed by what appear to be excerpts from studies that supposedly support the quoted assertions. What is remarkable about the document is that none of the excerpts actually supports the engineer distraction theory. In fact, the document relies primarily and extensively on the 2009 FRA report which,

as shown above, concludes that “more research is needed” before FRA can say that engineer distraction is a legitimate risk. *See* JA282.³

The FRA’s inaccurate characterization of the only report that even arguably supports its “engineer distraction” theory is a clear error that requires remand for multiple independent reasons. One, agency action is arbitrary and capricious when an agency “offer[s] an explanation for its decision that runs counter to the evidence before the agency.” *Motor Vehicles Mfrs. Ass’n*, 463 U.S. at 43. That is precisely what happened here: the FRA’s imposition of the display requirement is flatly at odds with the determination it made less than a year before that the evidence was *insufficient* to establish that engineer distraction is a legitimate danger. Two, remand is required where, as here, the agency has simply misstated the finding of a study on which it based its regulation. Three, to the extent the FRA may claim that it has changed its position since it issued its 2009 report, the agency has not adequately explained the change, *e.g.*, by identifying new research that has occurred in the interim. *See Ramaprakash v. FAA*, 346 F.3d 1121, 1124 (D.C. Cir. 2003) (“Agencies are free to change course as their expertise and experience may suggest or require, but when they do so they must provide a reasoned analysis

³ The “Human Factors Research Support” document cites the 2009 Report as “Roth & Multer, 2007.” The report appears to have been written in 2007, and the FRA’s cover indicates it was released in January 2009. *See* JA282, JA1110.

indicating that prior policies and standards are being deliberately changed, not casually ignored.”) (citation omitted). Here, the FRA failed even to acknowledge that it had reached a directly contrary conclusion less than a year earlier.

Real-world experience with PTC systems demonstrates that concerns of engineer distraction are baseless. Over the past ten years, the FRA has approved a variety of PTC systems for use on freight and passenger railroads alike. JA5. The overwhelming majority of these systems use a single-screen approach in which PTC information is *not* displayed to crew members other than the engineer. Single-screen systems include the Electronic Train Management System deployed by BNSF, and the Incremental Train Control System. *See* JA620 (the “locomotive cab configuration [for ETMS] includes one display screen, which is positioned on the dashboard of the engineer”) (quotation marks omitted); JA619 n.10 (ITCS also uses single-screen configuration).

These systems have worked successfully, and there has not been a single reported instance of an engineer becoming “distracted” by the PTC display. Nor have there been any accidents or safety-related incidents arising from a single-screen configuration. In fact, more than 4,300 trains have been run on the ETMS system without a single reported instance of engineer distraction. The FRA’s response that the ETMS system was approved under a prior regulatory regime, JA620, misses the point: if there has never been an accident over the lengthy

history of single-screen systems, that powerfully undercuts the FRA's claim that they pose a danger.

Furthermore, passenger and commuter trains typically operate *without* a conductor in the locomotive, and the FRA has not suggested that a single-screen system poses a danger of distraction in this context, nor is there any evidence that such a danger has materialized. Indeed, under the FRA's approach, passenger trains may continue to operate with a single-screen configuration because the engineer is the only crew member assigned duties in the locomotive. If a single-screen configuration were unsafe, it would make no sense for the FRA to permit its use for passenger trains. Indeed, the *only* basis for differentiating passenger from freight trains in this context is FRA's belief that passenger train engineers typically obtain and acknowledge mandatory directives while the train is stopped at a station. But as shown above, there is no basis for the FRA's claim that an engineer may become distracted by receiving a mandatory directive while the train is en route. Moreover, the final rule permits freight railroads to continue their historic practice of communicating mandatory directives via radio through the conductor, in which case there is no relevant difference between the freight and passenger contexts.

Although the FRA surmises that “[r]eading text on a PTC screen appears to be as distracting as reading text on a cell phone or PDA and texting in reply,”

JA621, it offers no evidentiary support for what it recognizes is an utterly speculative comparison (hence the qualifying language “appears to be”). Glancing at a PTC display bears little resemblance to reading text on a cell phone: the PTC display graphically depicts the track ahead with an occasional large-type message superimposed. And unlike writing a text message, which requires a close focus and pressing dozens of small buttons, an engineer can acknowledge a PTC warning with a single click of a large button. JA621 (“FRA has seen system designs that would permit acknowledgment by simply pressing a button.”). In any event, reading a mandatory directive on a PTC screen is far less distracting to the engineer than trying to read the conductor’s handwritten transcription of a directive communicated over the radio — a historic practice that is expressly permitted under the final rule.

Finally, the FRA failed to adequately take into account the *frequency* of mandatory directives sent while a train is en route. This is an important point because it dramatically undercuts the FRA’s “distraction” rationale. The fact is that mandatory directives are sent very rarely while a train is en route. *See* JA727 (conceding that mandatory directive issued en route is an “infrequent event[.]”); JA684. In short, the opportunity for “distraction” is not constant, but rather arises for a few seconds on an infrequent basis. The FRA simply failed to acknowledge in any meaningful way the sheer *infrequency* of the possibility for distraction

caused by an electronically-transmitted mandatory directive — and thus the virtually nonexistent risk of a distracted engineer causing an accident in those few seconds during a lengthy, multi-hour trip.

C. Generalized Principles Of “Crew Resource Management” Have Little Relevance In This Context.

The FRA also contends that principles of “crew resource management” support the display requirement. JA624. But these generalized principles of teamwork and cooperation cannot justify the specific mandate that all crew members must have access to a PTC display.

The FRA errs in contending that the conductors need access to the PTC display in order to perform their jobs. A conductor is not responsible for operating the train, and in fact is legally barred from doing so because he lacks an engineer’s certificate. In its final rule, the FRA identified several duties of the conductor that supposedly require access to the PTC display: “determining the train consist” (the cars that make up a train), “ensuring compliance with hazardous materials train placement requirements,” and “determining whether one or more cars in the train is restricted,” such as through a speed restriction or through a requirement that the car be placed in a particular spot in the train. JA619. But *none* of these duties requires access to the PTC display. The conductor does not need PTC to determine the ordering of cars on a train, and the FRA itself concedes that “[e]nforcement of

a speed restriction associated with a particular car is not a mandated PTC function.” JA619 n.9.

In the absence of any actual duty that would require the conductor to access a PTC display, the FRA is forced to invoke generalized principles of “crew resource management.” The agency contends that even if the conductor does not actually need access to PTC to perform his duties, denying him access will undercut morale and hamper the crew from functioning as a team. JA624 (arguing that it is important to “have all relevant information available to facilitate constructive interactions” because “[l]oss of crew cooperation could easily spill over to other functions”). But here too, the FRA lacks any empirical basis for its conclusion. In fact, the agency concedes that it cannot say with anything approaching certainty that providing the conductor with access to the PTC display will improve safety. *See* JA622.

Even if the FRA could somehow show that its “crew resource management” rationale carries some weight, the primary basis for the display requirement is the agency’s “engineer distraction” theory. As shown above, *that* rationale is not supported by the evidence and is the product of arbitrary and capricious decisionmaking. Accordingly, because the primary ground on which the FRA adopted the display requirement cannot stand, the provision as a whole must be vacated and remanded.

D. The FRA's Reliance On Purported "Business Benefits" Is Arbitrary And Capricious.

As shown above, *see* Section I(A) *supra*, the agency erroneously viewed itself as barred from weighing costs and benefits when implementing PTC. That legal error requires vacating the display requirement as well, as there is no way that the display requirement's purported benefits could possibly justify its undisputed cost of \$220 million, JA624, and the agency should have considered this vast discrepancy in formulating its rule.

Moreover, the FRA's rejection of the cost/benefit arguments that were raised during the rulemaking exemplifies arbitrary and capricious reasoning. During the rulemaking, "[t]he AAR and other railroads objecting to [the display requirement] maintain[ed] that there will be little safety benefit to the requirement[], and that the benefits would be far less than the costs." JA624; *see also* JA266 ("The FRA's failure to conduct any sort of cost-benefit assessment of the second display screen is particularly troubling . . ."). The FRA dismissed those objections with the following: "[I]n the long run, FRA believes that the additional cost for installing a second terminal would be justified by the aforementioned business benefits as well as the safety assurance." *Id.*

This was not a reasoned analysis. First, "the aforementioned business benefits" refers to the FRA's claim that a second screen "will return its cost in much less than a year." JA624. According to the agency, installing a second

screen will avoid the cost and delays incurred by the engineer having to stop the train in order to acknowledge a mandatory directive. *Id.* But the agency's claim that there are *any* business benefits from PTC is directly contradicted by its own Regulatory Impact Analysis, which states that the agency did *not* consider business benefits in formulating the rule because they were too speculative and might be achievable at lower cost through technologies other than PTC:

[Business] benefits are not included [in the Regulatory Impact Analysis] because of significant uncertainties regarding whether and when individual elements will be achieved and given the complicating factor that some benefits might, absent deployment of PTC, be captured using alternative technologies at lower cost.

JA635. It is plainly impermissible for the FRA to conclude that business benefits are too uncertain to be considered in calculating the benefits of the rule, while at the same time rejecting petitioner's cost/benefit argument by explicit reliance on the purported business benefits. Furthermore, the FRA measures the "business benefits" of the display requirement as the amount of "avoided costs" that would otherwise be imposed by the agency's rule if the railroads adopted one particular method of compliance. *See* JA624. But it is obviously incorrect to measure a rule's "business benefits" as the amount of money saved by a regulated party's attempts to *mitigate* the costs imposed by the rule.

The FRA also mentioned “the safety assurance” resulting from the display requirement. JA624. But it made absolutely no effort to measure or quantify the safety benefits purportedly resulting from a second display, and it is obviously impermissible for the agency to attempt to trump the known \$220 million cost of the second display through a general allusion to “safety assurance.” In *Advocates for Highway and Auto Safety v. Federal Motor Carrier Safety Administration*, 429 F.3d 1136 (D.C. Cir. 2005), this Court set aside a final rule of the Department of Transportation as arbitrary and capricious. The Court described the Department’s approach to cost/benefit analysis as “baffling” from “a purely economic perspective,” in that the agency “cite[d] no evidence that the final rule would achieve” the safety goals necessary “to be cost-beneficial.” *Id.* at 1146. So too here. The FRA did not even purport to measure the safety benefit of the display requirement, and relied on alleged “business benefits” that the agency itself rejected later in the rule as too speculative and uncertain to take into account. This Court should remand so that the agency can conduct a proper cost-benefit assessment of the display requirement.

CONCLUSION

This Court should vacate the 2008 baseline provision and the display provision in their entirety.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on January 20, 2011, I electronically filed the foregoing Final Opening Brief of Petitioner with the Clerk of the Court for the United States Court of Appeals for the D.C. Circuit by using the appellate CM/ECF system. I also hereby certify that I caused to be hand-delivered 8 copies to the Clerk's Office, pursuant to the deferred appendix method authorized by Fed. R. App. P. 30(c) and D.C. Cir. Rule 31.

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